



Staying Steady: Fall Prevention in Nursing Homes

Tara C. Klinedinst, PhD, OTR/L
Oklahoma Dementia Care Network
September 2025



COLLEGE OF ALLIED HEALTH
DEPARTMENT OF REHABILITATION SCIENCES
The UNIVERSITY of OKLAHOMA HEALTH SCIENCES CENTER

Dr. Tara C. Klinedinst, PhD, OTR/L



Objectives



IDENTIFY MAJOR RISK
FACTORS FOR FALLS



UNDERSTAND CURRENT
AND EMERGING FALL
PREVENTION STRATEGIES



APPLY EVIDENCE-BASED
PRACTICES TO YOUR
FACILITY



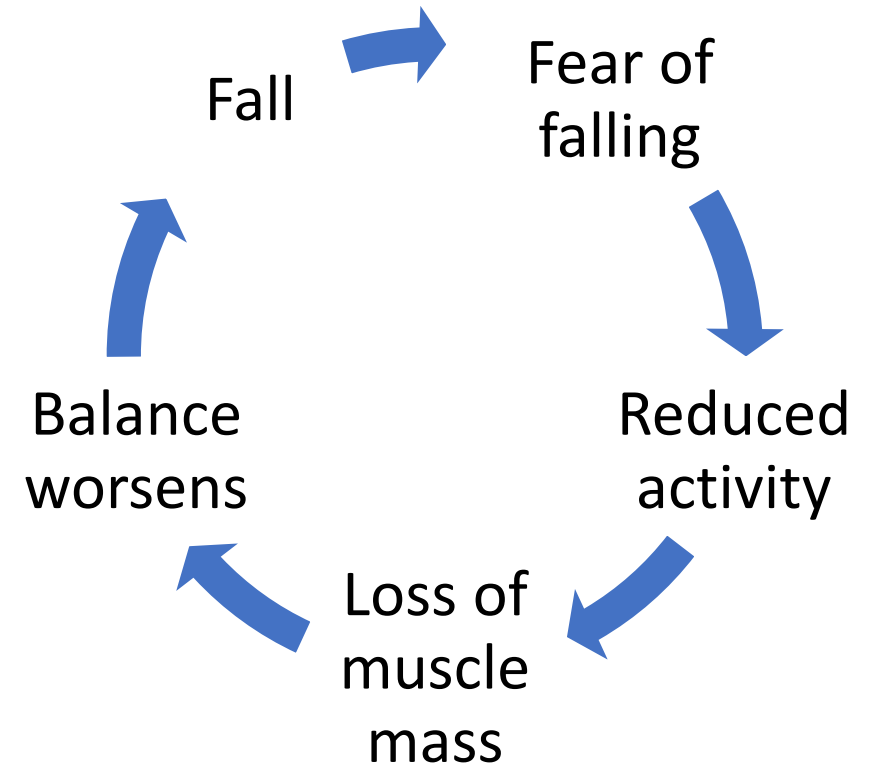
EXPLORE NEW
TECHNOLOGY AND
FUNDING OPPORTUNITIES



COLLEGE OF ALLIED HEALTH
DEPARTMENT OF REHABILITATION SCIENCES
The UNIVERSITY of OKLAHOMA HEALTH SCIENCES CENTER

Why This Matters

- Falls affect ~50% of nursing home residents annually
- Leading cause of injury, hospitalization, and loss of independence
- Emotional and psychological impact on residents
- Regulatory and financial impact (CMS quality measures)
- Costly (\$22,368 for multiple-injury fall)



Understanding Fall Risk Factors



Intrinsic:
Physical/medical
conditions



Extrinsic:
Environmental
hazards



Behavioral:
Habits and
activities



COLLEGE OF ALLIED HEALTH
DEPARTMENT OF REHABILITATION SCIENCES
The UNIVERSITY of OKLAHOMA HEALTH SCIENCES CENTER



Intrinsic Risk Factors

- Muscle weakness and balance issues
- Vision or hearing decline
- Chronic conditions: arthritis, diabetes, etc.
- Side effects from medications



Extrinsic Risk Factors

Poor lighting

Slippery or uneven floors

Loose rugs or mats

Cluttered walkways

Lack of handrails or grab bars

Unstable furniture

Improper footwear

Not having what residents need nearby



Comprehensive Fall Risk Assessment

- Admission and ongoing screening tools
 - Morse Fall Scale, STEADI
- Medication review for high-risk drugs
- Functional and mobility assessments AND re-assessments



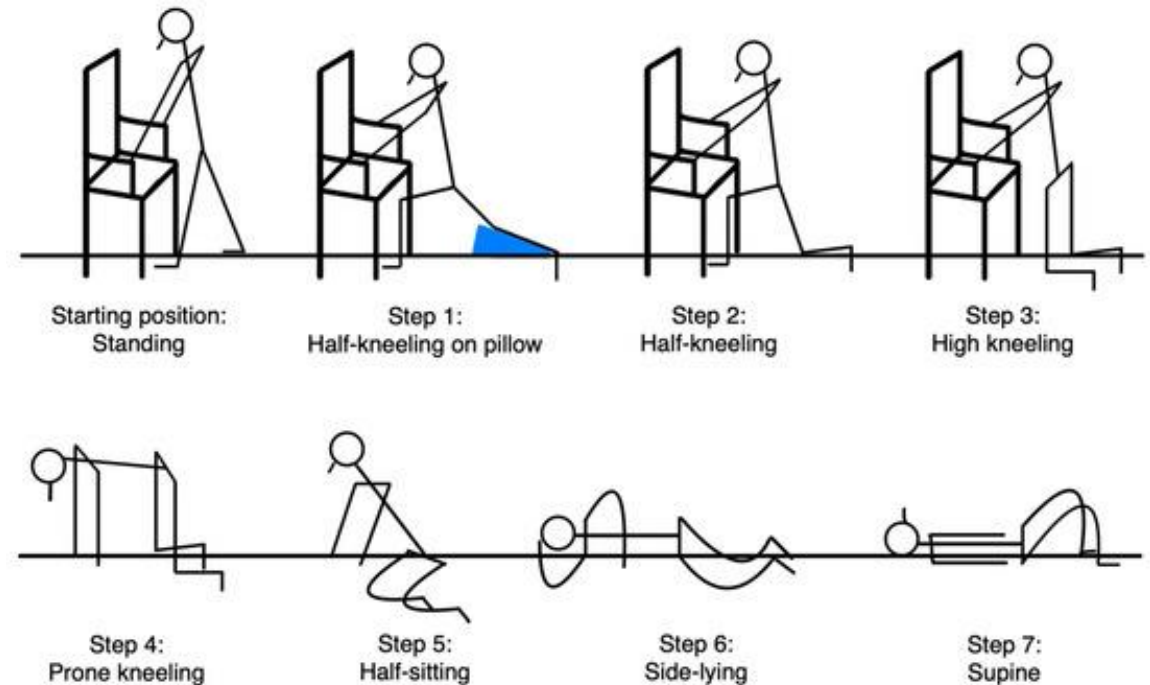
Evidence-Based Prevention Strategies

- Occupational and physical therapy and strength training
- Environmental modifications (grab bars, lighting)
- Safe mobility aids and footwear
- Staff and family education
- Post-fall analysis and huddles



Backward-Chaining Method

- Older adults worry about not being able to get up after a fall ->
- They reduce their physical activity ->
- Fall risk is increased
- Fear of falling increases risk of falling
- **13 residents at a long-term care facility** participated in a 7-week training program learning how to stand up from the ground.
- Compared to the control group there was no significant change in functional mobility or lower limb strength; however, **they demonstrated lower fear of falling scores and higher independent life-space scores.**



<https://doi.org/10.3390/jcm14155293>



Emerging Topics in Fall Prevention

- Ethical balance: autonomy vs. safety and “Freedom to Fall”
- Deprescribing and comprehensive medication review
- Staff workload and alarm fatigue



“Freedom to Fall” Philosophy

- **Recognizes autonomy as a core value** – Even with dementia, individuals retain the right to make choices, including those involving some risk, rather than being overprotected or restrained.
- **Views falls as part of living, not just a failure of care** – Instead of striving for zero falls, the focus is on supporting meaningful activity and preserving dignity.
- **Balances safety with quality of life** – Interventions aim to minimize serious harm without eliminating movement, exploration, or independence.
- **Encourages personalized risk assessment** – Decisions are made based on each person’s abilities, preferences, and goals rather than rigid rules.
- **Promotes a supportive environment** – Staff and families are educated to reframe risk as a natural part of person-centered care, fostering understanding rather than fear.



Medication review and deprescribing

- **Review and deprescribe** when possible—cut down on numbers of medications, especially FRIDs, and consider safer alternatives.
- **Reassess standing blood pressure regularly**, particularly after initiating or adjusting antihypertensive or CNS-active medications.
- **Target high-risk drugs with caution**—evaluate the necessity and dosing of hypnotics, antipsychotics, and similar agents.
- **Monitor residents more closely after starting new medications**, especially psychotropics or hypotension-inducing medications.

FACT SHEET

Medications Linked to Falls

Review medications with all patients 65 and older. Medication management can reduce interactions and side effects that may lead to falls.

STOP medications when possible.
SWITCH to safer alternatives.
REDUCE medications to the lowest effective dose.

Check for psychoactive medications, such as:

➤ Anticonvulsants	➤ Benzodiazepines
➤ Antidepressants*	➤ Opioids
➤ Antipsychotics	➤ Sedatives-hypnotics*

Review prescription drugs, over-the-counter medications, and herbal supplements. Some can cause dizziness, sedation, confusion, blurred vision, or orthostatic hypotension. These include:

➤ Anticholinergics	➤ Medications affecting blood pressure
➤ Antihistamines	➤ Muscle relaxants

Develop a patient plan that includes medication changes, and a monitoring plan for potential side effects. Implement other strategies, including non-pharmacologic options to manage conditions, address patient barriers, and reduce fall risk.

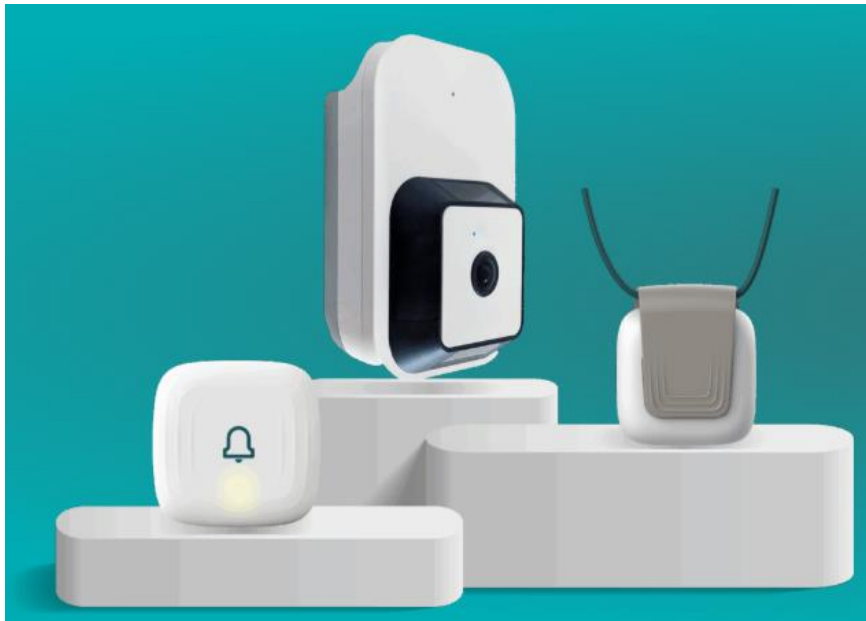
Visit the [American Geriatrics Society Beers Criteria](#) for more information on medications linked to falls.



Staff workload and alarm fatigue

- **Target alarms strategically:** Use alarms only for residents at highest risk rather than facility-wide blanket use.
- **Integrate alarms with workflow:** Ensure alerts reach the right staff member quickly through mobile devices or silent paging rather than loud, disruptive sounds.
- **Enhance staffing and rounding:** Proactive checks on residents reduce reliance on alarms and catch risks earlier.
- **Promote a culture of safety:** Encourage staff feedback on alarm policies and involve them in fall-prevention planning to increase engagement and compliance.
- **Improve alarm accuracy:** Select systems with fewer false positives, such as wearable or sensor-based technology.





Technology for Fall Prevention

Feature Area	SafelyYou	Vayyar Care
Technology	AI video-based (event only)	mmWave radar (touchless, all environments)
Privacy	Limited footage, no live streaming	Camera-free, wearables-free, button-free
Integration	Full AI care suite + clinical support	Nurse-call integration + behavioral analytics
Outcomes	Proven reductions in falls & ER visits; 4+ mo longer stay	Cost & occupancy benefits; real-time alerts
Best For	Facilities needing full care analytics & proven AI performance	Communities seeking seamless, privacy-first fall detection with operational ROI

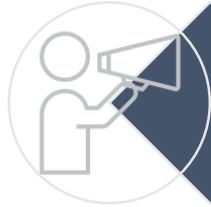


How to Pay for Fall Prevention Innovation

- CMS Quality Incentive Programs and VBP
- State Medicaid and Managed Long-Term Services and Supports (MLTSS) programs
- Vendor leasing or subscription models
- Building an ROI case: cost of falls vs. cost of prevention



Staff Role and Team Communication



Fall prevention is everyone's responsibility
Look for changes in mobility, behavior, environment



Use of shift huddles to notify team



Nominate a fall prevention champion



Encouraging near-miss reporting



Post-Fall Protocol

- Immediate injury check
- Root cause analysis (click [here](#) for guidance)
 - “Five Whys”
 - Fishbone diagram
- Care plan update and staff debrief
- Communicating with family



Implementation Steps for Facilities



Start with pilot projects



Integrate into EHR and workflows



Provide staff training and ongoing refreshers



Monitor metrics and celebrate improvements



Key Takeaways

Falls are often preventable but require a multi-layered approach

Risk assessment must be ongoing

Technology and staff training complement each other

Pilot testing to calculate ROI can make innovation possible

Discussion / Q&A

- Have any of you tried fall prevention technology? What has your experience been like?
- Is there anything that you have tried that has helped (even modestly) reduce falls?
- Do you or your staff implement “Freedom to Fall” philosophies?



Resources

- CDC STEADI: <https://www.cdc.gov/steady/>
- CMS CMP Reinvestment Program: <https://www.cms.gov/medicare/cmp-reinvestment>
- AHRQ Patient Safety Resources <https://www.ahrq.gov/patient-safety/settings/long-term-care/resource/ontime/fallspix/index.html>
- Vendor examples
 - SafelyYou: <https://www.safely-you.com/safelyyou-halo/>
 - Vayyar Care <https://vayyar.com/care/>



Thank You

- Tara-Klinedinst@ou.edu