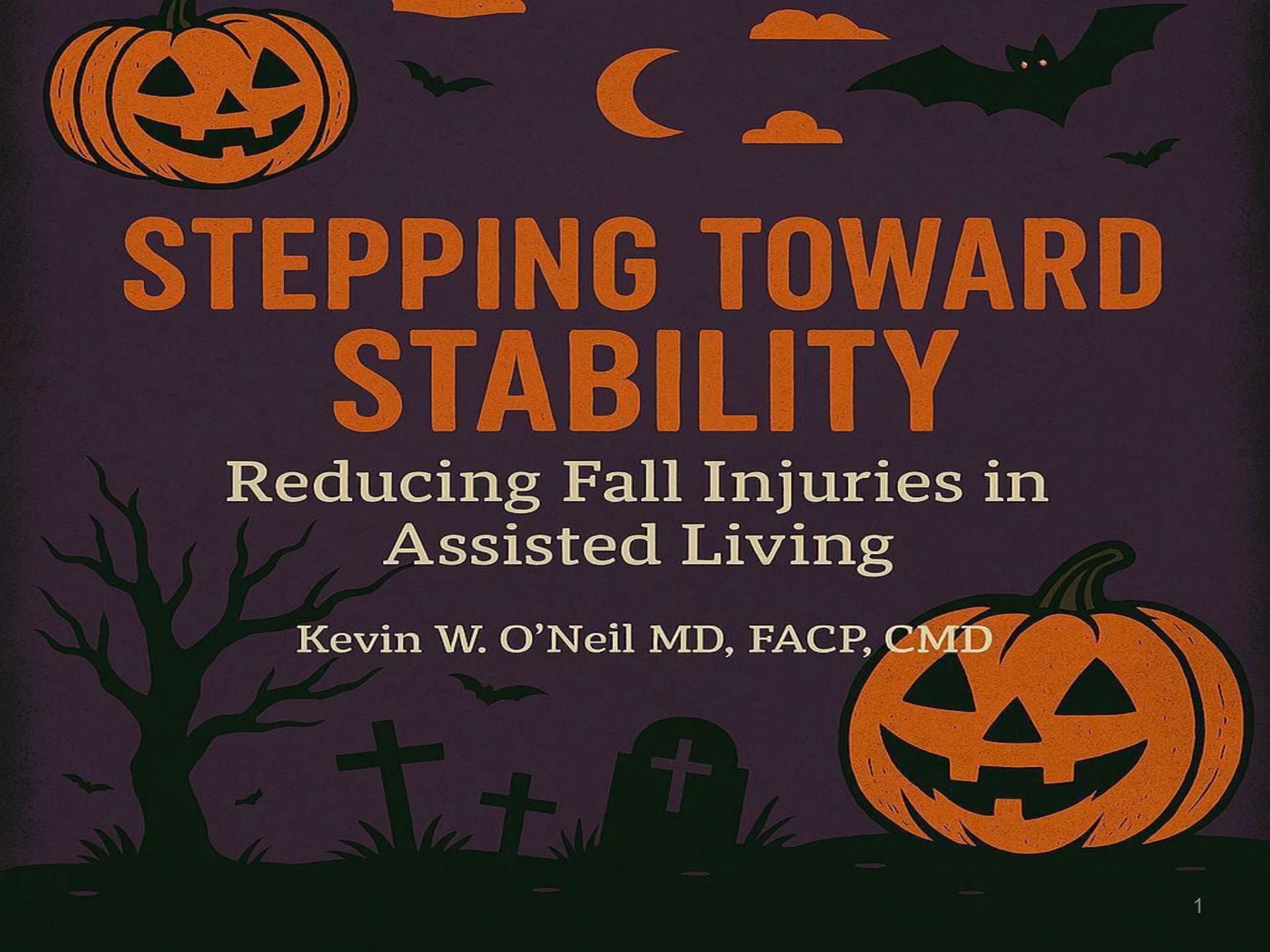

STEPPING TOWARD STABILITY
Reducing Fall Injuries in Assisted Living
Kevin W. O'Neil MD, FACP, CMD

Disclosures

- Unlike Dr. Jekyll, I do not have a Mr. Hyde
- I “hyde” no conflicts of interest related to this presentation.


But I do have a split personality!


Even multiple personalities!

FALL PREVENTION AND MANAGEMENT

LEARNING OBJECTIVES

Explain the prevalence of falls

Perform a root-cause analysis of falls

Describe intrinsic and extrinsic risk factors

Utilize clinical tools for fall assessment

Discuss orthostatic hypotension

Review evidence-based interventions

Pre-Test: True or False?

1. Most falls in elderly persons are associated with serious injury.
2. Falls are the leading cause of accidental death in the elderly.
3. Approximately 5% of community-dwelling elderly persons fall each year.
4. Falls in the older adult usually have one cause.
5. Orthostatic (postural) hypotension is a common cause of falls in older adults.

Best Answer(s)?

1. Which of the following types of medication are associated with an increased fall risk?
   a. Thyroid supplements
   b. Tranquilizers
   c. Narcotic pain medications
   d. Anti-depressants
2. Which of the following illnesses can increase fall risk in an elderly person?
   a. Pneumonia
   b. Parkinson's disease
   c. Alzheimer's disease and other forms of dementia
   d. Urinary tract infection

Definition

A fall is an event which results in a person coming to rest inadvertently on the ground or floor or other lower level.

-*World Health Organization*

Prevalence

- 35-40% of community-dwelling persons ≥ 65 fall annually
- One-half of those >80 years fall annually
- >50% of long-term care residents fall annually
- Complications of falls are the leading cause of death from injury in persons aged ≥ 65

Fall-Related Injury

- Most falls by older adults result in some injury
- 10% to 15% of falls result in serious injury
- Injury rates are higher in residential care settings
- The death rate due to falls increases with age
- 75% of deaths due to falls occur in the 14% of the population over age 65
- Mortality is highest in white men > 85 years

Consequences

- Associated with
  - Decline in functional status
  - Nursing home placement
  - Increased use of medical services
  - Fear of falling

- Half of those who fall are unable to get up without help (“long lie”)
- A long lie predicts lasting functional decline

Economic Impact

- CDC: About $50B spent annually due to non-fatal fall-related injuries.
- Medical spending for fatal fall injuries about $754M yearly
  - Fall-related injuries = 6% of total medical spending for older adults
- ↑ Emergency department visits: 75% of visits for falls are for persons over age 65.

Causes

- Rarely due to a single cause
- Complex interaction of:
  - intrinsic factors (e.g., chronic disease)
  - challenges to postural control (e.g., changing position)
  - mediating factors (e.g., risk taking, environmental)

LIFESOURCE Fall Prevention Program

RISE: Reduction In Serious Fall Events

Age-Related Factors

Medical Conditions

Medication

Unstable posture

Cognitive Impairment

Polypharmacy

Affects alterness. narcotics. antipays hotles, hypnotics

Orthostatic BP changes

Neurodegenerative or musculoskeletal disease

INTRINSIC CAUSES

Sensory deficits (e.g. visual, hearing)

EXTRINSIC

Lack of communication between disciplines (physicians, hursing, therapy)

Broken or maltunctioning assistive devices

HIGH NUMBER OF FALL-RELATED INJURIES (n=?)

Failure to identify risk nsons

Canes and walkers not fitted properly.

Improper footwear

Slippery floors, uneven surfaces, room clutter

Assistive devices not readily availat.

Staffing

Equipment

Environmental

Aging Eyes

- Visual
  - 👁️ Decreased Acuity
  - 🌙 Impaired Dark Adaptation
  - ⚡ Sensitivity to Contrast & Glare
  - 🔍 Impaired Accommodation
- Ocular Diseases
  - 🌫️ Cataracts
  - 🌀 Glaucoma
  - 🎯 Macular Degeneration

Aging Ears

- Auditory
  - 👂 Impaired detection and interpretation of auditory stimuli
- Vestibular
  - 🌀 Vestibular dysfunction may lead to vertigo and falls

Aging Nervous System

- Proprioception impaired
  - Age-related peripheral neuropathy
    - Neuropathy due to diabetes, B12 deficiency
  - Neck sensory receptors
    - Impaired by whiplash, cervical spondylosis

Drug Causes

- Specific classes
  - Benzodiazepines
  - Anticonvulsants
  - Antidepressants
  - Antipsychotic drugs
  - Diuretics
  - Antihistamines
  - Antihypertensives
  - Levodopa

- Recent medication dosage adjustments
- Total number of prescriptions

Postural Control

- Environmental: elevated or low bed height, bed rails, low toilet seats, poor illumination, upended rug edges, wet/highly polished floors, icy walkways.
- Changing positions
- Normal activities
  - Consider maladapted assistive devices
  - Multifocal lenses

Medical Conditions

- Degenerative joint disease
- Sarcopenia
- Acquired musculoskeletal deformities
- Intermittent claudication
- Impairments following orthopedic surgery
- Impairments following stroke
- Orthostatic (postural) hypotension
- Dementia
- Fear of falling
- Usually multifactorial

Extrinsic Factors

- 👥 Staffing
  - Staffing levels on weekends and nights
  - Failure to identify risk factors
  - Lack of communication between disciplines
- 🛠️ Equipment
  - Assistive devices not readily available
  - Canes and walkers not fitted properly.
  - Broken or malfunctioning assistive devices
- 🏠 Environmental
  - Poor lighting
  - Improper footwear
  - Slippery floors, uneven surfaces, room clutter

SEE SOMETHING? SAY SOMETHING!

YOU ARE A HEALTH HERO

You spotted the signs – and helped prevent a fall. That's heroic!

SBAR: Spooky but Accurate Reporting!

YOU ARE A HEALTH HERO

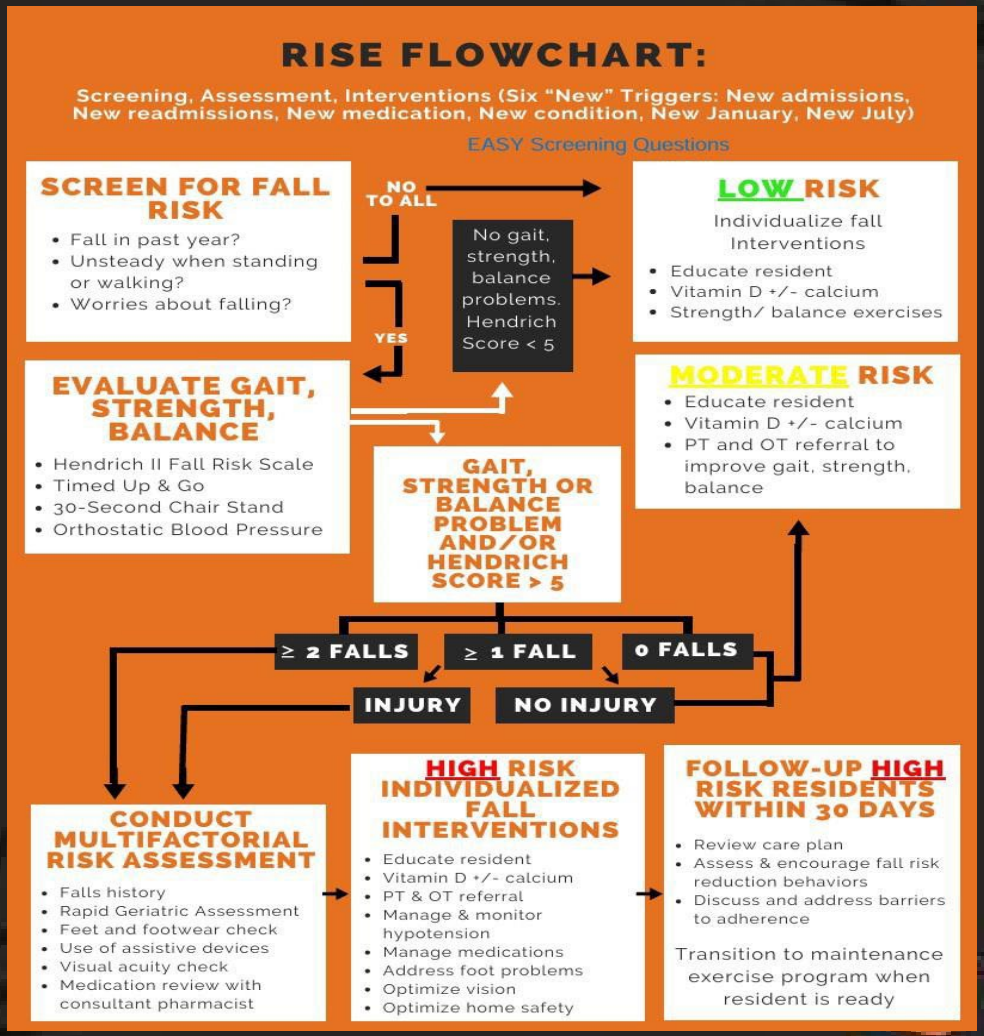
Your observations aren't extra–they're essential.
Even in spooky season, satety comes first!

Fall Assessment

- Should be part of an annual examination
- Single fall: check for balance or gait disturbance. Does not necessarily mean a higher risk.
- Recurrent falls or gait or balance disturbance: complete falls evaluation

- History
- Medications
- Vision
- Gait and balance
- Lower limb joints
- Neurologic
- Cardiovascular
-Alcohol

Process Flowchart



RCC/Nurse Screen: LOW Risk

RCC SCREEN FOR FALL RISK
Fall in past year?
Unsteady when standing or walking?
Worries about falling?

Yes

PT Screen

No

EASY SCREENING TOOL

1. Do you have pains, tightness or pressure in your chest during activity?
2. Do you currently experience dizziness or lightheadedness?
3. Have you ever been told you have high blood pressure?
4. Do you have a bone, joint, or muscle problem such as pain, stiffness or swelling that limits or prevents you from doing what you want or need to do?
5. Do you use an assistive device while standing or walking?
6. Is there a health reason not mentioned why you would be concerned about starting an exercise program?

No

LOW RISK
Educate Resident
Vitamin D +/- Calcium
Strength/ Balance Exercises
Individualize Fall Interventions

Yes

Refer to PCP for medical clearance

PT Screen: Low Risk

PT SCREEN: GAIT, STRENGTH, BALANCE
Hendrich II Fall Risk Model
Timed Up & Go (TUG)
30-Second Chair Stand
Orthostatic Blood Pressure

Normal

EASY SCREENING TOOL

1. Do you have pains, tightness or pressure in your chest during activity?
2. Do you currently experience dizziness or lightheadedness?
3. Have you ever been told you have high blood pressure?
4. Do you have a bone, joint, or muscle problem such as pain, stiffness or swelling that limits or prevents you from doing what you want or need to do?
5. Do you use an assistive device while standing or walking?
6. Is there a health reason not mentioned why you would be concerned about starting an exercise program?

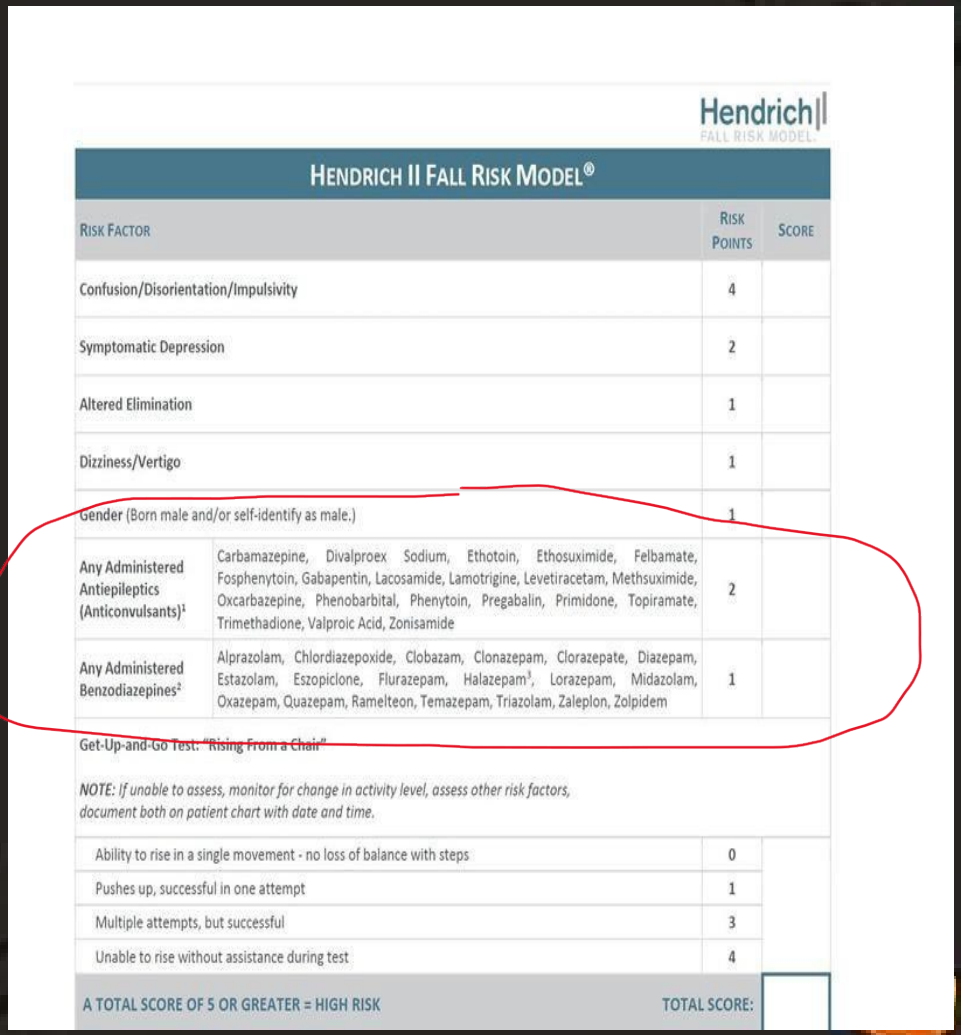
No

LOW RISK
Educate Resident
Vitamin D +/- Calcium
Strength/ Balance exercises
Individualize Fall Interventions

Yes

Refer to PCP for medical clearance

Hendrich II Fall Risk Model



Hendrich II
FALL RISK MODEL

HENDRICH II FALL RISK MODEL®

RISK FACTOR		RISK POINTS	SCORE
Confusion/Disorientation/Impulsivity		4	
Symptomatic Depression		2	
Altered Elimination		1	
Dizziness/Vertigo		1	
Gender (Born male and/or self-identify as male.)		1	
Any Administered Antiepileptics (Anticonvulsants)[1]	Carbamazepine, Divalproex Sodium, Ethotoin, Ethosuximide, Felbamate, Fosphenytoin, Gabapentin, Lacosamide, Lamotrigine, Levetiracetam, Methsuximide, Oxcarbazepine, Phenobarbital, Phenytoin, Pregabalin, Primidone, Topiramate, Trimethadione, Valproic Acid, Zonisamide	2	
Any Administered Benzodiazepines[2]	Alprazolam, Chlordiazepoxide, Clobazam, Clonazepam, Clorazepate, Diazepam, Estazolam, Eszopiclone, Flurazepam, Halazepam[3], Lorazepam, Midazolam, Oxazepam, Quazepam, Ramelteon, Temazepam, Triazolam, Zaleplon, Zolpidem	1	
Get-Up-and-Go Test: "Rising From a Chair"			
NOTE: If unable to assess, monitor for change in activity level, assess other risk factors, document both on patient chart with date and time.			
Ability to rise in a single movement - no loss of balance with steps		0	
Pushes up, successful in one attempt		1	
Multiple attempts, but successful		3	
Unable to rise without assistance during test		4	
A TOTAL SCORE OF 5 OR GREATER = HIGH RISK		TOTAL SCORE:	

Timed Up & Go Test (TUG)

Record the time it takes a person to:

- Rise from a hard-backed chair
- Walk 10 feet and turn
- Return to the chair
- Sit down

Scoring: Most adults can complete in 10 sec

- Most frail elderly adults can complete in 11 to 20 sec
- Need for > 10 sec = ↑ falls risk
- Need for > 20 sec → comprehensive evaluation

30-Second Chair Stand

ASSESSMENT

30-Second Chair Stand

Purpose: To test leg strength and endurance
Equipment: A chair with a straight back without arm rests (seat 17" high), and a stopwatch.

① **Instruct the patient:**

1. Sit in the middle of the chair.
2. Place your hands on the opposite shoulder crossed, at the wrists.
3. Keep your feet flat on the floor.
4. Keep your back straight, and keep your arms against your chest.
5. On **"Go,"** rise to a full standing position, then sit back down again.
6. Repeat this for 30 seconds.

NOTE: Stand next to the patient for safety.

② **On the word "Go," begin timing.**

If the patient must use his/her arms to stand, stop the test. Record "0" for the number and score.

③ **Count the number of times the patient comes to a full standing position in 30 seconds.**

If the patient is over halfway to a standing position when 30 seconds have elapsed, count it as a stand.

④ **Record the number of times the patient stands in 30 seconds.**

Number: _____ Score: _____

CDC's STEADI tools and resources can help you screen, assess, and intervene to reduce your patient's fall risk. For more information, visit www.cdc.gov/steadi

Patient _____

Date _____

Time _____ ☐ AM ☐ PM

SCORING

Chair Stand
Below Average Scores

AGE	MEN	WOMEN
60-64	< 14	< 12
65-69	< 12	< 11
70-74	< 12	< 10
75-79	< 11	< 10
80-84	< 10	< 9
85-89	< 8	< 8
90-94	< 7	< 4

A below average score indicates a risk for falls.

CDC Centers for Disease Control and Prevention
National Center for Injury Prevention and Control

2017

STEADI Stopping Elderly Accidents, Deaths & Injuries

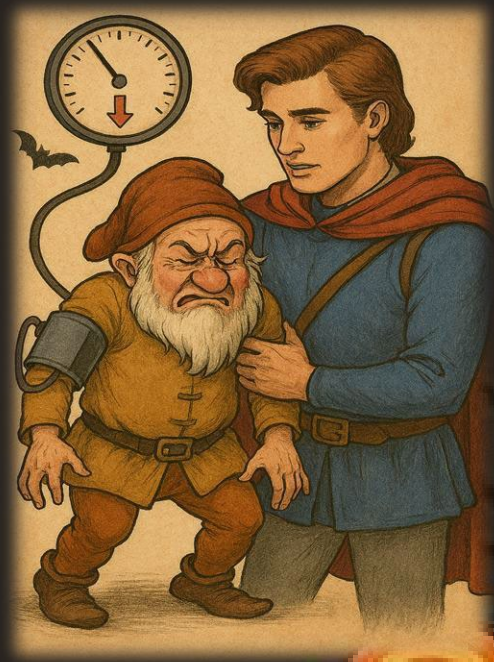
Source: https://www.cdc.gov/steadi/media/pdfs/STEADI-Assessment-30Sec-508.pdf

Orthostatic Hypotension

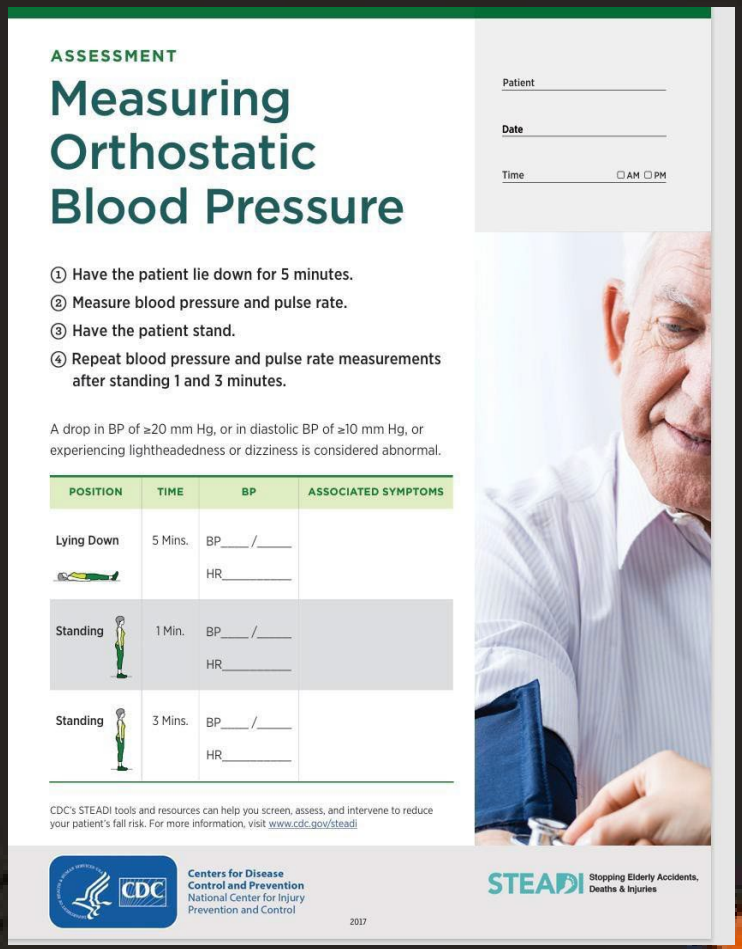
- 📊 Affects over 20% of people aged 60+
- 👵 >1/3 in assisted living; >50% in nursing homes
- 🏥 Nearly 70% of hospitalized elderly
- 🩺 More common in those with diabetes
- ❤️ Linked to coronary disease, heart failure, stroke
- ⚠️ Independent predictor of mortality and falls
- 🚑 Found in ¼-1/3 of ER patients with syncope

OH Definition

- Decrease in systolic blood pressure (SBP) of 20 mmHg or more or 10 mmHg or more diastolic (DBP) within 3 minutes of standing from the supine position.
- Most sensitive and consistent measurements in early morning.
- In patients with supine hypertension, OH is defined as a drop of at least 30 mmHg SBP or 15 mmHg DBP; however, decline >20 mmHg is a risk factor for falls.
- Neurogenic: related to neurological conditions (e.g., Parkinson's)
- Nonneurogenic: due to dehydration, anemia, or drug effects.
- Important to check supine and standing pulse rate to differentiate



Measuring Orthostatic BP



ASSESSMENT

Measuring Orthostatic Blood Pressure

Patient _____

Date _____

Time _____ ☐ AM ☐ PM

① Have the patient lie down for 5 minutes.
② Measure blood pressure and pulse rate.
③ Have the patient stand.
④ Repeat blood pressure and pulse rate measurements after standing 1 and 3 minutes.

A drop in BP of ≥20 mm Hg, or in diastolic BP of ≥10 mm Hg, or experiencing lightheadedness or dizziness is considered abnormal.

POSITION	TIME	BP	ASSOCIATED SYMPTOMS
Lying Down	5 Mins.	BP____/____ HR_____	
Standing	1 Min.	BP____/____ HR_____	
Standing	3 Mins.	BP____/____ HR_____	

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Centers for Disease Control and Prevention
National Center for Injury Prevention and Control

2017

STEADI Stopping Elderly Accidents, Deaths & Injuries

Source: https://www.cdc.gov/steadi/media/pdfs/STEADI-Assessment-MeasuringBP-508.pdf

Symptoms

- Occur with standing and relieved by supine position.
- Cerebral
  - Lightheadedness, syncope, cognitive impairment, vertigo
- Cardiovascular
  - Chest pain, palpitations
- Pulmonary
  - Dyspnea, fatigue, platypnea
- Gastrointestinal
  - Nausea
- Retina
  - Blurry or dimmed vision
- Upper body
  - Neck and shoulder pain (“coat hanger syndrome”)

PT Screen: MODERATE Risk

PT SCREEN: GAIT, STRENGTH, BALANCE
Hendrich II Fall Risk Scale
Timed Up & Go (TUG)
30-Second Chair Stand
Orthostatic Blood Pressure

Abnormal:
Hendrich≥5

FALL HISTORY
0 Falls?
1 Fall/No Injury?

Yes

MODERATE RISK
Educate resident
Vitamin D +/- calcium
PT/OT Referral
Medication Review
Review Care Plan
Encourage Fall Risk Reduction Behaviors
Transition to Maintenance Exercise Program When Ready

PT Screen: HIGH Risk

PT SCREEN: GAIT, STRENGTH, BALANCE
Hendrich II Fall Risk Scale
Timed Up & Go (TUG)
30-Second Chair Stand
Orthostatic Blood Pressure

Abnormal Hendrich≥5

FALL HISTORY
≥1 Fall With Injury?
≥2 Falls

Yes

MULTIFACTORIAL RISK ASSESSMENT
Fall History
Rapid Geriatric Assessment
Feet and Footwear Check (PT/OT)
Use of Assistive Devices (OT)
Visual Acuity
Medication Review (Pharmacist)

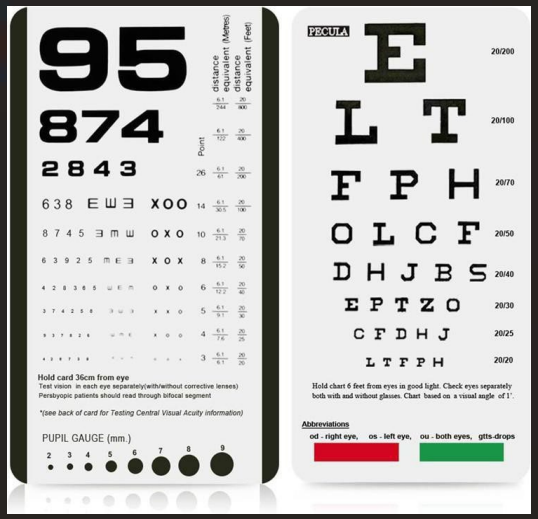
HIGH RISK
Educate Resident
Vitamin D +/-
Calcium
PT/OT Referral
Manage hypotension
Optimize Medications
Address Foot Problems
Optimize Vision
Optimize Home Safety

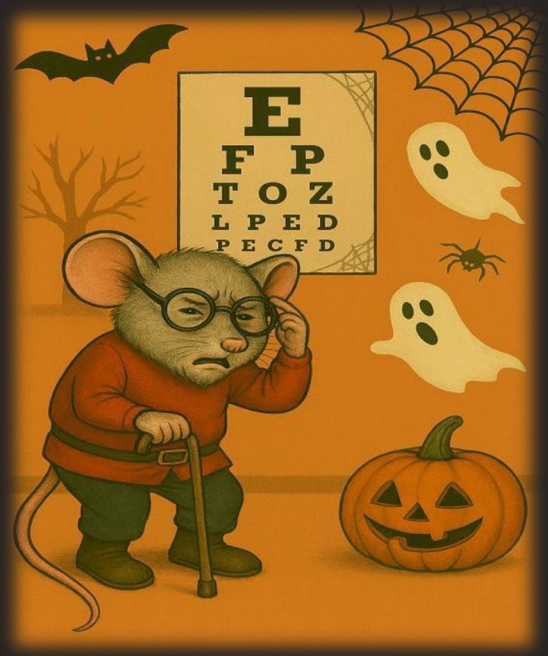
FOLLOW UP WITHIN 30 DAYS
Review Care Plan
Encourage Fall Risk Reduction Behaviors
Discuss and Address Barriers to Adherence
Transition to Maintenance Exercise Program When Ready

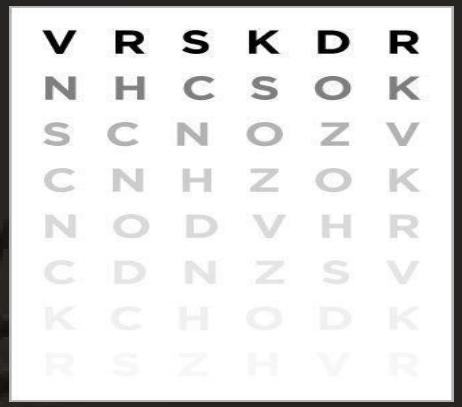
Physical Examination

- Blood pressure and pulse, both supine and standing
- Vision screening
- Cardiovascular exam
- Musculoskeletal exam. Include feet!
- Neurological exam
- Screen for depression (independent risk factor)

Vision Screening







Hearing

- **Handheld Audiometer**: Effective & expensive
- **Whispered Voice Test**: Easy & cheap
- **Tuning Fork Test**: Use 512–1024 Hz

Gait & Balance Evaluation

- Romberg test
- Sternal “nudge” test
- Dix-Hallpike test
- Gait speed
- Short Physical Performance Battery

Romberg Test

- Assesses postural control
- Cerebellum integrates inputs from:
  - Visual
  - Vestibular
  - Proprioceptive

Sternal Nudge Test

- Ask person to stand with both eyes open
- Place feet as close together as possible
- Ensure safety: have another person behind
- Nudge sternum slightly with your fingers
- Normal response: Patient stretches arms forward and takes a step backward if necessary to compensate
- Staggering or instability: consider neurological disease and/or back disease.

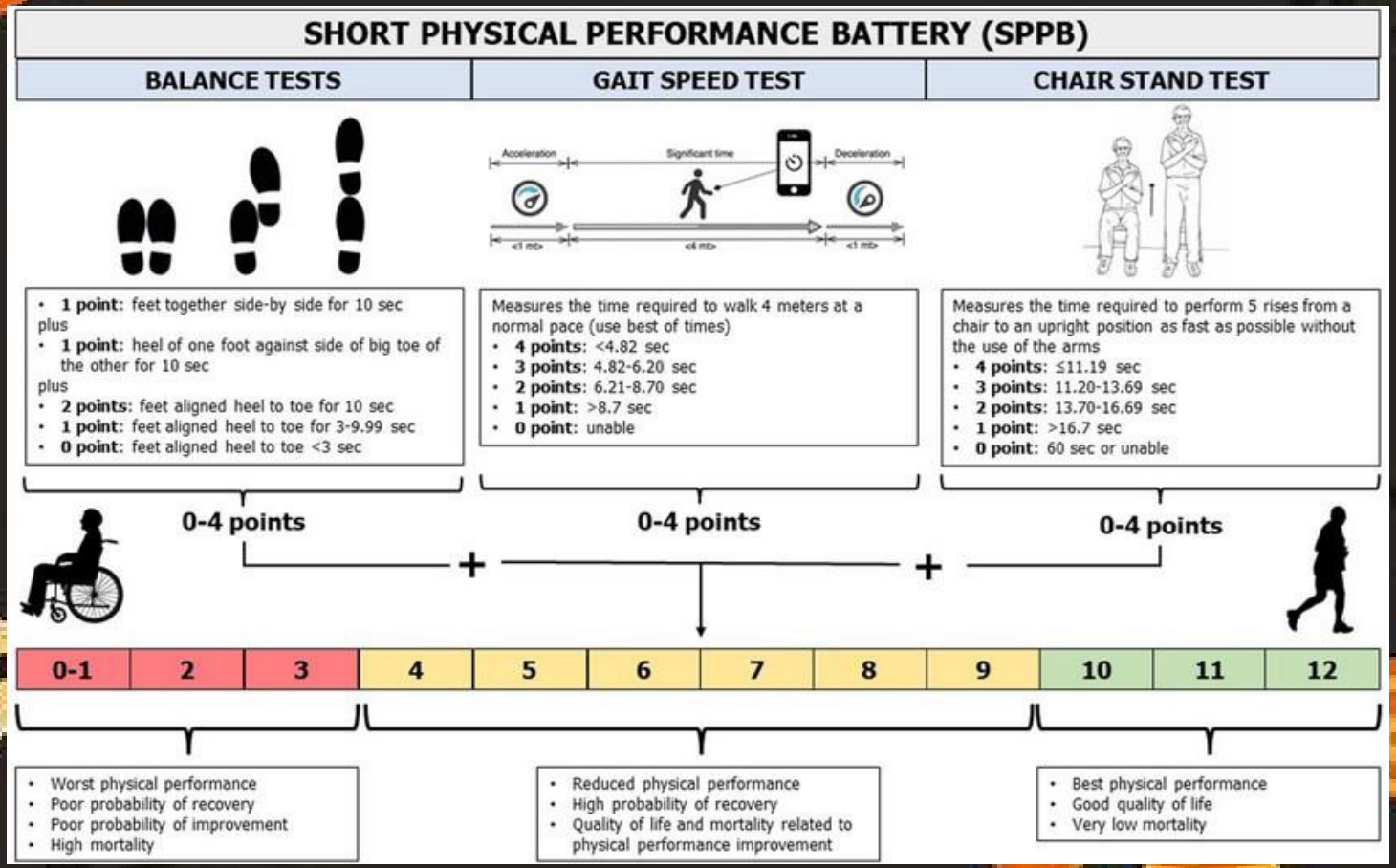
Dix-Hallpike Maneuver

- Sitting to a supine position, with the head turned 45 degrees to one side and extended about 20 degrees backward.
- A positive Dix-Hallpike tests consists of a burst of nystagmus (jumping of the eyes).
- Helps identify benign positional vertigo.

Gait Speed

- A 6m space is required
- The distance is separated into zones:
  - 1m acceleration zone
  - 4m testing zone
  - 1m deceleration zone
- Patient walks at normal pace; may use an assistive device if necessary.
- Timer begin with the first footfall after the initial testing line.
- Stop timer coinciding with the first footfall after the 4 m finish line.
- The test should be repeated twice.
- Scoring: A gait speed of more than 5 seconds to walk 4 meters (<0.8 m/s) indicates that the patient is at increased risk of adverse outcomes.

Short Physical Performance Battery



Diagnostic Testing

- CBC, BUN/Cr, glucose: to test for anemia, dehydration, or hyperglycemia. Toxicology if drugs suspected.
- Other tests based on history & physical exam: echocardiography, brain imaging, Xrays of spine
- Carotid sinus massage: carotid sinus hypersensitivity, a common cause of unexplained falls and fainting in the elderly. Contraindications include recent stroke, TIA, significant carotid artery stenosis
- Holter monitoring: no proven value for routine evaluation

Interventions

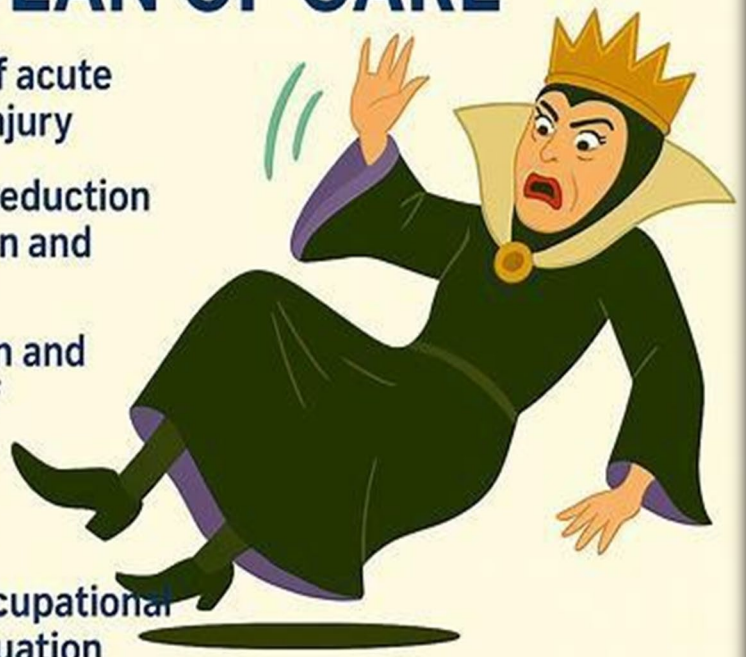
- Most favorable results with health screening followed by targeted interventions
- Aim to reduce intrinsic and environmental risk factors
- Interdisciplinary approach to falls prevention is most efficacious

SPLATT

- S: Symptoms
- P: Previous falls, near-falls
- L: Location of fall
- A: Activity at time of fall
- T: Time of fall
- T: Trauma, physiological and psychological

INITIAL PLAN OF CARE

- Treatment of acute illness and injury
- Review and reduction of medication and alcohol use
- Identification and treatment of orthostatic hypotension
- Initiation of physical/occupational therapy evaluation



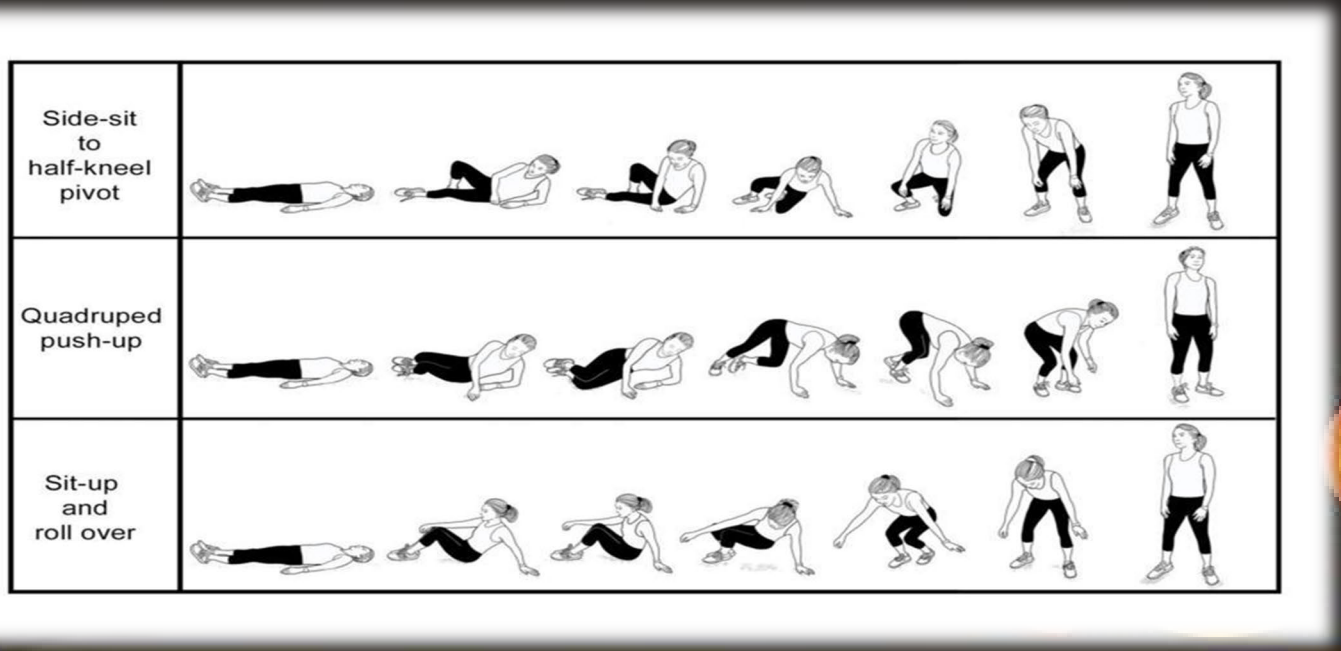
THERAPY

- Muscle strengthening
- Balance exercises
- Ambulatory assistive device if necessary
- Transfer and gait training
- Home safety evaluation

Instruction to prevent long lie

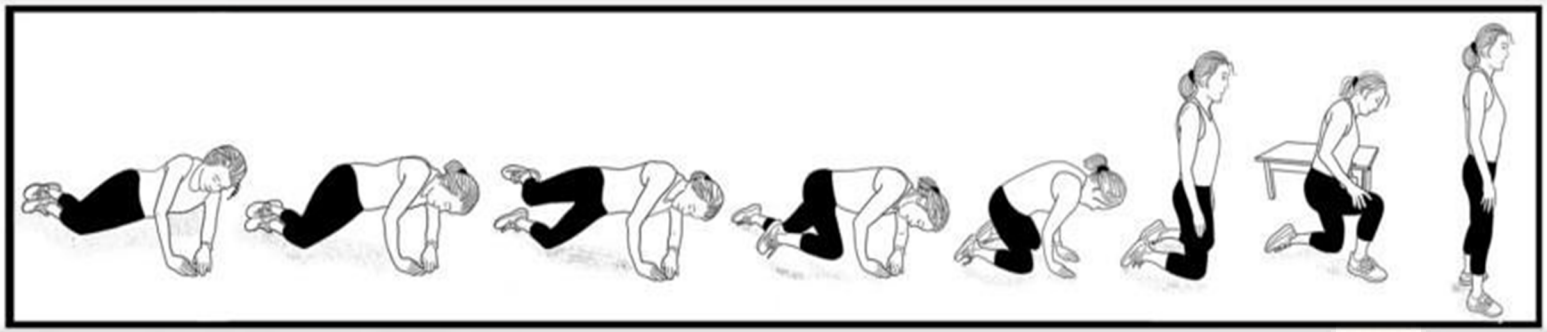
Preventing a Long-Lie

- Side-Sit pivot most popular with older adults:
  - Extremities maintain ground contact
  - Maximizes stability and postural control
  - Requires smaller ranges of hip & knee flexion



DNS Core Exercise

- Safest and easiest way to get up
- Requires smaller ranges of hip/knee flexion—easier on arthritis patients
- Improves stability and postural control
- Requires less head/neck motion



Consider…

- Eye/audiology exam
- Footwear evaluation
- Hip protectors
- Alarm device
- Lifeline

New Technology

Vitamin D

- Vitamin D supplementation at doses of 800-1000 IU per day, is associated with a significant reduction in the risk of falls among older adults.

  - Effect of Vitamin D, Calcium, or Combined Supplementation on Fall Prevention: A Systematic Review and Updated Network Meta-Analysis. Tan L, He R, Zheng X. BMC Geriatrics. 2024;24(1):390. doi:10.1186/s12877-024-05009-x.

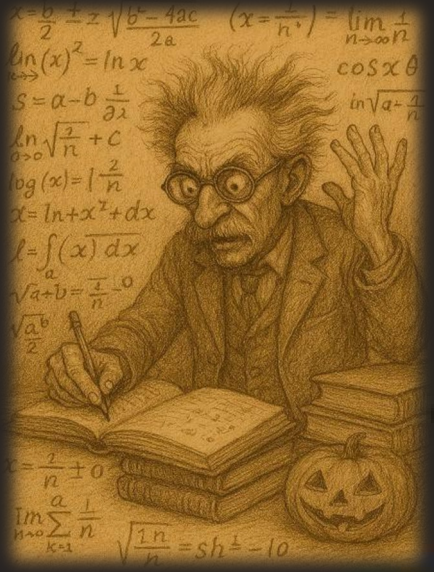
DATA!!!

“In God we trust. Everyone else must bring data!”

-Dr. W. Edwards Deming

Calculating Fall Rates

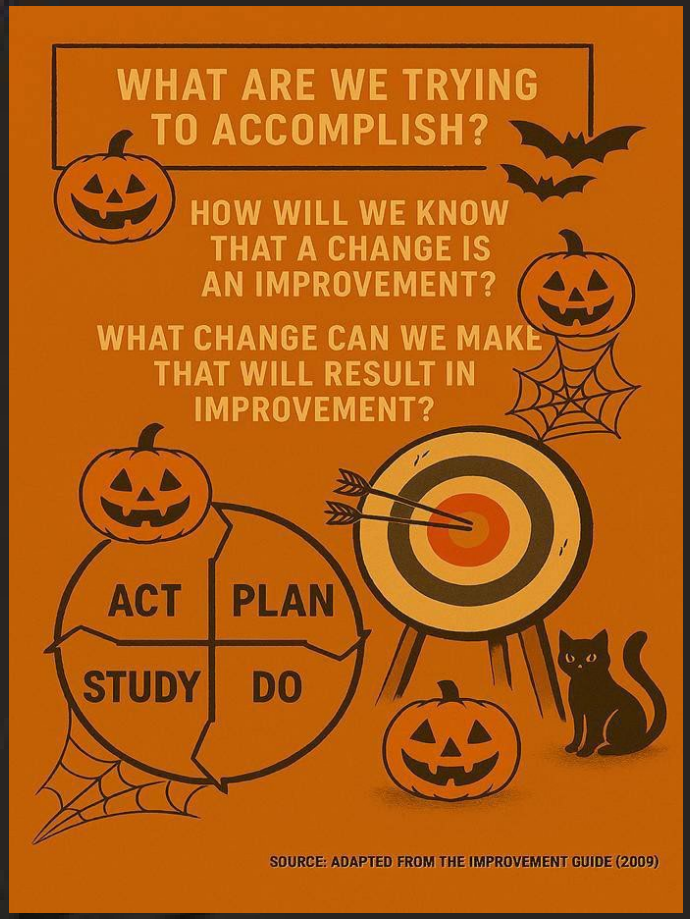
- Calculating the fall rate per 1000 patient days:
  - # of falls/BDOC (bed days of care)
  - BDOC = average daily census/month x days/month
  - Multiply by 1000
- Example: AL Community has had 8 falls with 1 serious injury in April.
  - Average daily census is 30.
  - Multiply 30 x 30 days = 900 BDOC
  - 8/900 = 0.0089
  - 0.0089 x 1000 = 8.9 fall rate
  - Serious injury = 0.0011 x 1000 = 1.1 injury rate



Goals

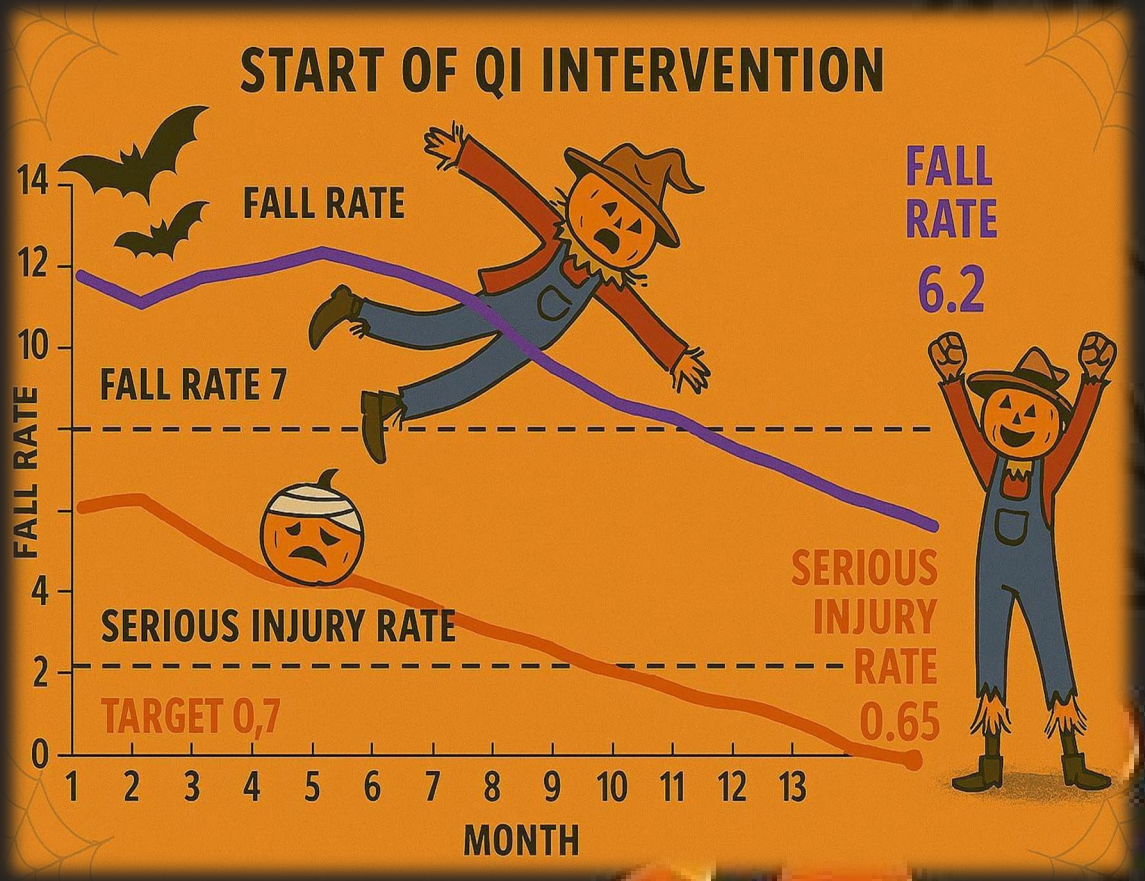
- No national benchmarks for fall rates in assisted living
- National studies report residential care ranges of 7-13 falls per 1000 resident days
- Injurious falls about 2.6 per 1000 resident days
- Falls requiring hospitalization about 0.7 per 1000 resident days
- A reasonable goal is <7 falls per 1000 resident days
- For serious injury fall rates requiring hospitalization, <0.7 per 1000 resident days.
- Try to get rates as low as reasonably achievable!

Know Your Target!



Track Your Progress!

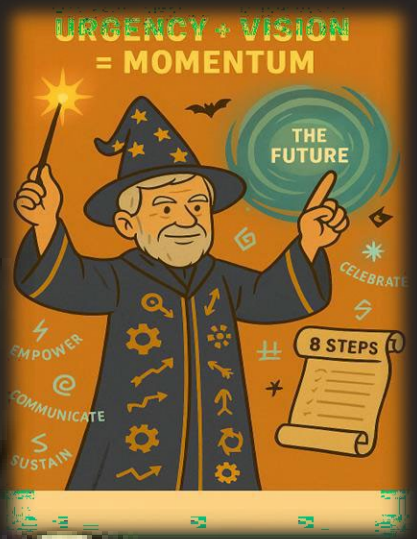
Aim Statement: By Halloween 2026,1 year following the initiation of our quality improvement project, we will reduce our fall rate to 7 or less and our serious fall injury rate to 0.7 or less



DON'T BE A MUMMY— LEAD THE CHANGE!

Change is scary... but hiding from it is scarier.

- **Brains!"**—Zombies love them, but leaders need to use them to drive innovation.
- **Witch way forward?"**—Cast a vision spell and guide your team through the fog.
- **Vampire-proof your strategy"**—Avoid energy drainers and embrace daylight transparency.
- **Unwrap your potential**—Don't let fear keep you wrapped up in the past.



KOTTER'S 8 STEPS TO ESCAPE THE HAUNTED HOUSE OF RESISTANCE!

1. CREATE URGENCY
2. FORM POWERFUL COALITION
3. CREATE VISION FO CHANGE
4. ENLIST AN ARMY
5. REMOVE OBSTACLES
6. CREATE SHORT-TERM WINS
7. BUILD MOMENTUM
8 ANCHOR THE CHANGE
VALUES Norms LEADERSHIP
LET'S DO THIS!
FEAR
LET'S DOIT!
STATUS QUO MANOR
DEGRESS
RED TAPE
NEGATIVITY
LET'S DOIT!

Don't let your organization become a ghost town–
Lead the change–before the cobwebs take over.

Quiz: True or False

1. Most falls in elderly persons are associated with significant injury.

   False

2. Falls are the leading cause of accidental death in the elderly.

   True

3. Approximately 5% of older persons fall each year.

   False

4. Falls in the older adult usually have one cause.

   False

5. Orthostatic (postural) hypotension is a common cause of falls in older adults.

   True

Best Answer(s)

1. Which of the following types of medication are associated with an increased fall risk?
   a. Thyroid supplements
   b. Tranquilizers
   c. Narcotic pain medications
   d. Anti-depressants
2. Which of the following illnesses can increase fall risk in an elderly person?
   a. Pneumonia
   b. Parkinson's disease
   c. Alzheimer's disease and other forms of dementia
   d. Urinary tract infection

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Case 1

- An 85-year-old woman in an assisted living community is having her annual wellness visit.
  - Occasionally incontinent of urine
  - Sometimes gets dizzy when she stands
  - Fell 6 months ago, without injury
- History: hypertension, declining memory (over past 3 years)
- Medications: hydrochlorothiazide, donepezil, quetiapine
- Physical examination:
  - Heart rate, 60 bpm; blood pressure, 150/80 mmHg seated and 130/70 mmHg standing
  - She is thin and mildly cachectic.

Case 1

- Which one of the following is the single most predictive risk factor for this patient's future fall risk?
  - Dementia
  - Hydrochlorothiazide
  - Prior fall
  - Orthostatic hypotension
  - Quetiapine

Case 1

- Which one of the following is the single most predictive risk factor for this patient's future fall risk?
  - Dementia
  - Hydrochlorothiazide
  - **Prior fall**
  - Orthostatic hypotension
  - Quetiapine

Case 2

- An 85-year-old woman has fallen twice in the last 6 months.
  - Most recent fall resulted in a hip contusion, from which she has now recovered.
  - A personal trainer works with her 3 days per week doing gait and balance training.
- History: diabetes (controlled by diet), osteoarthritis
- Surgical history: cholecystectomy, removal of a cataract in her right eye
- Medication: acetaminophen as needed
- Physical examination:
  - Blood pressure, 148/80 mmHg (seated and standing)
  - Mild bilateral hearing loss
  - Visual acuity: 20/30 on the right and 20/80 with correction on the left

Case 2

- Based on the results of controlled clinical trials, which one of the following interventions is most likely to help prevent future falls in this patient?
  - Removing the second cataract
  - Wearing hip protectors
  - Taking a vitamin D supplement
  - Wearing non-slide shoes
  - Using a personal alarm system

Case 2

- Based on the results of controlled clinical trials, which one of the following interventions is most likely to help prevent future falls in this patient?
  - Removing the second cataract
  - Wearing hip protectors
  - **Taking a vitamin D supplement**
  - Wearing non-slide shoes
  - Using a personal alarm system

Resources

- STEADI: Stopping Traumatic Elderly Accidents, Deaths and Injuries (CDC)
  - https://www.cdc.gov/steadi/index.html
- The Improvement Guide: A Practical Approach to Enhancing Organizational Performance, 2nd Edition.
  - Langley GJ, Moen RD, et al. (2009) Jossey Bass Wiley.
- The Institute for Healthcare Improvement
  - www.ihi.org
- Hendrich II Fall Risk Model
  - https://hendrichfallriskmodel.com/about-us/
- Kotter International
  - www.kotterinc.com
- The Falls Prevention and Monitoring Program: A Quality Improvement Program for Residential Care/Assisted Living Communities
- Video presentation on Orthostatic Hypotension:
  - https://us06web.zoom.us/rec/play/msjGsCeEYq7QBQ25Fch5SvhlZyJltc3onk_cYwQB3qA1BjFxKRpLEE2a0FgghT2CI8BEo1zHYLraMfXA.nPUFYTXFSDUg7Ps6?accessLevel=meeting&canPlayFromShare=true&from=my_recording&startTime=1737123460000&componentName=rec-play&originRequestUrl=https%3A%2F%2Fus06web.zoom.us%2Frec%2Fshare%2Fo2BrmNEMLT5SYi25NXCZm1hl_EzqTyBAYbNsli3JFbd4G1OOG9HtVyHrakGcC4Iw.svBY4KQNVjQ7nq6G%3FstartTime%3D1737123460000%2520Passcode%3A%2520e%3D%261K%5EyM

The Why…

"The purpose of human life is to serve and to show compassion and the will to help others."

-Dr. Albert Schweitzer


QUESTIONS?