

CATCH RURAL Falls

*Coordinated Action Toward
Community Health: RedUce
Risk And Limit Falls*

**Assessment and Intervention
for Orthostatic Hypotension**

Acknowledgements: Funding for the CATCH RURAL Falls Program

This work is supported by the Nebraska Department of Health and Human Services Office of Rural Health Medicare Rural Hospital Flexibility Program.

The content is solely the responsibility of the presenters and does not necessarily represent the views of any funding source.



Introductions and Contact Information

Dawn Venema, PT, PhD

- Physical therapist, with experience primarily in geriatric practice
- Expertise in fall risk management and mobility
- dvenema@unmc.edu



Victoria (Vicki) Kennel, PhD

- Industrial organizational psychologist
- Expertise in quality improvement, teamwork, and organizational science
- victoria.kennel@unmc.edu



Educational Objectives

- Measure orthostatic blood pressure as part of a thorough assessment of fall risk
- Identify appropriate interventions when orthostatic hypotension is identified as a risk factor



Steps for Fall Risk Management Recommended by the Centers for Disease Control Stopping Elderly Accidents, Deaths, and Injuries (STEADI) Initiative

- The identification of patients at increased risk of falling to determine if additional in-depth assessment of risk factors is needed

**Fall Risk
Screening**



- The identification of specific risk factors to guide intervention
- *In other words, why is your patient at risk for falling?*

**Fall Risk
Assessment**



- Addressing modifiable risk factors through medical management or referral to other health care professionals or resources

**Fall Risk
Intervention**



Centers for Disease Control Algorithm for Fall Risk Screening, Assessment, and Intervention



STEADI Algorithm

STEADI Algorithm for Fall Risk Screening, Assessment, and Intervention among Community-Dwelling Adults 65 years and older

START HERE

1 SCREEN for fall risk yearly, or any time patient presents with an acute fall.

Available Fall Risk Screening Tools:

• **Stay Independent: a 12-question tool** [at risk if score ≥ 4]
 - **Important:** If score < 4 , ask if patient fell in the past year
 (If **YES** → patient is at risk)

• **Three key questions** for patients [at risk if **YES** to any question]
 - Feels unsteady when standing or walking?
 - Worries about falling?
 - Has fallen in past year?
 » If **YES** ask, "How many times?" "Were you injured?"

SCREENED NOT AT RISK

PREVENT future risk by recommending effective prevention strategies.

- Educate patient on fall prevention
- Assess vitamin D intake
 - If deficient, recommend daily vitamin D supplement
- Refer to community exercise or fall prevention program
- Reassess yearly, or any time patient presents with an acute fall

SCREENED AT RISK

2 ASSESS patient's modifiable risk factors and fall history.

Common ways to assess fall risk factors are listed below:

Evaluate gait, strength, & balance

Common assessments:

- Timed Up & Go
- 4-Stage Balance Test
- 30-Second Chair Stand

Identify medications that increase fall risk (e.g., Beers Criteria)

Ask about potential home hazards (e.g., throw rugs, slippery tub floor)

Measure orthostatic blood pressure (Lying and standing positions)

Check visual acuity

Common assessment tool:
 • Snellen eye test

Assess feet/footwear

Assess vitamin D Intake

Identify comorbidities

(e.g., depression, osteoporosis)

3 INTERVENE to reduce identified risk factors using effective strategies.

Reduce identified fall risk

- Discuss patient and provider health goals
 - Develop an individualized patient care plan (see below)
- Below are common interventions used to reduce fall risk:

Poor gait, strength, & balance observed

- Refer for physical therapy
- Refer to evidence-based exercise or fall prevention program (e.g., Tai Chi)

Medication(s) likely to increase fall risk

- Optimize medications by stopping, switching, or reducing dosage of medications that increase fall risk

Home hazards likely

- Refer to occupational therapist to evaluate home safety

Orthostatic hypotension observed

- Stop, switch, or reduce the dose of medications that increase fall risk
- Educate about importance of exercises (e.g., foot pumps)
- Establish appropriate blood pressure goal
- Encourage adequate hydration
- Consider compression stockings

Visual impairment observed

- Refer to ophthalmologist/optometrist
- Stop, switch, or reduce the dose of medication affecting vision (e.g., anticholinergics)
- Consider benefits of cataract surgery
- Provide education on depth perception and single vs. multifocal lenses

Feet/footwear issues identified

- Provide education on shoe fit, traction, insoles, and heel height
- Refer to podiatrist

Vitamin D deficiency observed or likely

- Recommend daily vitamin D supplement

Comorbidities documented

- Optimize treatment of conditions identified
- Be mindful of medications that increase fall risk

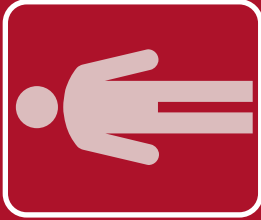
FOLLOW UP with patient in 30-90 days.

Discuss ways to improve patient receptiveness to the care plan and address barrier(s)



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

Measurement of Orthostatic Blood Pressure



Lying

- Have patient lie down for 5 minutes and measure blood pressure



Standing

- Repeat the blood pressure measurement after the patient has stood for 1 minute



Standing

- Repeat the blood pressure measurement again after the patient has stood for 3 minutes

Orthostatic hypotension is defined as a drop in systolic blood pressure of ≥ 20 mm Hg, a drop in diastolic blood pressure of ≥ 10 mm Hg, or experiencing lightheadedness or dizziness upon changing positions.

[Instructions available from the CDC STEADI Toolkit](#)

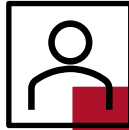


Intervene When Indicated



Medications

- Review antihypertensive medications and consider changes if possible
- Consider if other medications might be causing orthostatic signs and symptoms as well



Behavioral Changes

- Foot pumping before changing position
- Pause after position changes
- Hold onto something at least briefly upon standing up
- Sit down when showering, dressing, working in kitchen, etc.
- Sleep with head slightly elevated
- Avoid excessively hot baths/showers



Hydration

- Encourage adequate fluid intake (~50 oz daily) unless contraindicated



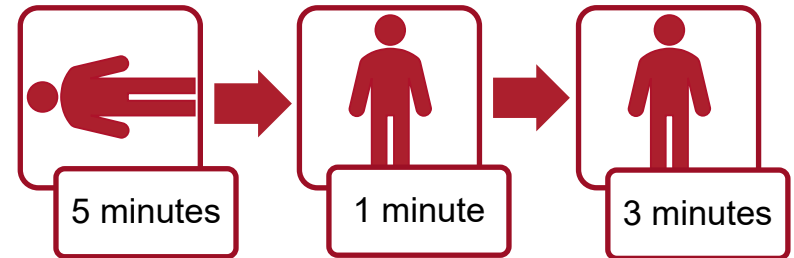
Compression Stockings

- However, realize these can be difficult for older adults to don/doff

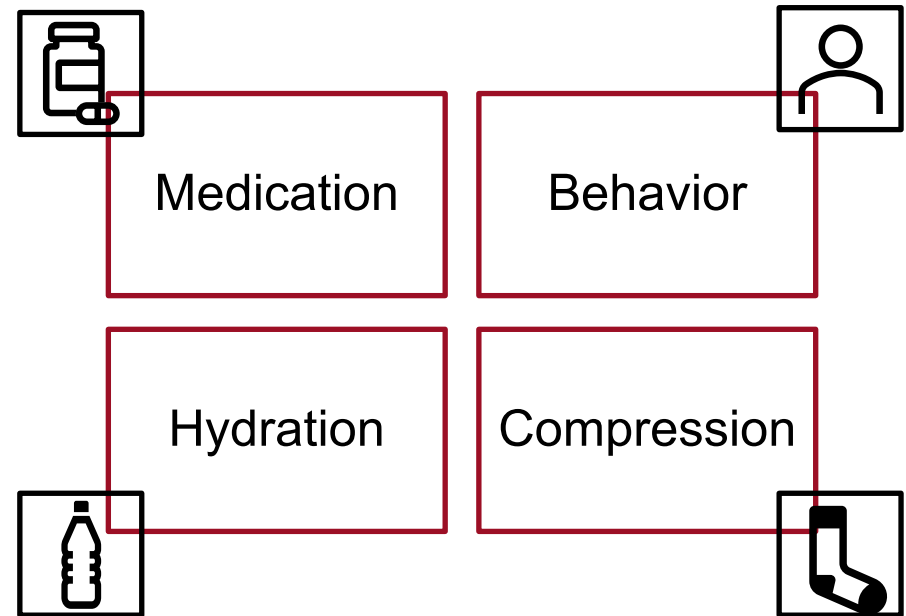


Summary: Review of Objectives

Measure orthostatic blood pressure as part of a thorough assessment of fall risk



Identify appropriate interventions when orthostatic hypotension is identified as a risk factor



References and Resources

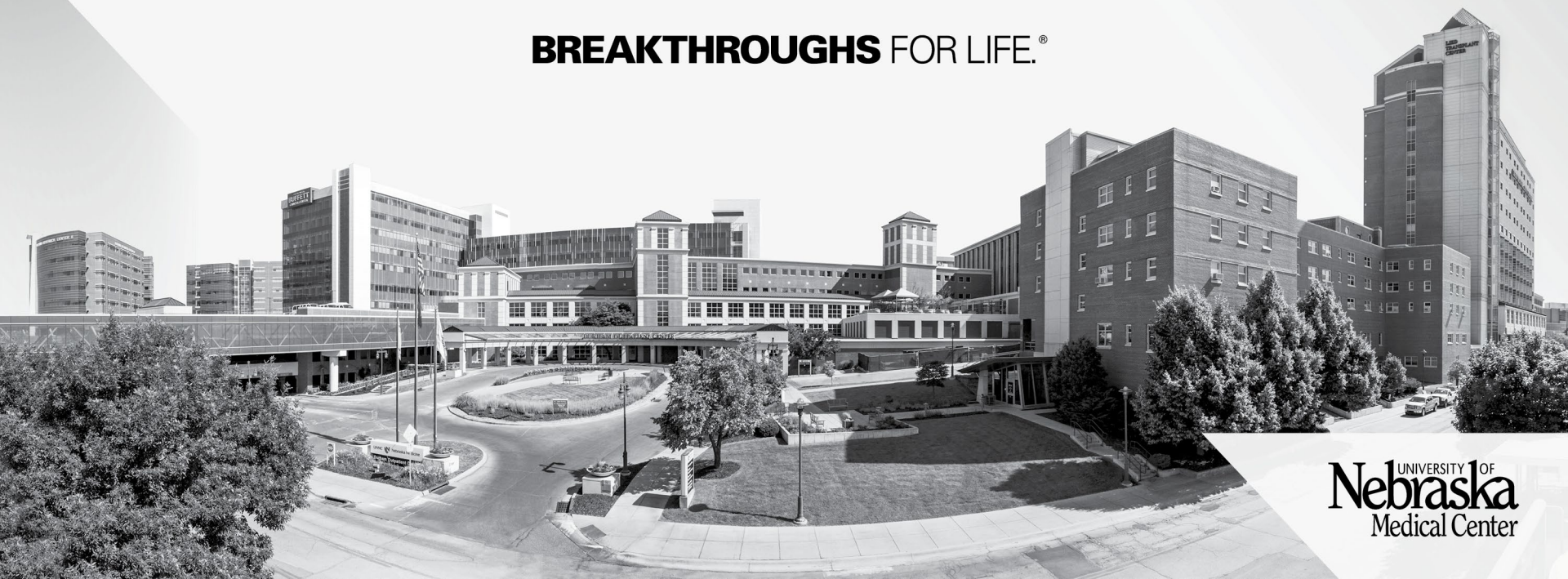
- [Center for Disease Control \(CDC\) Stopping Elderly Accidents, Deaths, and Injuries \(STEADI\) Home Page](#)
- [CDC STEADI Algorithm for Fall Risk Screening, Assessment, and Intervention](#)
- [CDC STEADI Coordinated Care Plan to Prevent Older Adult Falls](#)
- [CDC STEADI Measuring Orthostatic Blood Pressure \(Health Care Professional Instructions\)](#)
- [CDC STEADI Postural Hypotension: What it is & How to Manage it \(Patient Education Brochure\)](#)
- [CDC STEADI Hipotensión postural: Qué es y cómo manejarla \(Spanish Patient Education Brochure\)](#)





University of Nebraska Medical CenterSM

BREAKTHROUGHS FOR LIFE.[®]



UNIVERSITY OF
Nebraska
Medical Center