Secrets of the Stars: A Blueprint for a Fall Prevention Program

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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 causing or contributing to resident falls
- Identify appropriate interventions that match the causative reasons for resident falls

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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 QI/QMs; Falls, Depression & Anxiety, Decline in LL ADL, Decline in Rm 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 this program!
- Project completion date: 10/1/11

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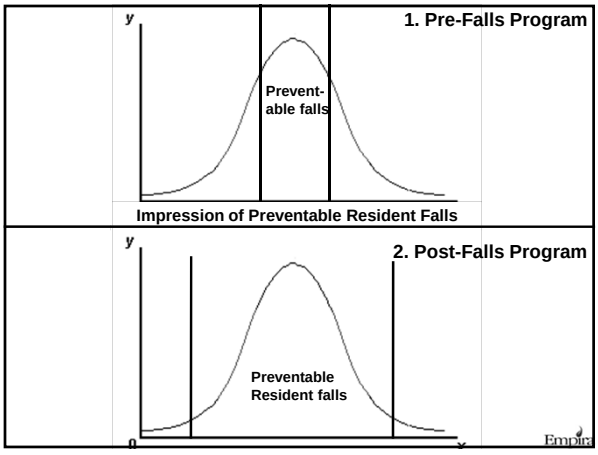
Everyone has a piece of the pie!

Results after 2½ years

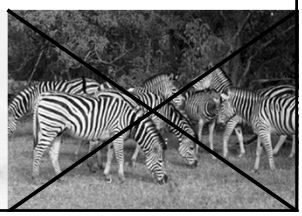
- **Prevalence of Falls (number of residents who have fallen) – decreased by 31%** (QI 1.2)
- **Incidence of Depression – decreased 20%** (QI 2.1)
- **Incidence Worsened ADLs – decreased 17%** (QI 9.1)
- **Incidence Worse Room Move – decreased 12%** (QI 9.3)
- **Falls per 1000 resident days (number of 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**



When you hear galloping hooves …

Think horses **Not zebras**



"I did then what I knew then, when I knew better, I did better."

~ Maya Angelou

Non-nursing departments' responsibilities for falls <u>prior</u> to onset of Empira Fall Prevention Program:

Total team's responsibilities for fall prevention: <u>after</u> implementation of Empira Fall Prevention

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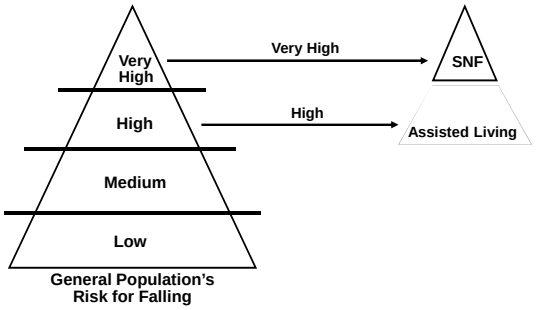
Who is at Risk for Falling . . . When Everyone Is?



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Two Tiered Approach

- **Proactive (fall prevention)**
  - **Speculate on degree of risk for falling**
  - **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**

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Person Centered "at risk" for Falls on Admission

- Mr. SD, 74 y.o., lives alone, recent widowed, alcoho dependent, slightly confused, easily agitated, has multiple hematomas from his many falls
- Mrs. MW, 69 y.o., 297 lbs., newly diagnosed brittle diabetic, not compliant with diet and meds, admitted post-hip pinning after a fall in her home
- Mrs. AT, 76 y.o., active, alert, visually impaired due to macular degeneration, slipped and fell getting out of her son's car, fx elbow & shoulder
- Mr. BL, 88 y.o., early stage Lewy Body dementia with symptoms increasing, can no longer be cared for in his AL setting

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Falls Admission Risk Assessment

1. Identify the individual's specific risk factors and conditions for falling e.g. limited vision, orthostatic B/P, dyskinesia, diet and medications – why?
2. If the person has a history of falls, determine the predisposing causes – what?
3. Consider psychological / emotional factors; grief, depression, fear of falling, self-imposed restriction of activity – why?
4. Focus on lower-extremity balance & strengthening
5. Encourage activity & movement!

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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.

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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.

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3 Areas to Investigate for Root Cause Analysis

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

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The Application of Root Cause Analysis to:

- Incontinence
- Pain
- Falls

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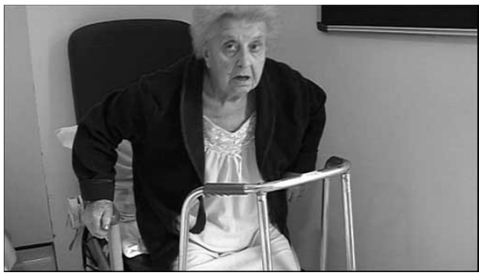
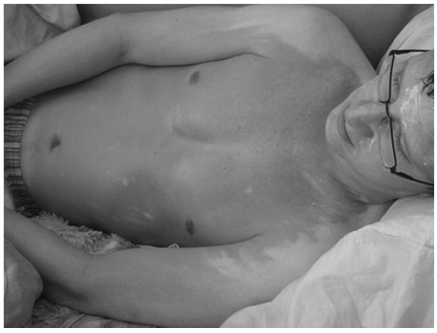
What might be the root cause(s) of her incontinence?



What might be the root cause(s) of her incontinence?

What might be the root cause(s) of their incontinence?

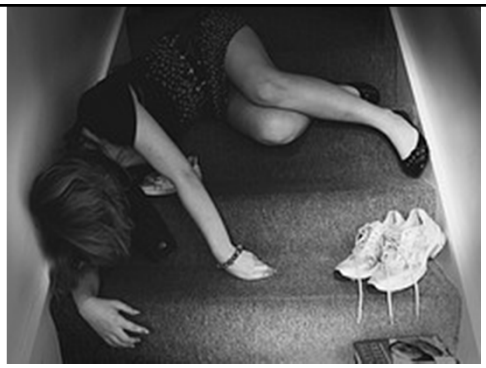
What might be the root cause(s) of his pain?



What might be the root cause(s) of his pain?

What might be the root cause(s) of their pain?

What might be the root cause(s) of her fall?



What might be the root cause(s) of her fall?

What might be the root cause(s) of her fall?

Why Do RCA After a Fall?

- **S:** "It's a single event and won't happen that way again."
- **S:** "No one, including that resident, will ever fall that way again."
- **A:** If the brakes failed in your car on a slippery 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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Situations that can hinder, divert, or prevent, successful root cause analysis:

1. **Blame Game**
2. **Human Nature**
3. **Tunnel Vision**

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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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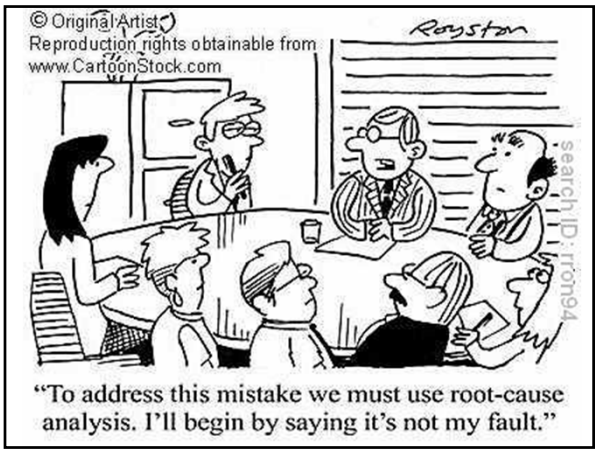


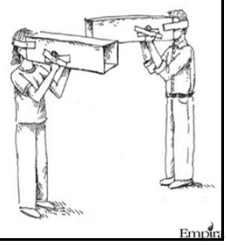
Human Factors

- **Humans forget**
  - **They succumb to a busy lifestyle and avoid being diligent**
- **Humans take chances because they believe the outcome will be successful**
- **Humans make mistakes**
  - **They inadvertently do things they shouldn't do**
- **Humans don't learn or remember all that they are taught or told**

Human factor: to err is human!

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 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 didn't see at the time of the event.



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?

Step 1: Gather clues, evidence, data

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

The clues are there . . . if we don't disturb them!

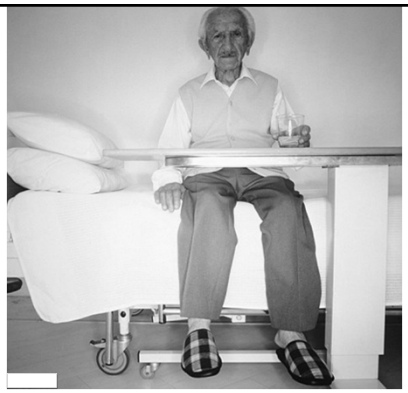
The clues are there . . . if we don't disturb them!

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? →**

RCA: Can we predict / prevent a fall?

Why might she fall? What are the clues?
What can you and your staff do to prevent her from falling?



Why might he fall? What are the clues?
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What can you and your staff do to prevent him from falling?

Step 2: Tools to determine RCA

- "10 Questions"
- Post Fall Huddle
- Staff Interviews
- Reenactment

} Fall Scene Investigation (FSI) Report

- FSI Report
- MDS, QM/QI Report
- Hourly Rounding (4Ps)

} Weekly Falls Committee Meeting

The resident has fallen: What you do NOT do!

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 just before you fell?
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?

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?"
  - Report to the nurse.
- **Personal (Potty) Needs:**
  - Ask the resident, "Do you need to use the bathroom or urinal?"
  - 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 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?
  - Is the bed at the correct height?

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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, → Orthostatic,
  - 5 feet away, → Balance/gait,
  - > 15 feet → Strength/endurance
  - In bathroom/at commode: ✓ contents of toilet
  - Urine or feces in toilet/commode? Urine on floor?

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Orthostatic Hypotension Contributing Factors

- Diuretics
- Vasodilators
- Beta Blockers
- Antidepressants
- Antipsychotics
- ACE Inhibitors
- Drugs to treat Parkinson's
- Prolonged Bed Rest
- Dehydration
- Infection
- Diabetes
- Heart Disease
- Anemia
- Hypothyroidism
- Excessive Heat
- Large Varicose Veins

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 my room." A nurse comes in to redirect Mrs. CC out of the room; she coaxes her by gently 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, ↑agitation, ↑falls

=

sleep deprived #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

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

Patterns & Trends of Falls

Here's where and when most falls occurred:

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

1. WHY do they fall at these times and in these places?
2. 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: 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,* is 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

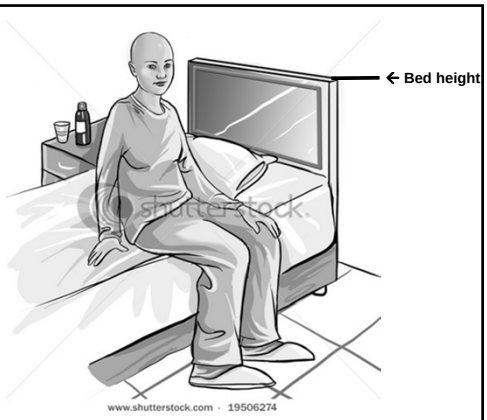
* To be most effective: interventions need to move to stronger actions rather than education or memory ***alone***.

Implement Interventions / Solutions

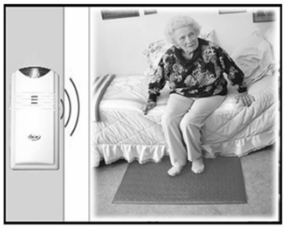
- What will you do to prevent this problem from happening again?
- Do the interventions / solutions match the causes of the problem?
- How will it be implemented? Who will be responsible for what?
- How will the solutions impact or effect other operations / people in your facility?
- What are risks to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



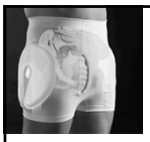
Mats on Floor Reduction



United States Department of Veterans Affairs, Falls Tool Kit, Floor Mats:
Applegarth, S.P. *Tips and Tricks for Selecting a Bedsize Floor Mat*.
Website: http://www.patientsafety.gov/SafetyTopics/fallstoolkit/resources/other/Tips_and_Tricks_ for_Selecting_a_Bedside_Floor_Mat.doc

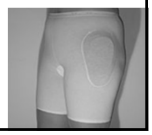
Mats on Floor Reduction

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



Hip Protectors

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



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Hip Protectors with Highest Rated Efficacy

- ComfiHips: www.comfihips.com
- Hip Saver: www.hipsaver.com
- SAFEHIP: www.safehip.com

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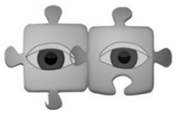
Visual conditions: contrast, illumination, placement?

How do they see?

What do they see?



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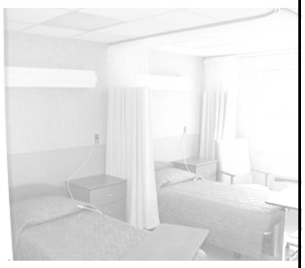
Normal Vision

Cataracts



Glaucoma

Macular Degeneration

Diabetic Retinopathy

Contrast the Environment

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

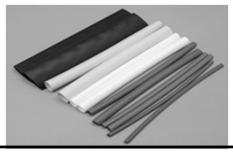
Contrast the Environment

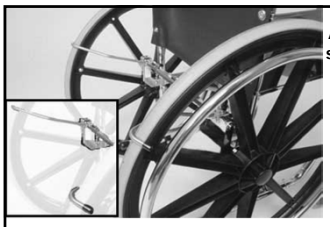
← →

Personal items: Which is easier to see?

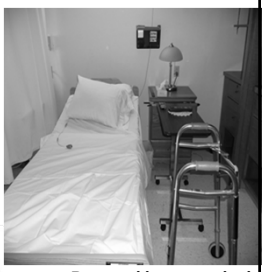
Contrast Tubing

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





Anti-roll back and self locking brakes



Auto timer/dimmer

"Silent Knight" Pill Crusher

Personal items marked and within easy reach

Medication Reduction

- Why so many meds?
- Reduce; type, dose, frequency, times, all.
- No crushing – if this is a "refusal"
- Eliminate medication carts
- Do not disturb sleeping residents
- Explain side effects
- Tell nursing assistants:
  - Which resident has been given a "water pill"
  - New meds or change in meds

Unnecessary Medications

- What makes a drug "unnecessary"?
- CMS F329 Unnecessary Drugs –
- General Drugs: Any drug when used;
  1. In excessive dose; or
  2. For excessive duration; or
  3. Without adequate monitoring; or
  4. Without adequate indications for its use; or
  5. In the presence of adverse side effects, which indicate the dose should be reduced or the drug discontinued; or
  6. Any combinations of the reasons above.

Reasons for the Use of Unnecessary Meds

- Resident's condition changes
  - need help / desire to help / unable to help
- Overestimate of effectiveness of drugs; believe drugs will produce desired results
- Underestimate the side effects of drugs
- Lack of training in non-pharmacological approaches to treatment
- Patient/family demands
- Influences of media and drug manufactures

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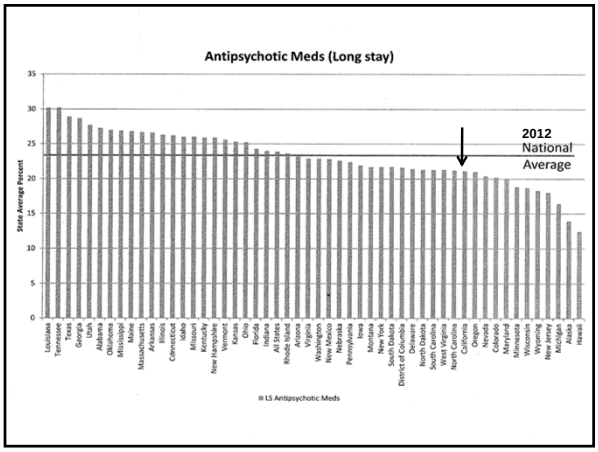

Why else do our residents fall?

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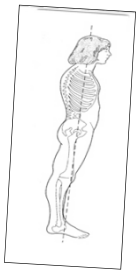
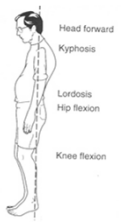
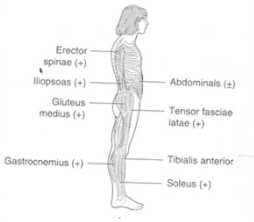
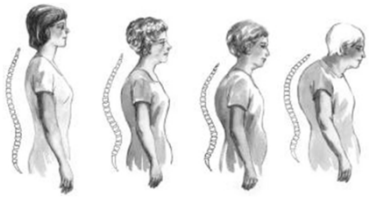
Physical Changes As We Age…

Posture ROM Strength









Balance

- Combination of posture, ROM, strength, reaction time, visual perception, somatosensory and pain

"*Balance* Exercise Reduces Risk of Falling"

- ***"Strength training alone may not effectively reduce falls since impaired balance is a stronger reason for falls than poor muscle strength."***
- ***"The greatest effect in preventing falls were seen with exercises that challenged balance."***

~ Journal of the American Geriatrics Society, December 2008

- **Create opportunities to stand and reach**
- **Incorporate balance into current activities & ADLs & newly created TR programs**

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**

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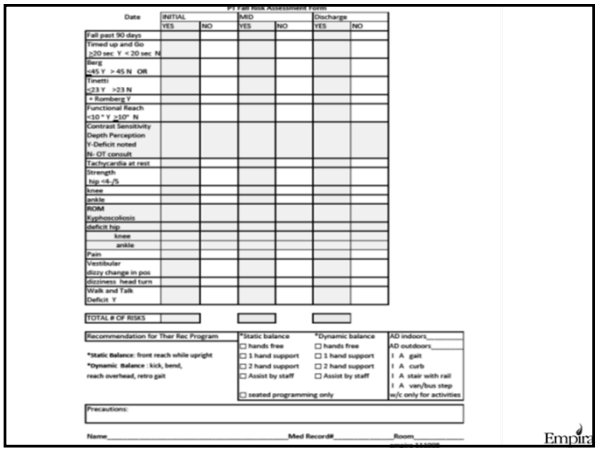

PT Fall Risk Assessment Form

Date	INITIAL		MID		Discharge	
	YES	NO	YES	NO	YES	NO
Fall past 90 days						
Timed up and Go ≥20 sec Y < 20 sec N						
Berg ≤45 Y >45 N OR						
Tinetti ≤23 Y >23 N						
+ Romberg Y						
Functional Reach <10 " ≥10" N						
Contrast Sensitivity Depth Perception Y-Deficit noted Rx- OT consult						
Tachycardia at rest						
Strength hip <4-/5						
knee						
ankle						
ROM						
Kyphoscoliosis						
deficit hip						
knee						
ankle						
Pain						
Vestibular dizzy change in pos dizziness head turn						
Walk and Talk Deficit Y						
TOTAL # OF RISKS						

Recommendation for Ther Rec Program	*Static balance	*Dynamic balance	AD indoors_____ AD outdoors_____
*Static Balance: front reach while upright *Dynamic Balance: kick, bend, reach overhead, retro gait	☐ hands free ☐ 1 hand support ☐ 2 hand support ☐ Assist by staff ☐ seated programming only	☐ hands free ☐ 1 hand support ☐ 2 hand support ☐ Assist by staff	I A gait I A curb I A stair with rail I A vary/bus step w/c only for activities

Precautions:

Name_____ Med Record#_____ Room_____

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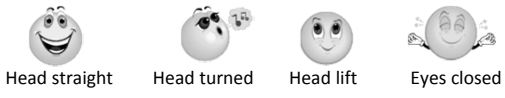
Balance Challenges

Easy → Difficult



Head straight | Head turned | Head lift | Eyes closed

Reach | Push | Pull | Overhead | Turn

Wide stance | Feet together | Tandem | One leg

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Key to Falls Program Success

Incorporating Standing in Current Activity Programming

Bingo

Outings

Pledge at Resident Meetings & Activities

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Charades Noodles

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Standing during baking activity

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Resident Artists

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Horseshoes a wonderful pastime and opportunity to stand

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Visually impaired elder has an opportunity to stand and garden

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Ball Room Dancing

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Bob Hope Golf Tourney

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Reaching and Twisting; Improves Core Balance

- Reach for items, don't have them handed to you
- 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
- Self propel in wheelchair, don't be pushed (works lots of muscles, posture, balance and independence)

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Then

Now

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Getting the CNA Involved

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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 – muscles, posture, core balance and independence are worked.)

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"Here's your next bite, lean over."

Encourage Standing in Daily Routine

- Stand at the sink
- Pause during the transfer
- Allow standing for a moment

Little time but BIG rewards

"Stand and wait for breakfast, lunch or dinner."

Restlessness, Agitation: a need to be calm and relaxed

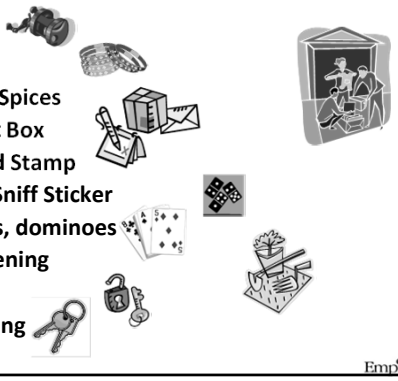
- Identify causes of restlessness and agitation: the 4Ps and/or sleep deprivation
- Then consider calming interventions:
  - weighted baby doll
  - fluffy purring kitten
  - heated and/or weighted blanket
  - self locking brakes
  - anti-roll back devices
  - interest boxes;
    - jewelry, tackle, puzzles,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

INTEREST BOX IDEAS

- Fishing Box
- Jewelry Box
- Recipe Card/Spices
- Sales Receipt Box
- Envelope and Stamp
- Scratch and Sniff Sticker
- Playing Cards, dominoes
- Sports/Gardening
- Key and Lock
- PVC pipe fitting



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

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External lesson learned:

if we can stop the noise, then we can reduce the falls.

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Noise Contributes to 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.

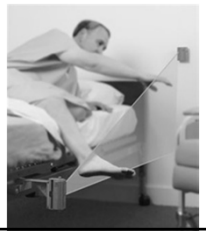
- **The most common types of personal alarms are:**
- **Pressure sensitive pads placed under the resident while they are sitting on chairs, in wheelchairs or when sleeping in bed**
- **A cord attached directly on the person's clothing with a pull-pin or magnet adhered to the alerting device**
- **Pressure 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?



Need → Motion → Alarm

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

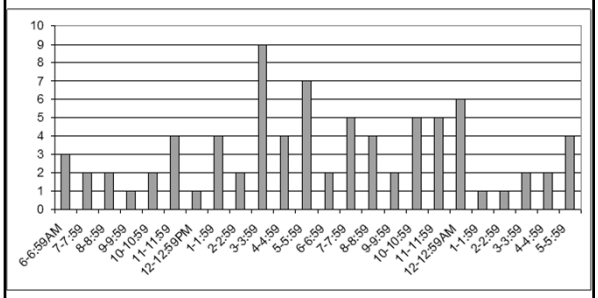
Anticipate their needs:

Why might their alarms go off?

Results of Alarm Reduction

Alarms being used at all times of the day.

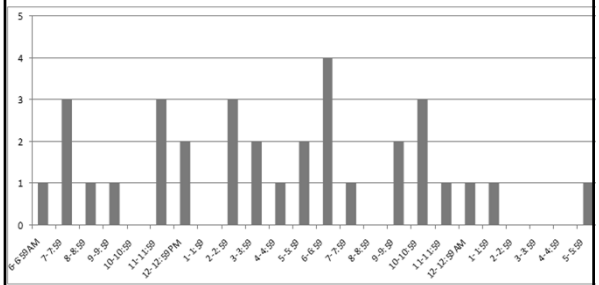
CARE CENTER #1: APR - JUNE 2010 FALL TIMES



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

TCU, FALL TIMES, JUNE - NOVEMBER 2010

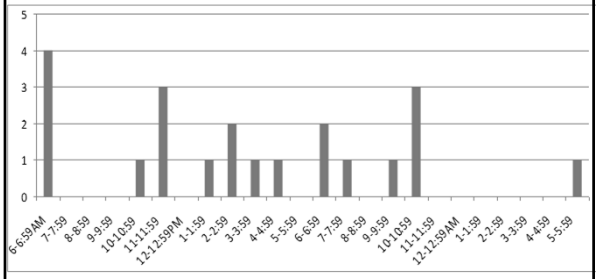
Beginning to reduce the number of alarms.



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

TEAM 2, Fall Times, January - March 2010

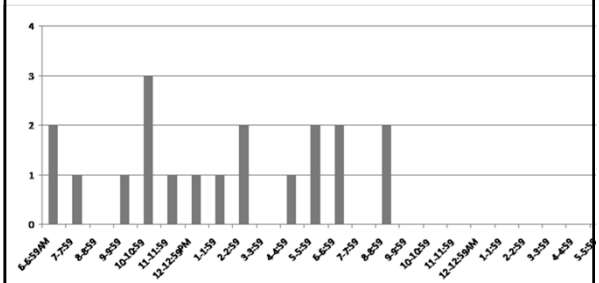
No alarms used during night shift



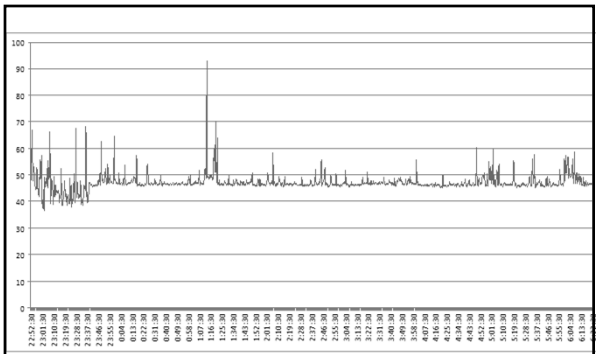
X axis = times of the day the falls occurred, Y axis = # of falls.

Care Center #2: Time of Falls April-June 2010

No alarms used during evening and night shifts.



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



Noise level in decibels in an Empira member SNF from 10:52 PM to 6:22 AM.

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?

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"Alarms Cause Reactionary Rather than Anticipatory Nursing"

"Sit down." versus "What do you need."

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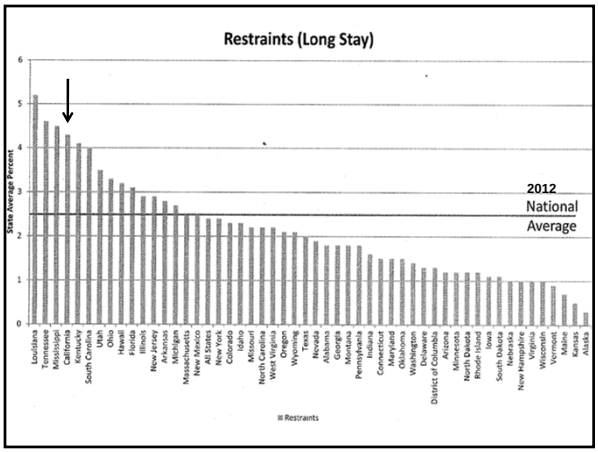

How to Reduce Restraints & Alarms

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 <u>not</u> 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

Slide 25

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

Slide 28

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.

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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'."

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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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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 clinical or environmental conditions, it is usually the result of an underlying systemic breakdown**

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What is the Business Case for a Falls Prevention Program?

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Lets do the Math

- CDC 2009 estimate average of a single resident fall in nursing homes: $9,100 to $13,000
- Average hourly cost of licensed staff follow-up to a resident fall
- # of falls per month
- Monthly census
- Falls/1000 resident days
- Hourly rate for legal or consulting assistance
- Equipment costs
- Reputation

Strong Interventions to Prevent Falls

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

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 Handing" vs. increasing residents' movement and independence

What's in the future to preventing falls?

- Medication reduction
- Non-pharmacological interventions
- Sleep hygiene; fragmentation, consolidation
- Shift times/staffing to better match resident needs
- Equipment:
  - Actigraphy, sleep monitors, hip protectors, improvement in environmental contrast and design
- "Bone cocktail": Vitamin D & calcium, magnesium
- Education:
  - Family – outings, transfers, walks, sleep
  - Medical Directors, MDs, NPs, Pharmacists, Hospitals
  - CMS state and national surveyors

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Where do we go from here?

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Restorative Sleep Vitality Program: Goals

- Undisturbed sleep at night

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Restorative Sleep Vitality Program: Goals

- **Fully engaged, awake during the day**

You're never too old for pilates!

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RSVP: Sleep and Wake 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: "Over the last 2 weeks, did the resident have any of the following problems: trouble falling or staying asleep, or sleeping too much." and "How important is to you to go to bed when you want?"**

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Empira's Restorative Sleep Vitality Program

- **This program is a combination of nationally recognized evidence-based, sleep studies and the application of cutting edge sleep/wake practices to enhance residents sleep experience**
- **Empira is challenging and changing the culture of long term care provider services to include the all important component of good sleep and wake hygiene.**

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~ Mahatma Gandhi
"How to initiate change."

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

EMPIRA TEAM 2013