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The Nursing Home Expert Panel's

Falls Investigation Guide Toolkit

How-to Guide

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The Oregon Patient Safety Commission is a semi-independent state agency that supports healthcare facilities and providers in improving patient safety. We encourage broad information sharing, ongoing education, and open conversations to cultivate a more trusted healthcare system.

Learn more: **oregonpatientsafety.org**

Our Mission

To reduce the risk of serious adverse events occurring in Oregon's healthcare system and encourage a culture of patient safety.

BUILDING A CULTURE OF SAFER CARE—TOGETHER.

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Introduction

Oregon's Quality Agenda

In 2008, the Oregon Patient Safety Commission convened its Nursing Home Expert Panel to encourage quality improvement in nursing homes. The stated goal was to "better align nursing home patient safety efforts around a well-articulated and interlocking set of principles, values and assumptions." The project started with a straightforward question: Could the expert panel identify critical safety concerns and then offer a standardized set of improvement tools? Since then, the work has gathered momentum and is now part of a larger effort to rethink quality efforts within long term care. The cornerstones of this new approach are:

- **Responsive regulation**, an approach that encourages nursing homes to design their own safe systems, while regulating those systems to ensure that best practices are consistently applied.
- **Alignment of interests.** The belief that improvement requires everyone, including nursing facilities, regulators, patients and families, and purchasers to align their goals in a shared quality agenda.
- **Standardized quality improvement tools and techniques**. We need to create well-tested, evidence-based approaches that are used across the state. The expert panel has led the effort to develop standardized tools.

The Project: Falls Management

With a focus on safety and cooperative quality improvement, the Expert Panel set out to address trends identified through the Oregon Patient Safety Commissions' adverse event reporting program as well as common citations in Oregon's long term care environments. The Expert Panel chose to work on falls management; specifically, reducing falls with injury and repeat falls.

Upon review of falls data, survey citation data, and incident reports, the Expert Panel concluded that nursing homes and community based care settings would benefit from improved systems for falls investigation. This led to the development of a simple, easy to use, set of guides to investigate falls built around evidence-based quality improvement principles. The Panel focused on the three most common contributing factors to falls – medications, environment/equipment, and communication – and developed investigation guides to address each one as well as an overarching falls investigation guide. The guides take the first responder through an initial investigation and continue on to direct follow-up and review per facility policy. Based on feedback from pilot participants, a condensed version of the investigation guides was also created to guide a fall's first responder through the initial investigation process. Additionally, a documentation checklist and a falls investigation form were created to further aid facilities in the investigation process. Using these tools, two pilot participants developed their own falls investigation forms which have been included in this toolkit. It is the Expert Panel's hope that other facilities will incorporate these resources into their systems of care.

The Nursing Home Expert Panel

Special thanks to all the Nursing Home Expert Panel members for their hard work and dedication to this project. Their participation was voluntary and reflects their commitment to improving the quality and safety of long-term care in Oregon. Members included:

- Libby Darnall, RN, Seniors and People with Disabilities
- Sharon Faulk, RN, Pinnacle Healthcare
- Patti Garibaldi, RN, BA, RAC-CT, Consonus Healthcare
- Amy Carl, Oregon Patient Safety Commission
- Ruth Gulyas, Oregon Alliance of Senior and Health Services
- Demi Haffenreffer, RN, MBA, Haffenreffer and Associates
- Linda Kirschbaum, Oregon Health Care Association

- Valerie Van Buren, MPH, Comagine Health (formerly Qualis Health and Acumentra Health) and Oregon Patient Safety Commission

Additional thanks to Karen Jones, Comagine Health, for her work on formatting the Investigation Guides.

What Providers Have to Say about the Investigation Guides

"Without the written Falls Investigation Guide, it is easy for the nurses to forget about some factors that could contribute to a fall or to skip over steps in the investigation process. The 5-Whys have also forced us to dig deeper into the root causes of each fall and allowed us to implement systems to prevent similar falls in the future. Since we started using the Guide, we have seen a steady decline in our falls rates, and we hope that over time as we get better and better at using it, we will continue to see fewer falls and fewer injuries!"

—Erin Cornell, Director of Health Services, Rose Villa

"Using the Falls Investigation Guide helped my staff feel more empowered. They were active participants in the investigation; we used the valuable suggestions from front-line staff to make care plan interventions. It helped us be proactive about trying to keep another fall from happening again…to the same resident and other residents."

—Leslie Pena, LPN, Administrator, Mount Angel Towers

"Quality is everyone's responsibility." —W. Edwards Deming

Components of an Effective Investigation Process

Applying Root Cause Analysis to Falls Investigations

To understand why falls or other adverse events occur, improvement experts champion the use of root cause analysis (RCA). RCA requires a systematic, intensive, and in-depth review to learn the most basic reasons for the adverse event. The approach has a formal logic and a defined methodology. The goal is to understand the problem in sufficient depth to effectively eliminate the risk of future injury. RCA can be used to analyze a single fall as well as to look at multiple falls so that patterns can be identified, and system wide changes can be made. For more information on RCA, please refer to Oregon's Guide to Root Cause Analysis in Long Term Care, Investigating with a Different Lens on the State Library of Oregon website. The Falls Investigation Guides walk the investigator(s) through the RCA process to:

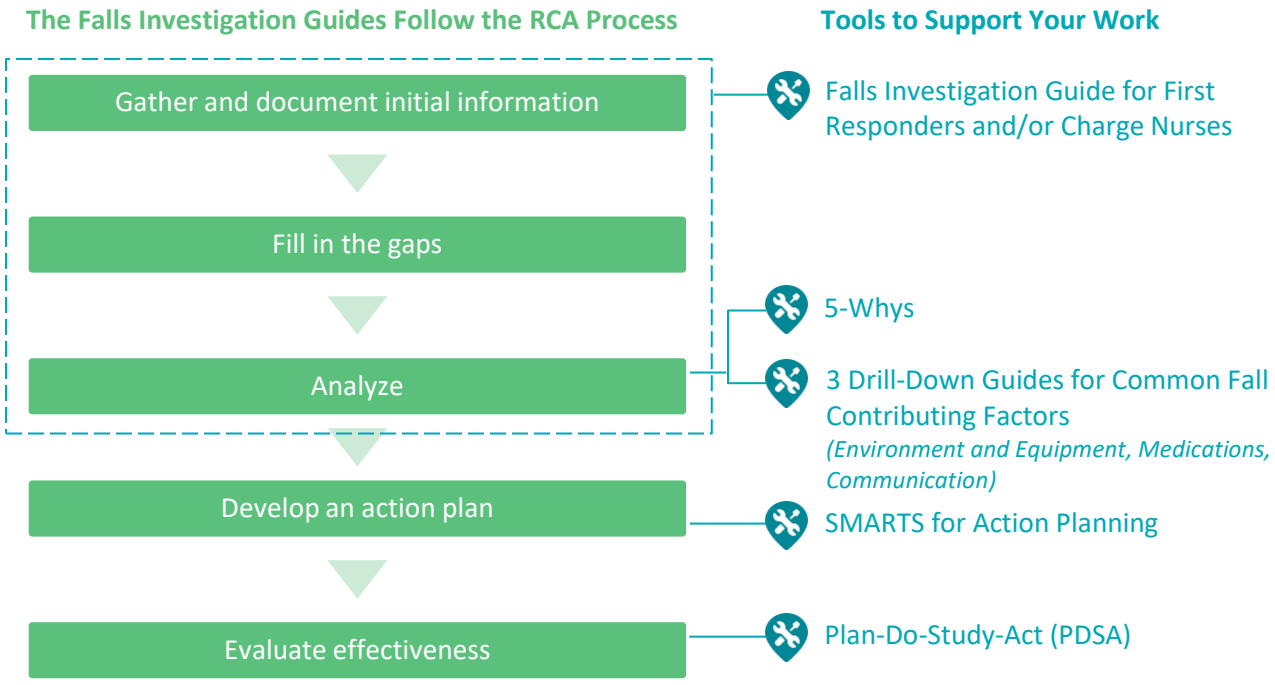
- Determine what happened.
- Identify factors that contributed to the event, like a fall.
- Develop an action plan to reduce the likelihood of a similar event.

The components of an effective RCA outlined in *Oregon's Guide to Root Cause Analysis* are:

1. Gather and document initial information
2. Fill in the gaps
3. Analyze
4. Develop an action plan
5. Implement action plan and evaluate results

Figure 1. summarizes how the Falls Investigation Guides correspond to the steps in an RCA, and the various quality improvement tools to assist you in your investigation that are included in the toolkit. Information about these tools can be found within the Falls Investigation Guides (p. 5) and in the Glossary of Terms (Appendix D).

Figure 1. The Falls Investigation Guides Align with the RCA Process and Provide Tools to Support Your Work



How Does Your Investigation Measure Up?

You can compare your facility's current practices related to falls investigations with those outlined in the Falls Investigation Guides using the *Falls Investigation Guide Documentation Checklist* (Appendix A). Note that this document is not meant to replace the guides, which contain much more detail and process information. It is, however, a tool to help you identify any gaps you may currently have in your processes.

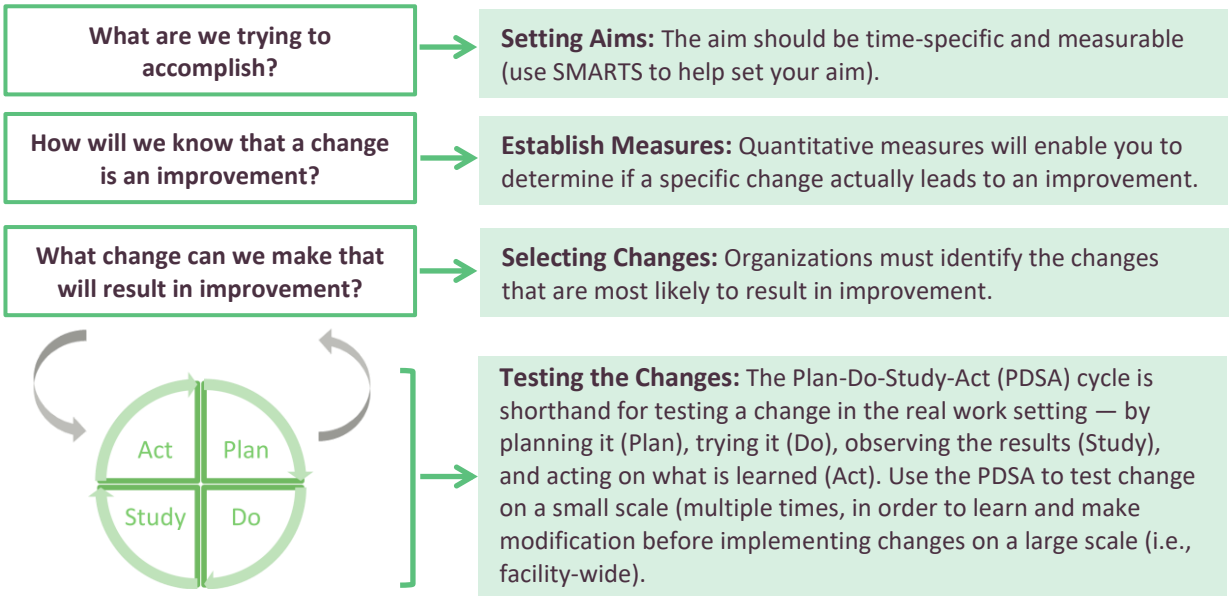
Implementing Change and Sustaining Improvement

Once a facility has decided to make a change in how it investigates falls, it is important to plan the change in order to ensure effective implementation. One tool that can help structure this process is the Model for Improvement—a simple tool for accelerating improvement. It is not meant to replace change models that organizations may already be using, but rather to accelerate improvement. This model has been used very successfully by hundreds of health care organizations to improve many different health care processes and outcomes.

The Model for Improvement (Figure 2) has two parts:

1. Three fundamental questions (can be answered in any order)
2. The Plan-Do-Study-Act (PDSA) cycle to test and implement change. The PDSA cycle helps guide the test to determine if the change is an improvement.

Figure 2. The Model for Improvement



For more information on the Model for Improvement visit the Institute for Healthcare Improvement at ihi.org.

After testing your change on a small scale, learning from each test, and modifying the change through several PDSA cycles, you can implement the change on a broader scale. Once implemented, it is important to make sure your change continues to have the intended impact (i.e., are you still meeting your aim?). Monitor your progress by tracking your measure. You may find that you need to modify your approach over time using the PDSA cycle. It is also possible for your aim to change, in which case you can begin the Model for Improvement again by asking the three fundamental questions. See Appendix C, How to Integrate the Falls Guides into the Investigation Process (p. C-2) for an outline of what this might look like in your facility.

The Falls Investigation Guides

The Falls Investigation Guides are a series of guides that walk the investigator(s) through a fall investigation. The Falls Investigation Guide and the three Drill-Downs are intended to be used together and offer detailed information related to different components of the investigation process (see description of each guide below). The Falls Investigation Guide for First Responders is a condensed version of the other guides which includes only the initial steps in the investigation. The Guides are located in the next 10 pages of this How-to Guide and are intended to be printed front to back; ordering is as follows:

What's Included

- **Falls Investigation Guide:** This guide follows the RCA process and serves as a roadmap for an investigation. It provides the sequence of actions to take after a fall through developing an action plan and monitoring for your plan for effectiveness.
- **Three Falls Investigation Drill-Down Guides:** The drill-down guides help investigators identify contributing factors during the analysis portion of the investigation. They include:
    - Environment and Equipment Drill-Down
    - Medication Drill-Down
    - Communication Drill-Down
- **Investigation Guide for First Responders:** This condensed version of the guides walks a first responder through the initial steps of the investigation process. The intent is that the investigation will be handed off to another individual, based on facility structure and policy, who will follow the investigation though completion.

Falls Investigation Guide

Fall Protocol Components
(per facility policy)

Investigation Components
(Root Cause Analysis)

Fall Occurs

Immediately Ensure Resident is Safe, Assess and Treat for Injury

- Put any preliminary preventative steps into place

Make Required Notifications

Nurse or CBC Health Services
- 911 (if applicable)
- Physician (use **SBAR**)
- Admin and DNS (or leadership team)
- Resident's responsible party

Admin or DNS
- Notify Adult Protective Services if abuse/neglect suspected

Situation
Background
Assessment
Recommendation

(See SBAR Communication Worksheet)

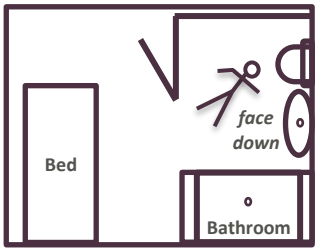
Document Event

- Update care communication tools
  - Alert charting
  - 24-hr. report
  - Temporary care/service plan
- New physician order (note and implement)
- Begin incident report (or other facility document)

Begin Investigation

#1 – Gather and Document Initial Information

- Interview staff and others closely involved (last to see the resident, first responder, witness, resident, visitors, etc.)
- What do they think happened (sequence of events) and why (contributing factors)
- Use open-ended questions (e.g. "Tell me about…")
- Make a diagram of the scene at time of discovery, attach it to the investigation (show position of furniture, door/doorways, equipment, other relevant features)
  - Draw a stick figure to indicate where resident fell/was found (label as face-up or face-down)



#2 – Fill in the Gaps

Review Findings

- Identify gaps and gather any missing information (i.e., review record, fall history, interview/re-interviews, plan of care, etc.)
- Outline the sequence of events leading up to the fall
- List possible contributing factors

#3 – Analyze

Identify Contributing Factors

- Possible contributing factors to consider:
  - Environment and equipment related
  - Medication related
  - Communication related
  - Were identified fall prevention/risk interventions in place?
  - Care/service plan appropriate, updated, and followed?
- Use the **5-Whys** to uncover root causes

See Environment and Equipment Drill-Down

See Medication Drill-Down

See Communication Drill-Down

See Contributing Factors and 5-Whys

Document Analysis Findings

Considerations for Action Plan

- Include resident and/or responsible party
  - Review risks/benefits
  - Ask for alternative ideas to prevent recurrence
  - Review proposed changes to care/service plan
- Consider:
  - Resident's needs, goals, and preferences
  - Effectiveness of previous plans
  - Managed risk agreement
  - Supervision plan
- Review:
  - Regulations and best practices
  - Policies and procedures
  - Care/service plan

#4 – Action Plan Development

- Include Interdisciplinary Team (IDT) in process
- Ask, "What can we do to keep similar events from happening again?" (System-level, not just resident- level)
- Address identified root causes
- Develop an action plan with **SMARTS**

Specific
Measurable
Attainable
Realistic
Timely
Supported

#5 – Evaluation of Effectiveness

Test the Plan (PDSA)

Plan: Formulate action steps
Do: Implement steps on trial basis
Study: Monitor effectiveness for set time period
Act: Review effectiveness, revise or adopt plan

Implement the Plan and Monitor for Effectiveness

- Track and trend data over time
- Share results with Safety and Quality Committees

Adverse Event Report (if applicable)

- Complete/send to Oregon Patient Safety Commission within 30 days of discovery (for hospitalization or death)

Document Action Plan and Results

- Update care communication tools
  - Care/service plan (or document reasons for no change)

Contributing Factors and 5-Whys

Contributing Factors

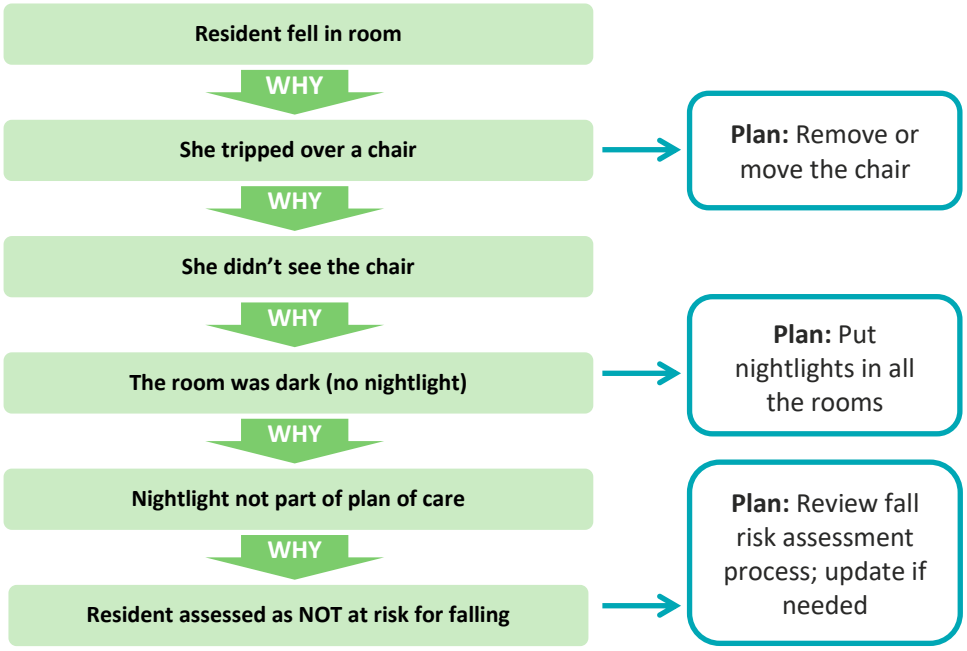
Note: This chart is meant to provide examples of possible contributing factors and is not considered all-inclusive.

Communication	Organizational Factors	Resident Management	Resident Factors
Healthcare Team • With physician or RN practitioner • Hand-offs or shift reports • Involving resident transfers • Among units • With other organizations or outside providers • Among interdisciplinary teams • Hard to read handwriting/fax **Patient/Family** • Culture • Language • Miscommunication	Overall culture of safety Staffing levels Leadership/management skills Adequacy of budget Systems to identify risks Internal reporting Staffing turnover Temporary staffing Staff assignment/work allocation Relief/float healthcare staff Job orientation/training Staff competencies Supervision	Accuracy of care plan Implementing care plan Responding to a change of condition	Family dynamics/ relationships Mental status Behavioral problems Sensory impairment Physical limitations Fragile health status

Device or Medical Supply	Policies & Procedures	Human and Environmental
• Availability • Design • Function	• Absent • Too cumbersome • Work around more efficient	• Work area design specifications • Distractions or Interruptions • Personnel fatigue • Personnel health issue • Personnel stress

The 5-Whys

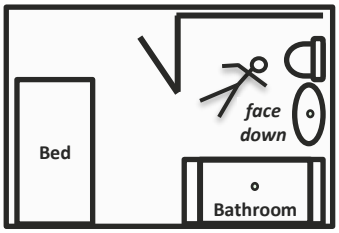
The 5-whys is a question-asking method used to uncover the underlying cause of an event (see example to right). Uncovering the root causes(s) leads to action plans that are more likely to prevent the event from happening again.



Environment and Equipment Drill-Down

Review Contributing Factors Related to Environment and Equipment

Review Diagram of the Scene, Revisit as Necessary



Environment

General Contributing Factors

- Lighting
- Flooring (wet, shiny, contrast, uneven)
- Equipment placement
- Furniture placement
- Room to move freely in the space/turn radius
- Others present (residents, staff, visitors, etc.)

Equipment

General Contributing Factors

- Defective/nonworking equipment (in good repair?)
- Equipment design (function, displays, controls, etc.)
- Use specified in care/service plan (and up-to date)
- Appropriate for resident?

Contributing Factors That Impact How a Resident Interacts with Their Environment

(Keep general contributing factors in mind for each)

- Footwear/clothing
- Mobility
- Prosthesis/splint
- Dominant side re:
  - Equipment
  - Furniture
  - Doors and doorways
  - Bathroom fixtures
- Sensory impairments (eyesight, hearing)
- Cognition
- Resident assumption of risk
- Behavioral problems/issues
- Underlying medical conditions:
  - Pain
  - Neuromuscular
  - Orthopedic
  - Cardiovascular
  - Recent condition change
  - Dialysis
  - Neurological

Specific Equipment Related Contributing Factors

(Keep general contributing factors in mind for each)

Bed
- Height/position
- Brakes on/off
- Mattress (type)

Side-rails
- Full/half/other
- Transfer cane
- Padding

Fall mat
- Thickness

Bathroom equipment
- Toilet seat raise
- Grab bars
- Toilet height
- Commode present
- Toileting schedule

Call light
- See general contributing factors

Alarms
- On/attached to resident?
- Turned on?
- Functioning/working?
- Sounding?
- When was it placed?

Assistive devices and transfer equipment
- In need of repair (exposed metal, torn vinyl, etc.)
- Are brakes on/off?
- Are footrests up/down/off?
- Is wheelchair cushion present/with or without nonskid material?
- Is resident positioned appropriately?
- Is device adjusted/fitted properly? (e.g., seat height/depth, foot placement)

If Immediate Risk Identified, Take Steps to Ensure Resident Safety and Prevent Recurrence

- Remove, replace, and/or repair hazard or equipment

Return to Falls Investigation Guide

(#3 – Analysis: Identify Contributing Factors)

Equipment Resource List

Note: this list is meant to provide examples of equipment used to meet resident needs and is not considered all-inclusive.

Restraints and Supportive Devices

- Bed cane
- Geri-Chair/recliner/Tilt-N-Space wheelchair
- Lap Buddy/Flexi-Lock
- Lap tray
- Tray table
- Seatbelt
- Wheelchair straps
- Anti-rollback wheelchair device
- Anti-tip wheelchair device
- Leg straps
- Wrist restraints/mitts
- Chest harness/pelvic restraint
- Therapy trough
- Side rails (quarter, half, three-quarters, full)
- Any other device attached to or adjacent to the resident's body that the resident cannot remove and that restricts his or her freedom of movement or access to the body

Mobility Devices and Transfer Equipment

- Cane
- Walker
- Merry Walker
- Wheelchair
- Lift equipment (Hoyer and other)
- Slide board
- Transfer bar (M-rails, grab bars, etc.)
- Transfer pole

Alarms

- Bed
- Tab
- Pressure pad
- Seatbelt
- Motion sensors
- Wheelchair
- Call light

Other

- Beds in low position
- Perimeter mattress
- Contour mattress
- Fall mat
- Pool bed

Medications Drill-Down

Review Contributing Factors Related to Medication

Medication

General Contributing Factors

- New medications?
- Changes? (i.e., dose, time, etc.)
- When was last dose given?
- Has there been a med error in the last 24 hours?

Other Medication Related Contributing Factors to Consider

Side Effects

Did resident exhibit signs of or complain of:

- Weakness?
- Acute delirium?
- Dizziness?
- Clammy skin?
- Gait disturbance?
- Dehydration?
- Impaired vision?
- Agitation?
- Impulsiveness?
- Resistance to care?

Interactions

Review for:

- Drug-drug
- Drug-food
- Drug-supplement
- Drug-herb

Medication Class

Diuretics

- Edema (lower extremity)
- Lung status (CHF)
- Change in urgency & void
- Change in usual voiding pattern
- Change in fluid intake (72 hours)

Laxatives

- Prescribed and given?

Psychopharmacological
anti-anxiety, antidepressant, antipsychotic, hypnotic

For antipsychotics only:

- Check most recent AIMS
- Consider EPS (involuntary movement)

Anti-Hypertensives/ Cardiovascular

- Baseline blood pressure
- Postural blood pressure
- Vital signs (include O_2 sats)
- Skin (is it cold/clammy?)

Narcotics/Analgesics
Pain level

- At last dose
- At time of fall movement)

Hypo/Hyperglycemics

- Time of last insulin/oral agent dose
- CBG results
- Last p.o. intake (time, quantity)
- Skin (is it cold/clammy?)

Antibiotics

- Diagnosis for use (UTI, Pneumonia)

Consult Pharmacist and Physician (as appropriate)

If Immediate Risk Identified, Take Steps to Ensure Resident Safety and Prevent Recurrence

Return to Falls Investigation Guide
(#3 – Analysis: Identify Contributing Factors)

Communication Drill-Down

Review Contributing Factors Related to Communication

Communication

Points of Communication Exchange to Consider

- Handoffs or shift reports
- Between departments
- With physician or nurse practitioner
- Between healthcare personnel & resident/family
- Involving resident transfers
- Among staff
- With other organization or outside providers
- Care communication tools (i.e., care/service plan, documentation, 24-hour report, alert charting, etc.)

Other Communication Related Contributing Factors to Consider

Communication

General Contributing Factors

- Lack of information provided and/or available (verbal and documented)
- Language barriers
- Hard to read handwriting/fax
- Forms difficult to use
- Communication not adequate (accurate, complete, and understood)

Organizational

General Contributing Factors

- Information regarding resident status and care needs was not shared and used in a timely manner
- The resident and/or family was not actively included in the care/service planning process
- The overall culture of the facility does not encourage or welcome observations, suggestions, or "early warnings" from staff about risky situations and risk reduction
- Work allocation / work load

Human or Environmental

General Contributing Factors

- Distractions and interruptions
- Work area design
- Work allocation/work load
- Stress levels

Patient/Resident

General Contributing Factors

- Language/culture
- Sensory impairment
- Family dynamics/relationships
- Cognition
- Resident assumption of risk
- Behavioral problems/issues
- Underlying medical conditions:
  - Pain
  - Neuromuscular
  - Orthopedic
  - Cardiovascular
  - Recent condition change
  - Dialysis
  - Neurological

If Immediate Risk Identified, Take Steps to Ensure Resident Safety and Prevent Recurrence

Return to Falls Investigation Guide
(#3 – Analysis: Identify Contributing Factors)

SBAR Communication Worksheet

Preparation

Have the following available before calling the Physician, Nurse Practitioner, etc.

- Your assessment of the resident
- Resident's chart including most recent progress notes & notes from previous shift
- List of current medications, allergies, labs (provide date & time of test(s) done & results of previous test(s) for comparison)
- Most recent vital signs
- Code status

Use the following modalities to contact the Physician, N.P., etc.:

- Direct page
- Call/answering service
- Office (during weekdays)
- Home or cell phone

Before assuming that the Physician, N.P., etc., is not responding, use all modalities. Use appropriate protocol as needed to ensure safe resident care.

S — Situation

High-level summary of the situation, and convey the immediate need

I am calling about [resident name, facility, unit]

The problem I am calling about is [fall, med error, code, etc.]

Vital signs: BP ____/____; Pulse:____; Respiration: ____; Temp:____

I have just assessed the resident personally and am concerned about the

- Blood pressure, pulse, respiration and/or temp, because it is not within normal limits
- Other [state your concern]

B — Background

Set the context, as it relates to the situation, and provide known facts

The resident's current mental status is [confused, agitated, combative, lethargic, etc.]

- This is different than baseline [state how]

The skin is [pale, mottled, diaphoretic, extremities cold or warm, etc.]

- This is different than baseline <state how>

The resident is on oxygen.

- The resident has been on ___ (l/min) or (%) oxygen for ___ (min or hr)
- The oximeter is reading ___%
- The oximeter does not detect a good pulse & is giving erratic readings.
- This is different than baseline [state how]

The resident's current, relevant medications include _____

The resident's current, relevant treatments include _____

A — Assessment

Define what you think the problem is, be specific

This is what I think the problem is [say what you think the problem is]

The problem seems to be [cardiac, infection, neurologic, respiratory, etc.]

I am not sure what the problem is, but the resident is deteriorating.

The resident seems to be unstable & may get worse; we need to do something.

R — Recommendation

Summarize your proposed solution to address the problem

I suggest or request that you [state what you want or would like to see done]

- Come see the resident or schedule an appointment
- Order a consult, medication, treatment, etc.
- Transfer the resident to the ED
- Talk to the resident and/or representative about the code status

If a change in medication or treatment is ordered, then ask:

- When do you want to start the new order?
- Do you want to discontinue other medications or treatments?
- How often do you want vital signs?
- How long do you expect this problem to last?
- If the resident does not get better, when do you want us to call again?

Document the change in the resident's condition and physician notification.

Falls Investigation Guide
For First Responders

Fall Protocol Components
(per facility policy)

Investigation Components
(Root Cause Analysis)

Fall Occurs

Immediately Ensure Resident is Safe, Assess and Treat for Injury

- Put any preliminary preventative steps into place

Make Required Notifications

Nurse or CBC Health Services
- 911 (if applicable)
- Physician (use **SBAR**)
- Admin and DNS (or leadership team)
- Resident's responsible party

Admin or DNS
- Notify Adult Protective Services if abuse/neglect suspected

Situation
Background
Assessment
Recommendation

(See SBAR Communication Worksheet)

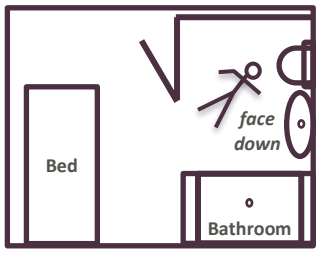
Begin Investigation

#1 – Gather and Document Initial Information

- Interview staff and others closely involved (last to see the resident, first responder, witness, resident, visitors, etc.)
- What do they think happened (sequence of events) and why (contributing factors)
- Use open-ended questions (e.g. "Tell me about…")
- Make a diagram of the scene at time of discovery, attach it to the investigation (show position of furniture, door/doorways, equipment, other relevant features)
  - Draw a stick figure to indicate where resident fell/was found (label as face-up or face-down)

Document Event

- Update care communication tools
  - Alert charting
  - 24-hr. report
  - Temporary care/service plan
- New physician order (note and implement)
- Begin incident report (or other facility document)



#2 – Fill in the Gaps

Review Findings

- Identify gaps and gather any missing information (i.e., review record, fall history, interview/re-interviews, plan of care, etc.)
- Outline the sequence of events leading up to the fall
- List possible contributing factors

#3 – Analyze

Identify Contributing Factors

- Possible contributing factors to consider:
  - Environment and equipment related
  - Medication related
  - Communication related
  - Were identified fall prevention/risk interventions in place?
  - Care/service plan appropriate, updated, and followed?
- Use the **5-Whys** to uncover root causes

Document Analysis Findings

See Environment and Equipment Drill-Down

See Medication Drill-Down

See Communication Drill-Down

See 5-Whys

Handoff Investigation (per facility policy)

Give to the individual who will review the initial investigation and:
- Develop an action plan to prevent recurrence
- Monitor the effectiveness of the plan

The 5-Whys

The 5-whys is a question-asking method used to uncover the underlying cause of an event (see example to right). Uncovering the root causes(s) leads to action plans that are more likely to prevent the event from happening again.

Resident fell in room

WHY

She tripped over a chair → **Plan**: Remove or move the chair

WHY

She didn't see the chair

WHY

The room was dark (no nightlight) → **Plan**: Put nightlights in all the rooms

WHY

Nightlight not part of plan of care

WHY

Resident assessed as NOT at risk for falling → **Plan**: Review fall risk assessment process; update if needed

First Responder Drill-Downs for Common Fall Contributing Factors

Environment and Equipment Drill-Down

START

Review Diagram of the Scene, Revisit as Necessary

Environment

General Contributing Factors

- Lighting
- Flooring (wet, shiny, contrast, uneven)
- Equipment placement
- Furniture placement
- Room to move freely in the space/turn radius
- Others present (residents, staff, visitors, etc.)

Contributing Factors That Impact How a Resident Interacts with Their Environment
(Keep general contributing factors in mind for each)

- Footwear/clothing
- Mobility
- Prosthesis/splint
- Dominant side re:
  - Equipment
  - Furniture
  - Doors and doorways
  - Bathroom fixtures
- Sensory impairments (eyesight, hearing)
- Cognition
- Resident assumption of risk
- Behavioral problems/issues
- Underlying medical conditions:
  - Pain
  - Neuromuscular
  - Orthopedic
  - Cardiovascular
  - Recent condition change
  - Dialysis
  - Neurological

Equipment

General Contributing Factors

- Defective/nonworking equipment (in good repair?)
- Equipment design (function, displays, controls, etc.)
- Use specified in care/service plan (and up-to date)
- Appropriate for resident?
- Proper placement (re: dominant side, within reach, etc.)
- Equipment meeting code, regulations
- Entrapment/safety risk

Specific Equipment Related Contributing Factors
(Keep general contributing factors in mind for each)

Bed
- Height/position
- Brakes on/off
- Mattress (type)

Side-rails
- Full/half/other
- Transfer cane
- Padding

Fall mat
- Thickness

Bathroom equipment
- Toilet seat raise
- Grab bars
- Toilet height
- Commode present
- Toileting schedule

Call light (See general contributing factors)

Alarms
- On/attached to resident?
- Functioning/working?
- Sounding?
- When placed?

Assistive devices and transfer equipment
- In need of repair?
- Brakes on/off?
- Footrests up/down/off?
- Wheelchair cushion on, with/out nonskid material?
- Resident positioned appropriately?
- Device adjusted/fitted properly?

Medication Drill-Down

START

Important: A more thorough medication review should be completed by nurse manger (including interactions and medication class)

General Med. Contributing Factors

- New medications?
- Changes? (i.e., dose, time, etc.)
- When was last dose given?
- Has there been a med error in the last 24 hrs.?

Side Effects

Did resident exhibit signs of or complain of:

- Weakness?
- Acute delirium?
- Dizziness?
- Clammy skin?
- Gait disturbance?
- Dehydration?
- Impaired vision?
- Agitation?
- Impulsiveness?
- Resistance to care?

Consult pharmacist and physician (as appropriate)

Communication Drill-Down

START

Points of Communication Exchange

Consider:

- Handoffs or shift reports
- Between departments
- With physician or NP
- Between staff & resident/family
- Involving resident transfers
- Among staff
- With other providers
- Care communication tools (i.e., care/service plan, 24-hour report, alert charting, etc.)

Contributing Factors

General

- Lack of information provided and/or available (verbal and written)
- Language barriers
- Hard to read handwriting/fax
- Forms difficult to use
- Communication not adequate (accurate, complete, understood)

Resident-Related

- Language/culture
- Sensory impairment
- Family dynamics
- Cognition
- Resident assumption of risk
- Behavioral issues

Underlying medical conditions:

- Pain
- Neuromuscular
- Orthopedic
- Cardiovascular
- Recent condition change
- Dialysis
- Neurological

Environmental or Work Area

- Distractions and interruptions
- Work area design
- Work allocation/work load
- Stress levels

If Immediate Risk Identified, Take Steps to Ensure Resident Safety and Prevent

Return to Falls Investigation Guide For First Responders (#3 – Analysis: Identify Contributing Factors)

Appendix A: Falls Investigation Guide Documentation Checklist

The checklist below identifies the recommended components of a falls investigation as outlined in the Falls Investigation Guides and *Oregon's Root Cause Analysis (RCA)* process. Review your current process and indicate which of the "Recommended Investigation Components" are a part of your system with a "✓" in the box.

	Recommended Investigation Components	✓ if Present
Pre-Investigation	Immediate plan to protect the resident and ensure safety	☐
	Notifications	
	• The physician (use **SBAR**) and/or 911 (who, time)	☐
	• Resident's responsible party (who, time)	☐
	• If applicable (i.e., abuse/neglect suspected), appropriate state agencies (i.e., Adult Protective Services or other)	☐
Gather and document initial information	**Interviews to determine what happened (sequence of events) and why it happened**	
	• With staff and others closely involved (include last to see the resident, first responder, witnesses, family, etc.)	☐
	• With the resident	☐
	A drawing/diagram of the scene at the time of discovery	☐
	Documentation of initial findings	
	• Determination whether or not the care/service plan was followed	☐
	• Updates to care communication tools (i.e., Alert charting, 24-hr. report, Temporary care/service plan, etc.)	☐
Fill in the gaps	• Begin incident report (or other facility documentation), to be completed per facility protocol	☐
	Review of initial findings by the Interdisciplinary Team (IDT) to fill in any gaps (i.e., sequence of events leading up to the fall, possible contributing factors, etc.)	☐
Analyze	**Analyze to identify contributing factors**	
	• Environmental/equipment related contributing factors (i.e., resident factors that impact how they interact with environment, equipment: functional appropriate, and, care planned, etc.)	☐
	• Medication related contributing factors (i.e., current medications and administration, side-effects, interactions, issues associated with medication class)	☐
	• Communication related contributing factors (i.e., consider all possible points of communication exchange, organizational factors, environmental factors, resident related factors, etc.)	☐
	• Evaluation to determine if identified fall prevention/risk intervention in place (consider appropriateness for resident, changes made as a result of previous falls, resident acceptance of risk)	☐
	• Evaluation to determine appropriateness of current care/service plan (up to date)	☐
Develop an action plan	Identification of **root cause(s)** (use **5-Whys**)	☐
	An action plan to address root causes and prevent recurrence	
	• Include resident and/or representative in the process	☐
	• Use **SMARTS** framework (i.e., Specific, Measurable, Attainable, Realistic, Timely, Supported)	☐
	• Consider effectives of previous plans (interventions tried, both successful and unsuccessful)	☐
	• Communication of any adjustments made to the care/service plan (to resident and/or representative and staff; update all applicable care communication tools)	☐
	• Test the plan on a small scale before full implementation (use **PDSA**)	☐
Implement action plan and evaluate results (ongoing)	Identification of next steps (full implementation of action plan if successful, revise action plan and re-test (use **PDSA**) if unsuccessful)	☐
	Documentation of monitoring effectiveness of plan over time (modify as necessary)	☐
	If applicable, complete an Oregon Patient Safety Reporting Program (PSRP) adverse event report	☐

Appendix B: Falls Investigation Forms

The Falls Investigation Form was developed by the Nursing Home Expert Panel and includes three components:

- Initial Falls Investigation
- Investigation Review, Follow-up, and Action Planning
- Final Review

The form follows the investigation process outlined in the Falls Investigation Guides. It can be used as a comparison tool for your current investigation forms/processes or to be incorporated into individual facility investigation forms and modified as necessary to meet your needs, while maintaining critical investigation components recommended in this guide. A Word version is also available on the OPSC website. You can insert your individual facility name and make it your own. Note that both nursing home and CBC staff position titles are used side-by-side in the form. Your facility may choose to revise the form to reflect your facility specific staff position titles.

Other Investigation Form Examples

Two example investigation forms available only on the OPSC website. The forms were created by pilot participants who tested the Falls Investigation Guides and modified them based on their experience. You are encouraged to insert your individual facility name and make it your own.

Nursing Facility Falls Investigation Form

Provided courtesy of Rose Villa, Portland, OR

CBC Falls Investigation Form

Provided courtesy of Mount Angel Towers, Mount Angel, OR

Initial Falls Investigation

First-Responders: Complete the first five pages to gather initial information about what happened and why it happened. Once complete, pass this form off to the individual (per facility protocol) who will complete the reminder of the investigation process.

Resident Name:

Name/Title of Person Completing Form:

Date of Fall: **Time of Fall:** **Shift:**

Immediate Assessment of Resident

☐ Y ☐ N	Did the resident sustain an Injury as a result of fall? If yes, explain:
☐ Y ☐ N	Were any immediate measures put into place to protect the resident and ensure safety? Explain:
Vitals	T: Pulse: R: BP: Orthostatic PB:

Notifications

☐	The physician (SBAR) – Name:	[☐ Phone ☐ Fax]	Time:
☐	Resident's responsible party – Name:		Time:
☐	Administrator or Executive Director		Time:
☐	DNS or RN Health Service Director		Time:

Gather Initial Information

Interviews

Use open ended questions ("Tell me a little more about…") and document the following using their words (attach additional pages as necessary).

Name: Staff or others closely involved (e.g., witness, visitors, etc.)	**Location at time of fall**	**What happened?**	**Why they think the fall happened**
Resident			
First Responder			

Name: Staff or others closely involved (e.g., witness, visitors, etc.)	**Location at time of fall**	**What happened?**	**Why they think the fall happened**

Draw a Diagram of the Scene

Draw a diagram of the scene at the time of discovery in the box below (show furniture, door/doorways, equipment, and other relevant features). Draw a stick-figure to indicate where resident fell/was found (note if face-up or face-down).

Update Care Communication Tools

☐	Alert Charting	Time:
☐	24-Hour Report	Time:
☐	Temporary Care/Service Plan	Time:

Identify Contributing Factors

Use the table below to help you determine what factors may have contributed to the fall. Complete the table as follows:

1. Identify which of the "Possible Contributing Factors" is applicable to the resident (✓ "Applies to Resident/Situation").
2. Determine which items could have been a contributing factor (CF) to the fall (✓ "CF to Fall").
3. Explain any items selected as contributing factors in the "CF to Fall" column.
4. For those items identified as "CF to Fall," identify if it is currently addressed in the resident's care/service plan (✓ "Part of CP").

Possible Contributing Factors	Applies to Resident	CF to Fall	If "CF to Fall," explain:	Part of CP
Resident Factors				
Cognition	☐	☐		☐
Eyesight/Visual Field	☐	☐		☐
Footwear/Clothing	☐	☐		☐
Mobility	☐	☐		☐
Hearing	☐	☐		☐

Possible Contributing Factors	Applies to Resident	CF to Fall	If "CF to Fall," explain:	Part of CP
Prosthesis/Splint	☐	☐		☐
Dominant Side				
Equipment	☐	☐		☐
Furniture	☐	☐		☐
Doors/Doorways	☐	☐		☐
Bathroom fixtures	☐	☐		☐
Underlying Medical Conditions				
Pain	☐	☐		☐
Neuromuscular	☐	☐		☐
Orthopedic	☐	☐		☐
Cardiovascular	☐	☐		☐
Recent condition change	☐	☐		☐
Dialysis	☐	☐		☐
Dementia	☐	☐		☐
Neurological (not dementia)	☐	☐		☐
Environment				
Lighting	☐	☐		☐
Floor (wet, shiny, contrast, uneven)	☐	☐		☐
Equipment placement	☐	☐		☐
Furniture placement	☐	☐		☐
Room to move freely/turn radius	☐	☐		☐
Others present (staff, visitors, residents, etc.)	☐	☐		☐
Bed				
Height/position	☐	☐		☐
Brakes on/off	☐	☐		☐
Mattress-type	☐	☐		☐
Side-rails				
Full/half/other:_____	☐	☐		☐
Up/Down	☐	☐		☐
Transfer cane	☐	☐		☐
Padding	☐	☐		☐
Fall Mats				
Thickness	☐	☐		☐
Placement re: dominant side	☐	☐		☐
Call Light				
Within reach of resident	☐	☐		☐
Functioning/working	☐	☐		☐
Appropriate for resident use	☐	☐		☐
Placement re: dominant side	☐	☐		☐
Bathroom				
Toilet seat riser	☐	☐		☐
Grab bars	☐	☐		☐
Toilet height	☐	☐		☐
Commode present	☐	☐		☐
Toileting schedule	☐	☐		☐
Restraints and Supportive Devices				
Proper application	☐	☐		☐
Appropriate for resident	☐	☐		☐
Alarms				
Appropriate for resident	☐	☐		☐
Attached to resident	☐	☐		☐
Turned on	☐	☐		☐
Functioning/working	☐	☐		☐

Possible Contributing Factors	Applies to Resident	CF to Fall	If "CF to Fall," explain:	Part of CP
Sounding	☐	☐		☐
Assistive Devices/Transfer Equipment				
Device present	☐	☐		☐
Appropriate for resident	☐	☐		☐
Within resident's reach	☐	☐		☐
In need of repair (exposed metal or vinyl)	☐	☐		☐
Brakes on/off	☐	☐		☐
Footrests up/down/off	☐	☐		☐
Wheelchair cushion with non-skid pad	☐	☐		☐
Appropriate positioning	☐	☐		☐
Appropriate fitting (seat height, depth, foot placement)	☐	☐		☐
Medications				
Time of last dose: _____	☐	☐		☐
New medication	☐	☐		☐
Med. change in the last 24 hours (dose, time, etc.)	☐	☐		☐
Med error in the last 24 hours	☐	☐		☐
Drug side effects	☐	☐		☐
Points of Communication Exchange				
Handoffs/shift reports	☐	☐		☐
Between departments	☐	☐		☐
Involving patient/resident transfers	☐	☐		☐
Between staff and resident/family	☐	☐		☐
Among staff	☐	☐		☐
With other organizations/providers	☐	☐		☐
Care communication tools (i.e., care plan, documentation, 24-hour report, alert charting, etc.)	☐	☐		☐
General Communication Factors				
Lack of information	☐	☐		☐
Language barriers	☐	☐		☐
Hard to read handwriting/fax	☐	☐		☐
Adequate communication (accurate, complete, understood)	☐	☐		☐
Environmental/Work Area				
Distractions and interruptions	☐	☐		☐
Work area design	☐	☐		☐
Work allocation/workload	☐	☐		☐
Stress levels	☐	☐		☐
Resident Factors				
Language/culture	☐	☐		☐
Sensory impairment	☐	☐		☐
Family dynamics/relationships	☐	☐		☐
Cognition	☐	☐		☐
Resident assumption of risk	☐	☐		☐
Behavioral problems/issues	☐	☐		☐
Organization Factors				
Resident status info. shared/ used in a timely manner	☐	☐		☐
Resident/Family involved in Care planning process	☐	☐		☐
Culture encourages reporting safety issues	☐	☐		☐

Fall History

☐ Y ☐ N	Has the resident had a fall in the last 30 days? If yes, date:
☐ Y ☐ N	If yes (to above), was there an injury as a result of the fall? If yes, explain:

Conclusions – Root Cause(s)

Use the 5-whys to determine **root cause(s)** of this fall (there are likely multiple root causes). Continue to ask "why" until you can't ask "why" any longer.

What do you believe to be the root cause(s) of this fall (list below)?

Sign below and give this form to the individual (per facility protocol) who will complete the investigation processes and begin action planning.

Signature:	**Date:**
Name, Title (please print):	

Investigation Review, Follow-up, and Action Planning

Guidance: Review the initial investigation and complete the following section (typically the RCM in a nursing home or other facility specified staff in the CBC setting). Once complete, pass this form off to the individual(s) (per facility protocol) who will complete final review.

Use the table below to help you determine what medication related factors may have contributed to the fall. Complete the table as follows:

1. Identify which of the "Possible Contributing Factors" is applicable to the resident (✓ "Applies to Resident").
2. Determine which items could have been a contributing factor (CF) to the fall (✓ "CF to Fall").
3. Explain any items selected as contributing factors in the "CF to Fall" column.
4. For those items identified as "CF to Fall," identify if it is currently addressed in the resident's care/service plan (✓ "Part of CP").
5. Consult Pharmacist and Physician as appropriate.

Possible Contributing Factors	Applies to Resident	CF to Fall	If "CF to Fall," explain:	Part of CP
Medications				
Time of last dose: _____	☐	☐		☐
New medication	☐	☐		☐
Med. change in the last 24 hours (dose, time, etc.)	☐	☐		☐
Med error in the last 24 hours	☐	☐		☐
Drug side effects	☐	☐		☐
Diuretics				
Edema (lower extremity)	☐	☐		☐
Lung status (CHF)	☐	☐		☐
Change in urgency and void	☐	☐		☐
Change in fluid intake (last 72 hours)	☐	☐		☐
Laxatives				
Prescribed	☐	☐		☐
Given	☐	☐		☐
Anti-psychotics				
Most recent AIM	☐	☐		☐
EPS (involuntary movement)	☐	☐		☐
Narcotics/Analgesics				
Pain level at last dose:_____	☐	☐		☐
Pain level at time of fall:_____	☐	☐		☐
Anti-Hypertensives /Cardiovascular				
Baseline BP:_____	☐	☐		☐
Postural BP:_____	☐	☐		☐
Vital Signs: P:_____ R:_____ BP:_____ O_2 sats: _____	☐	☐		☐
Skin (cold/clammy)	☐	☐		☐
Hypo-/Hyperglycemics				
Time of last insulin/oral agent dose:_____	☐	☐		☐
Last p.o. intake time:_____	☐	☐		☐
Skin (cold/clammy)	☐	☐		☐
CBG Results	☐	☐		☐

Conclusions – Root Cause(s)

Use the 5-whys to determine **root cause(s)** of this fall (there are likely multiple root causes). Continue to ask "why" until you can't ask "why" any longer. What do you believe to be the root cause(s) of this fall? List cause(s).

Develop an Action Plan

Develop and action plan that (1) addresses identified root cause(s), (2) uses SMARTS framework (**S**pecific, **M**easurable, **A**ttainable, **R**ealistic, **T**imely, **S**upported), (3) and answers the question, "What can we do to keep similar events from happening again?" Describe action plan.

☐ Resident and/or responsible party included in the process (consider goals and preferences)

☐ Effectiveness of previous plans considered (interventions tried, both successful and unsuccessful)
List previous interventions:

Communicate Action Plan

☐ Y ☐ N Care/Service plan revised to reflect action plan?
If no, explain why:

The following were notified of the new action plan: ☐ Resident ☐ Nursing staff ☐ CNA/care staff ☐ DNS/RN Health Service Dir.	Date:
Other staff notified (as needed): ☐ Dietary ☐ Maintenance ☐ Housekeeping ☐ Social Services ☐ Activities ☐ Others (list):	Date:

Monitor Effectiveness of Action Plan

The action plan will be monitored as follows:	Timeframe (how long?):

Sign below and give this form to the individual(s) (per facility protocol) who will complete the final review.

Signature:	**Date:**
Name, Title (please print):	

Final Review

Final Reviewers: Review the fall investigation and action plan and complete the section below. Final reviewers are typically clinical management and administration, such as the DNS and Administrator or RN Health Service Director and Executive Director.

Final Reviewer (DNS or RN Health Service Dir.)

Additional comments, questions, or changes related to fall investigation and action plan:

Final Reviewer (Administrator or Executive Dir.)

Additional comments, questions, or changes related to fall investigation and action plan:

Notifications

☐ Y ☐ N	Has abuse been ruled out?
☐ Y ☐ N	If no (above), has Adult Protective Services been notified? If no, explain why:
☐ Y ☐ N	If fall resulted in in hospitalization or death, was an adverse event report submitted to the Oregon Patient Safety Commission (applies to NH program participants only)? If no, explain why:

Signature:	Date:
Name, Title (please print):	

Administrator Signature:	Date:
Name, Title (please print):	

Appendix C: Integrating the Guides into the Investigation Process

Using the Guides

The table below describes an incident investigation and findings from a facility without utilizing the Falls Investigation Guides, an investigation and findings utilizing the guides, and an investigation process guidelines crosswalk. Each investigation is compared against the investigation process guidelines to determine if it contains the necessary components. A "Y" (yes) or "N" indicates if the investigation met the guidelines. Use the *Falls Investigation Guide Documentation* Checklist (Appendix A) to ensure your investigation has the necessary components.

Incident Example: A resident stood quickly from her wheelchair and lost her balance. A staff member who was standing by was able to grab hold of the gait belt currently on the resident and assist her to the floor.

Incident Investigation without the guides	Y/N	Investigation Process Guidelines	Y/N	Incident Investigation with the guides
Investigation summary Resident stood quickly from chair. Resident lost balance. Staff member standing nearby eased resident to floor. In room, lights on. No injuries. Alarm was on the chair and alarm sounded. **Findings** • Documentation noted, "Successful incident" (Panel interpretation: current facility practices related to falls protocol were followed). • No documentation of changes to plan of care interventions to prevent recurrence; all interventions in place. • No documented reference as to why resident was standing up. • Interviews with residents, staff and/or witnesses not documented. • Resident noted to be "impulsive" and "unpredictable." **Action Plan** None	**N**	• Thorough investigation to evaluate and identify the risks for falls (antecedents, interviews) documented.	**Y**	**Investigation summary** Resident was in room prior to dinner and staff came to escort resident to meal. Resident had the sudden urge to go to the bathroom, standing quickly. Resident lost balance and staff was able to ease them to the floor. Alarm began to sound once resident began to fall. **Findings** • Resident has history of being impulsive and attempting to stand independently. Resident was not wearing shoes or slip-resistant socks at time of fall. • Resident had to wait in his room to come to the dining room with one-on-one assistance; he becomes agitated while waiting. • Recent medication change likely cause of urinary urgency. **Action Plan** Plan of care will be updated to include safe footwear when resident is out of bed. Resident's plan of care also updated to include reminder to use bathroom before meals and activities and an assisted walk around the building before being seated for a meal. New plan of care interventions will be shared with all staff and monitored for 7 days. If successful, they will be fully implemented. If not, new interventions will be planned and implemented.
	N	• Investigation of cause of accident including, if indicated, revised interventions to plan of care to prevent recurrence.	**Y**	
	N	• Documentation of monitoring the effectiveness of the interventions and modifying them as necessary.	**Y**	
	N	• Plan of care implemented consistently.	**Y**	
	N	• Plan of care interventions based on minimizing resident's risks to try to prevent avoidable accidents.	**Y**	
	N	• Plan of care modified as needed based on response, outcomes, and needs of resident.	**Y**	
	N	• Reporting or documentation of reporting to a state agency if abuse/neglect suspected.	**Y**	

How to Integrate the Falls Guides into the Investigation Process

The process map below outlines how the Falls Guides could be integrated into your current investigation process. Several quality improvement tools introduced in this How-to Guide are used.

Create a process improvement team

Identify any gaps in your current falls investigation process
Review the Falls Investigation Guides and compare them to your current system and tools for investigating falls.

Use the **Documentation Checklist** to help identify key components of a falls investigation

Determine what type of change you will make
As a team, decide how you can use the Falls Guides in a way that makes sense for your facility.

Answer the three fundamental questions in the **Model for Improvement** to provide structure to the process:

1. What are trying to accomplish? (Must be time-specific and measurable)
2. How will you know your change is an improvement? (Measure, e.g., fall rate)
3. What change can you make that will result in improvement?

Test your change
Test your change on a small scale (i.e., one unit for one day or to investigate one fall), make modifications as necessary and run additional tests to work out any issues.

Use the **PDSA Cycle** to learn and make changes along the way

Implement your change facility-wide
After successful implementation of your test on a small scale, the team can spread the changes to other parts of the organization.

Monitor your progress
Meet regularly to monitor your progress and ensure your change continues to have the intended effect (i.e., track your measure).

Make modifications as needed
You may need to modify your approach over time using the PDSA cycle.

Share your results with staff and celebrate success!

Appendix D: Glossary of Terms

5-Whys

A question-asking method used to uncover the underlying cause(s) of an event. Uncovering the root cause(s) leads to an action plan that is more likely to prevent the event from happening again. An example of utilizing the 5-whys process to investigate the causes of fall is outlined below. Columns A, B, and C follow different causes that contributed to the same event through the 5-whys process.

Event

Resident found on floor of bathroom sitting with back against the wall near the door.
Puddle of liquid pooled in front of toilet and sink.

↓

Why?

Resident stated he had to go to the bathroom; after pushing call light and waiting he decided to walk unassisted to the bathroom.

↓

Why?

Cause A	Cause B	Cause C
Resident had increased fluid intake that day causing new urinary urgency at night.	Call light did not register on staff pagers.	Resident's walker out of reach
↓ **Why?**		
New medication led to increased fluid intake and new urinary urgency.	Call light in room disconnected from paging system.	Resident had historically slept through the night; walker put away to keep thoroughfare open.
↓ **Why?**		
Increase in new medication only recorded in MAR; changes to care plan not yet made.	Maintenance done paging system earlier in the week and reconnection test indicated it was working.	Medication changes did not prompt care plan changes.
↓ **Why?**		
Only managers are authorized to make care plan changes (none present at time of medication change).	Reconnection testing done by one individual who mis-marked the audit form indicating that this call light was working.	Only managers are authorized to make care plan changes (none present at time of medication change).
↓ **Action Plan (with SMARTS)**		
Immediately implement a Manager-On-Duty program to ensure management staff are available (in-person or on-call) to review and approve care plan changes. Review the policy and procedure regarding care plan changes within two weeks. Consider making changes to enable non-management staff to make care plan changes. Once updated, monitor the new policy and procedure for 30 days for effectiveness then fully implement with a tracking/monitoring plan.	Following any maintenance of the call light system reconnection will be verified using a two-person check. This will begin with two staff members re-testing every call light by the end of the day tomorrow. Random audits of call lights will occur at least weekly using the two-person check. Monitor the new plan for 30 days for effectiveness then fully implement and track monthly	Review the medication administration system. Review how new medication orders can be used to prompt care plan changes within two weeks in conjunction with the care plan policy and procedure review.

Contributing Factors

An aspect of the situation or care process that plays a part in the adverse event; these are usually system-level, not person-focused; adverse events are usually the result of many contributing factors.

Plan-Do-Study/Check-Act (PDS/CA)

PDS/CA is shorthand for testing a change by planning it, trying it, observing the results, and acting on what is learned. This is the scientific method used for action-oriented learning. (Source: ihi.org)

Plan: Formulate action steps.
Do: Implement steps on a trial basis.
Study: Monitor effectiveness of action steps for specified time (1 week, 30 days, etc.)
Act: Review effectiveness of plan, then adopt steps or revise plan

Model for Improvement

A model to test change quickly that combines the PDSA and the following three questions:

- What are we trying to accomplish?
- How will we know that a change is an improvement?
- What changes can we make that will result in an improvement?

Root Cause Analysis (RCA)

A systematic process for identifying the most basic or causal factor(s) underlying variation in performance; the intensive, in-depth analysis of a problem event to learn the most basic reason(s) for the problem which if corrected will minimize the recurrence of that event. For more information on RCA, please refer to Oregon's Guide to Root Cause Analysis in Long Term Care, Investigating with a Different Lens. A model of how RCA is used to investigate a fall is also available in Appendix E.

The RCA process involves:

- Determining what happened.
- Identifying what factors contributed to the event.
- Developing an action plan to reduce the likelihood of a similar event.

The steps in Oregon's Root Cause Analysis process are:

1. Gather and document initial information
2. Fill in the gaps
3. Analyze
4. Develop an action plan
5. Evaluate results

SBAR Communication (Situation-Background-Assessment-Recommendation)

SBAR is a technique that provides a framework for communication between members of the health care team about a resident's condition. SBAR is an easy-to-remember, concrete mechanism useful for framing any conversation, especially critical ones, requiring a clinician's immediate attention and action. It allows for an easy and focused way to set expectations for what will be communicated, and how, between members of the team, which is essential for developing teamwork and fostering a culture of patient safety. Learn more about the SBAR toolkit.

SMARTS for Action Planning

SMARTS is technique used to map out action plans. This step-by-step approach give action plans the structure required to see results. Action plans with SMARTS are:

- **S**pecific (identify who, what, where, when, how, why)
- **M**easurable (set criteria for tracking progress toward completion)
- **A**ttainable (there is a reasonable chance of success)
- **R**ealistic (willing and able to work on it)
- **T**imely (set time frame and end date)
- **S**upported (determine resources to support your action plan, i.e., organization commitment, outside resources such as books, articles, courses, other LTC experts)

Appendix E: Additional Resources

- **Root Cause Analysis Case Example:** Walks you through a fall investigation using root cause analysis (p. E-2)
- **PDSA Worksheet for Testing Change:** A worksheet for using PDSA to test a change in your organization (p. E-3)

Other Resources Available Online

- Article: Rethinking the Use of Position Change Alarms
- State Operations Manual Appendix PP – Guidance to Surveyors for Long Term Care Facilities
- Oregon Administrative Rules for Long Term Care Settings

Root Cause Analysis Case Example

Event

Resident fell at the bedside while on her way to the restroom. She was found on the floor with a bleeding skin tear to her left hand and an abrasion to her left knee; her wheelchair was tipped forward. The physician was notified and a treatment for her left-hand skin tear was ordered as well as an x-ray to her left knee and right hip.

Gather & Document Information

Documentation/Chart

- 78-year-old, female
- Diagnoses: Right hip pinning, urinary urgency, congestive heart Failure (CHF), hypertension (HTN) Current medications: Blood thinner, two anti-hypertensive meds, a diuretic, pain meds as needed.
- History: Had a fall at home after getting caught in her dog's leash which resulted in a fractured right hip. Was admitted to the hospital for surgery (hip pinning) and is now in a skilled nursing facility for rehabilitation.

Staff Interview/Observation

- Resident was witnessed resting in her bed at 1030 and aide moved the bedside table close to bed in preparation for lunch.
- A staff member heard her call out at 1115.
- The aide that found the resident on her left knee, her left hand was bleeding, and her right leg was extended straight and in alignment with her body.
- The resident does not use side rails.
- The resident's wheelchair was behind her but tipped forward.
- Resident's wheelchair brakes were not locked.

Resident Interview

- The resident states she was getting up to use the bathroom.
- The resident does not complain of any increase in right hip pain and her surgical incision is intact.
- She does state that her left knee is painful as is her left hand where she hit it on the bedside table.
- The resident stated that she tried to sit in her wheelchair because she became dizzy on standing.

Other Data Sources

- Identify possible contributing factors
- Identify the sequence of events to clearly understand what took place and the problem/issue:

Resident leaves bed to use restroom ▶ Resident attempts to sit in wheelchair ▶ Wheelchair tips and resident falls ▶ Resident sustains skin tear to left hand and abrasion to left knee

Analysis

- Identify contributing factors
- Use the 5-Whys to uncover root causes (continue asking "why")

Develop an Action Plan

- Include Interdisciplinary Team (IDT) in process
- Ask, "What can we do to keep similar events from happening again?" (on a system-level) Address identified root causes
- Develop action plans with SMARTS (specific, measurable, attainable, realistic, timely, supported)

Evaluate Results

- Use PDSA to plan, test, and implement action plans (PDSA: Plan, Do, Study, Act) Track and trend data over time to ensure action plan met intended goal

PDSA Worksheet for Testing Change

Achieving your goal will require multiple small tests of change to reach and efficient process and the desired results.

Three Fundamental Questions for Improvement

1. **Aim**: What are we trying to accomplish?

2. **Measure**: How will we know that a change is an improvement?

3. **Change**: What changes can we make that will lead to improvement?

Plan

What is your first (or next) test of change?	Test population?	When to be done?
List the tasks needed to set up this test of change: 1. 2. 3.	Who is responsible?	When to be done?
Predict what will happen when test is carried out:	Measures to determine whether prediction succeeds:	

Do

Describe what happened when you ran the test (what was done, measured results, observations).

Study

Describe how measured results and observations compared with the predictions.

Act

Determine next steps (modify idea and retest, spread idea, test a new idea).

Adapted from a worksheet developed by the Institute for Healthcare Improvement. This material was prepared by Acumentra Health, Oregon's Medicare Quality Improvement Organization, under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services. The contents presented do not necessarily reflect CMS policy. 9SOW-OR-NHR-09-04, 7/10/09