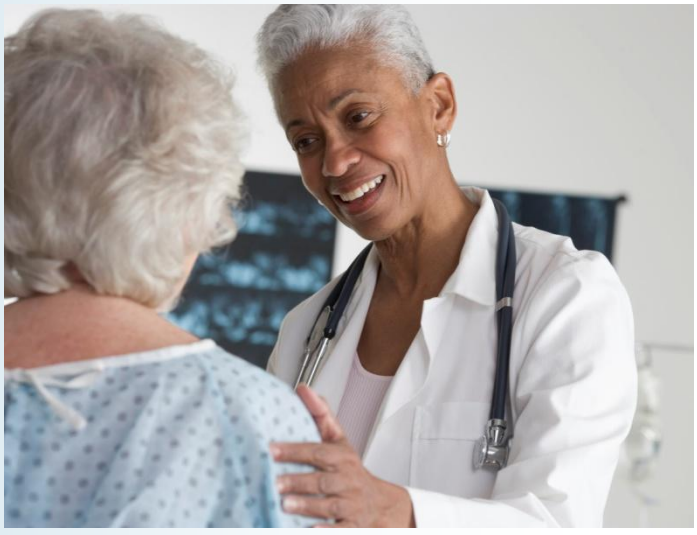
Preventing Falls in Hospitals

A Toolkit for Improving Quality of Care



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A Toolkit for Improving Quality of Care

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Agency for Healthcare Research and Quality
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Boston University School of Public Health
ECRI Institute

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Authors

RAND Corporation

David A. Ganz, M.D., Ph.D., VA Greater Los Angeles Healthcare System, University of California at Los Angeles, and RAND Corporation
Christina Huang, M.P.H., RAND Corporation
Debra Saliba, M.D., M.P.H., VA Greater Los Angeles Healthcare System, UCLA/JH Borun Center for Gerontological Research, and RAND Corporation
Victoria Shier, M.P.A., RAND Corporation

Boston University School of Public Health

Dan Berlowitz, M.D., M.P.H., Bedford VA Hospital and Boston University School of Public Health
Carol VanDeusen Lukas, Ed.D., VA Boston Healthcare System and Boston University School of Public Health

ECRI Institute

Kathryn Pelczarski, B.S.
Karen Schoelles, M.D., S.M.
Linda C. Wallace, M.S.N., B.S.N.
Patricia Neumann, R.N., M.S.

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Roadmap

Section	Action Steps	Tool That Supports Action	Who Should Use The Tool
Overview	Enlist support of senior leaders	Tool ØA, Introduction and Overview for Stakeholders	Senior manager
Section 1	Are you ready for this change?		
1.1	Assess the culture of safety in your hospital	Tool 1A, Hospital Survey on Patient Safety Culture	All interdisciplinary team members
1.2	Evaluate current organizational attention to falls	Tool 1B, Stakeholder Analysis	Implementation Team leader
1.3	Assess and develop leadership support for the fall prevention program	Tool 1C, Leadership Support Assessment Tool 1D, Business Case Form	Implementation Team leader
1.5	Identify resources that are available and resources that are needed	Tool 1E, Resource Needs Assessment	Implementation Team leader
1.7	Assess your progress on completing readiness for change activities	Tool 1F, Organizational Readiness Checklist	Implementation Team leader
Section 2	How will you manage change?		
2.1	Identify your Implementation Team	Tool 2A, Interdisciplinary Team	Implementation Team leader
2.2	Assess the current status of fall prevention activities in your hospital	Tool 2B, Quality Improvement Process Tool 2C, Current Process Analysis	Implementation Team leader, individuals designated by the

		Tool 2D, Assessing Current Fall Prevention Policies and Practices	Implementation Team leader
	Determine staff knowledge about fall prevention	Tool 2E, Fall Knowledge Test	Staff nurses and nursing assistants
2.3	Set goals for improvement based on outcomes and processes	Tool 2F, Action Plan	Implementation Team leader with quality improvement/safety/risk manager
Section	Action Steps	Tool That Supports Action	Who should use the tool
2.4	Assess your progress on completing the managing change activities	Tool 2G, Managing Change Checklist	Implementation Team leader
Section 3	Which fall prevention practices do you want to use?		
3.1	Identify how fall prevention care processes connect to one another	Tool 3A, Master Clinical Pathway for Inpatient Falls	Quality improvement/safety/risk manager, staff nurses, nursing assistants
3.2	Implement universal fall precautions	Tool 3B, Scheduled Rounding Protocol Tool 3C, Tool Covering Environmental Safety at the Bedside Tool 3D, Hazard Report Form Tool 3E, Clinical Pathway for Safe Patient Handling	Unit manager, staff nurses, nursing assistants, facility engineer, hospital employee who enters patient rooms

3.3	Identify important risk factors for falls in your patients	Tool 3F, Orthostatic Vital Sign Measurement Tool 3G, STRATIFY Scale for Identifying Fall Risk Factors Tool 3H, Morse Fall Scale for Identifying Fall Risk Factors Tool 3I, Medication Fall Risk Scale and Evaluation Tools	Staff nurses, pharmacist, nursing assistants
3.4	Use identified fall risk factors to implement fall prevention care planning	Tool 3J, Delirium Evaluation Bundle: Digit Span, Short Portable Mental Status Questionnaire, and Confusion Assessment Method Tool 3K, Algorithm for Mobilizing Patients Tool 3L, Patient and Family Education Tool 3M, Sample Care Plan	Educators, staff nurses, physicians, nurse practitioners, physician assistants, nursing assistants
3.5	Assess and manage patients after a fall	Tool 3N, Postfall Assessment, Clinical Review Tool 3O, Postfall Assessment for Root Cause Analysis	Staff nurses and physicians
Section	Action Steps	Tool That Supports Action	Who should use the tool
3.8	Assess your progress on completing the best practices activities	Tool 3P, Best Practices Checklist	Implementation Team Leader
Section 4	How do you implement the fall prevention program in your organization?		

4.1	Assign staff roles and responsibilities for tasks identified in set of best practices	Tool 4A, Assigning Responsibilities for Using Best Practices Tool 4B, Staff Roles	Implementation Team Leader, Unit manager
4.3	Assess current staff education practices and facilitate integration of new knowledge on fall prevention into existing or new practices	Tool 4C, Assessing Staff Education and Training	Implementation Team Leader
4.4	Assess your progress on implementing best practices activities	Tool 4D, Implementing Best Practices Checklist	Implementation Team Leader
Section 5	How do you measure fall rates and fall prevention practices?		
5.1	Collect the right data to learn about falls, fall-related injuries, and their causes	Tool 5A, Information To Include in Incident Reports	Quality improvement/risk manager, information systems staff
5.2	Measure fall prevention practices	Tool 5B, Assessing Fall Prevention Care Processes	Unit manager and unit champions
5.3	Assess your progress on measuring progress activities	Tool 5C, Measuring Progress Checklist	Implementation Team Leader
Section 6	How do you sustain an effective fall prevention program?		
6.3	Identify factors need to sustain your fall prevention efforts	Tool 6A, Sustainability Tool	Implementation Team Leader

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Overview

The Problem of Falls

Each year, somewhere between 700,000 and 1,000,000 people in the United States fall in the hospital.[i] A patient fall is defined as an unplanned descent to the floor with or without injury to the patient.[ii] A fall may result in fractures, lacerations, or internal bleeding, leading to increased health care utilization. Research shows that close to one-third of falls can be prevented.[iii] As of 2008, the Centers for Medicare & Medicaid Services (CMS) does not reimburse hospitals for certain types of traumatic injuries that occur while a patient is in the hospital[iv]; many of these injuries could occur after a fall.

Staff in acute care hospitals have a complex and potentially conflicting set of goals when treating patients. Hospital personnel need to treat the problem that prompted the patient's admission, keep the patient safe, and help the patient to maintain or recover physical and mental function. Thus, fall prevention must be balanced against other priorities. Fall prevention involves managing a patient's underlying fall risk factors (e.g., problems with walking and transfers, medication side effects, confusion, frequent toileting needs) and optimizing the hospital's physical design and environment. A number of practices have been shown to reduce the occurrence of falls, but these practices are not used systematically in all hospitals.

The Challenges of Fall Prevention

Fall prevention requires an interdisciplinary approach to care. Some parts of fall prevention care are highly routinized; other aspects must be tailored to each patient's specific risk profile. No clinician working alone, regardless of how talented, can prevent all falls. Rather, fall prevention requires the active engagement of many individuals, including the multiple disciplines and teams involved in caring for the patient. To accomplish this coordination, high-quality prevention requires an organizational culture and operational practices that promote teamwork and communication, as well as individual expertise.

Fall prevention activities also need to be balanced with other considerations, such as minimizing restraints and maintaining patients' mobility, to provide the best possible care to the patient. Therefore, improvement in fall prevention requires a system focus to make needed changes.

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[i] Estimate from Currie LM. Fall and injury prevention. In: Patient safety and quality. an evidence-based handbook for nurses. Rockville, MD: Agency for Healthcare Research and Quality; 2008. AHRQ Publication No. 08-0043. Available at: www.ahrq.gov/qual/nurseshdbk/docs/CurrieL_FIP.pdf.

[ii] This definition comes from the National Database of Nursing Quality Indicators. For the full definition, see resource box in section 5.1.2.

[iii] See Cameron ID, Murray GR, Gillespie LD, et al. Interventions for preventing falls in older people in nursing care facilities and hospitals. Cochrane Database of Systematic Reviews 2010, Issue 1. Art. No.: CD005465.

[iv] As of October 2012, CMS' list of codes for falls and trauma includes fractures, dislocations, intracranial injuries, crushing injuries, burns, and other injuries (such as hypothermia). The specific Comorbidity and Complication/Major Comorbidity and Complication codes are 800-829; 830-839; 850-854; 925-929; 940-949; and 991-994. CMS may update these codes periodically, so check the CMS Web site at www.cms.gov for guidance.

Toolkit Designed for Multiple Audiences

This toolkit focuses on overcoming the challenges associated with developing, implementing, and sustaining a fall prevention program. Therefore, you will find that a good deal of the toolkit is focused on successfully negotiating a change process at your hospital. This is what we feel makes the toolkit unique. The toolkit was developed under a contract with the Agency for Healthcare Research and Quality through the ACTION II program (Accelerating Change and Transformation in Organizations and Networks). It was created by a core team with expertise in fall prevention and organizational change. The team included staff from the RAND Corporation, ECRI Institute, and Boston University.

This toolkit focuses specifically on reducing falls during a patient's hospital stay. For more information on how to prevent falls outside the hospital, see the American Geriatrics Society guidelines at www.americangeriatrics.org/health_care_professionals/clinical_practice/clinical_guidelines_recommendations/2010/) and the Centers for Disease Control and Prevention STEADI Toolkit at www.cdc.gov/homeandrecreationalsafety/Falls/steadi/index.html. Efforts to prevent falls outside the hospital will help reduce the number of patients admitted to the hospital for fall-related injuries.

The toolkit's content draws on a systematic review of the literature.[v] We also drew heavily on expert opinion regarding best practices in fall prevention.[vi] We used the literature wherever possible to support our recommendations. Throughout the toolkit you will find citations to relevant literature where it exists.

In many cases, the literature was unclear or silent about key aspects of care, or implementation strategies were not reported in adequate detail. Therefore, we sought guidance from an expert panel and additional experts in the field. We merged this input with our own experience both as clinicians working in acute care hospitals and as quality improvement specialists who work with hospitals to improve their fall prevention programs. In addition, six hospitals volunteered to test the toolkit as part of this project. Their feedback influenced this final version and many of the resource boxes throughout the toolkit reflect their experiences.

The toolkit is designed for multiple uses. The core document is an ***implementation guide*** organized under six major questions intended to be used primarily by the Implementation Team charged with leading the effort to put the new prevention strategies into practice.[vii] The full guide

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[v] See Hempel S, Newberry S, Wang Z, et al. Review of the evidence on falls prevention in hospitals. RAND Working Paper. (Prepared for the Agency for Healthcare Research and Quality, Contract No. HHSA2902010000171, PRISM no. HHSA2903200IT, Task Order #1). Publication No. WR-907-AHRQ. Santa Monica, CA: RAND; 2012. Available at: www.rand.org/pubs/working_papers/WR907.html. Also see Appendix, "Bibliography of Studies Implementing Fall Prevention Practices," for details.

[vi] In the context of this toolkit, "best practices" refers to both (1) a standard way of developing, implementing, and sustaining a hospital fall prevention program; and (2) those clinical care processes that, based on literature and expert opinion, represent the best way of preventing falls in the hospital.

[vii] We conceive of the Implementation Team as a standing committee charged with overseeing the hospital's fall prevention program. Joint Commission standards require ongoing efforts to assess risk for falls and to intervene to reduce fall risk; staff education regarding fall prevention; and an evaluation of the effectiveness of the hospital's fall prevention strategies, including fall risk assessment, interventions, and education. Therefore, many hospitals already have in place a fall committee that could become the Implementation Team.

also includes **links to tools and resources** found in the Tools and Resources section of the toolkit, on the Web, or in the literature. The tools and resources are designed to be used by different audiences and for different purposes, as indicated in the guide.

Because it is important to have your facility's leadership engaged, the toolkit includes a letter to introduce the program to other key players, such as hospital senior management and unit nurse managers. This letter may be found at the beginning of section 7 (Tool ØA, "Introduction and Overview for Stakeholders"). The toolkit also contains an "Action Plan" (Tool 2F), which provides a quick overview of the steps needed to implement and sustain a fall prevention program. In addition, it contains an "Interdisciplinary Team" tool (Tool 2A), which has a matrix of all the tools in this toolkit organized by the types of hospital personnel who would most likely use them (e.g., tools for nursing staff, rehab personnel, pharmacists).

Implementation Guide Organized To Direct Hospitals Through the Change Process

To implement a successful initiative to improve fall prevention on a sustained basis, your organization will need to address six questions:

- Are you ready for this change?
- How will you manage change?
- Which fall prevention practices do you want to use?
- How do you implement best practices in your organization?
- How do you measure fall rates and fall prevention practices?
- How do you sustain an effective fall prevention program?

Sections of the Guide

The six questions make up the major sections of the implementation guide. Each major question is in turn organized by a series of more detailed questions to guide the Implementation Team through the improvement process, as summarized in the table of contents. Each section begins with a brief explanation of why the question is relevant and important to the change process or to fall prevention. Each section concludes with action steps and specific resources to support the actions needed to address the questions. Additional resources that may be helpful to implementers may be found in the appendix "Bibliography of Studies Implementing Fall Prevention Practices."

Each section also suggests specific tools and resources to assist you. In addition, printer-friendly versions of all these referenced tools and resources are compiled in section 7. Some resources are intended for the Implementation Team to use during the planning and system change process. Others are designed as educational materials or clinical tools to be used by unit staff as they implement the new strategies and use them on an ongoing basis. Sections also include references or links to more detailed resources for those who want to explore an issue in more detail.

Adaptation of the Guide to Your Organization

While the implementation guide is designed to cover the full improvement process from deciding to make changes to monitoring sustainability, some sections may be more relevant than others if your organization has already begun the improvement process. Sections 1 and 2 are intended to

guide you through an assessment of your readiness to change and help you plan your processes to change.

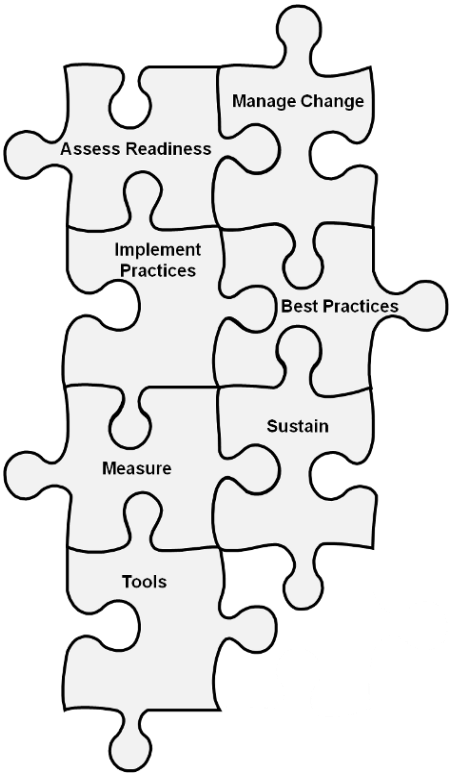
Hospitals may have their own approaches in tailoring the toolkit to their needs. The guide can be used as a reference document with sections consulted selectively as needed. To help you find the pieces you need, the questions that guide the full process are listed in the table of contents and the location of subjects can be found in the roadmap.

Because the changes needed are usually complex, most organizations take at least a year to develop, incorporate, and consolidate the new fall prevention practices. Some take longer as early accomplishments uncover the need and opportunity for further improvements. It will be important to balance the need to proceed thoughtfully with the need to move quickly enough to show progress and maintain momentum.

Improvement as Puzzle Pieces

The path through the guide is not a single sequence of steps. Instead, the sections can be better viewed as interlocking pieces of a puzzle, for two reasons. First, the components of improvement are not linear and independent; one piece may depend on another and work will need to move back and forth between them. Second, each hospital may choose to start with a different section of the guide, depending on its local needs.

We present this view of the guide as a puzzle with the image below. To orient readers using the guide, we repeat this image at the beginning of each section with the content of the section highlighted. In addition, throughout the guide, we explicitly cross-reference subsections where assessments, decisions, or tools in one area will contribute to deliberations or actions in another.

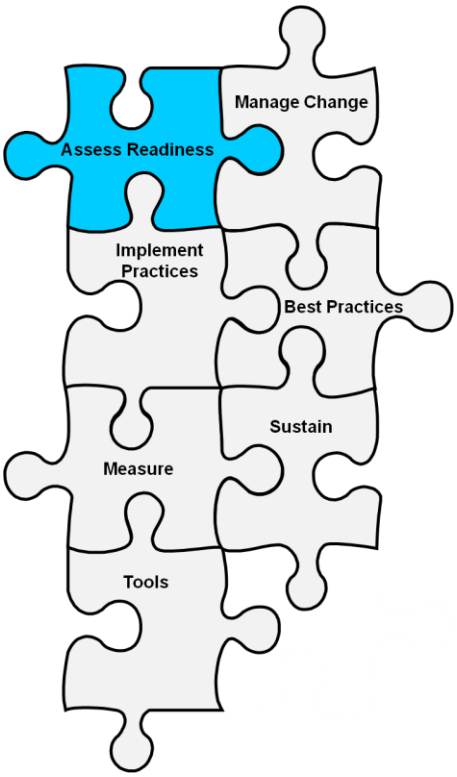


Icons

Throughout this toolkit, icons signal different types of resources to assist you:

Action and Resource Symbols	
	Denotes action steps
	Denotes a tool for this action in Tools and Resources
	Denotes a linked tool or other resource for this action
	Denotes practice insights Includes added commentary or examples drawn from experiences in a variety of organizations, including the hospitals that tested this toolkit
	Denotes additional background material for those interested in pursuing this area in more detail

1. Are you ready for this change?



Falls represent a considerable problem in hospitals. Efforts to improve fall prevention require a system approach that achieves organizational change through multiple, simultaneous modifications to workflow, communication, and decisionmaking. This type of organizational change can be difficult to achieve. Failure to assess your organization's readiness for change can lead to unanticipated difficulties in implementation, or even the complete failure of the effort.

Each question below will help you and your organization explore readiness and identify any needed actions to improve it:

- Do organizational members understand why change is needed?
- Is there urgency to change?
- Does senior leadership support this initiative?
- Who will take ownership of this effort?
- What resources are needed?
- What if you are not ready for full-scale change?

Organizational Readiness for Change: Locally Relevant Considerations

Even hospitals whose leaders are ready to support change may face barriers to further progress. For example, senior leadership may believe that effective fall prevention is essential and may demonstrate that fall prevention is a high priority. However:

- Some hospitals may experience significant turnover in senior leadership and nursing leadership.
- Competing patient safety and quality priorities may affect resource availability.

This section of guide addresses these types of issues.

1.1. Do organizational members understand why change is needed?

Knowing how care should be delivered is only one step in the process of improving fall prevention. Readiness requires both the capability to make changes and the motivation to change. That motivation may be helped along by external factors, such as Federal or State mandates. But the motivation is most likely to be strong and enduring if based on a clear understanding of the concerns behind the planned change at all levels of the organization.

One of way of finding out whether people within your hospital understand why change is needed is to perform a survey. Consider administering a general survey, such as the AHRQ Hospital

Survey on Patient Safety Culture (Tool 1A, "Hospital Survey on Patient Safety Culture") to assess the culture of safety in your hospital.

There are many potential reasons to implement a fall prevention program. While we offer general reasons and statistics in the box below, local reasons or cases may be more tangible and compelling. For example:

- Has your facility experienced a significant increase in fall rates?
- Have there been any adverse events that were fall related?
- Has your facility been the target of a legal action related to a fall?
- Do staff members have personal experience of a family member affected by a fall?

Did you know?

- Falls are common: Falls are the most frequently reported incident in adult inpatient units. The rate of falls ranges from 1.7 to 25 falls per 1,000 patient days (see sections 5.1.3 to 5.1.5 for an explanation of rates), depending on the unit, with geriatric psychiatry patients having the highest risk.[a]
- There is a business case for fall prevention: Falls are associated with increased length of stay, higher rates of discharge to nursing homes, and greater health care utilization.[b] One study found that operational costs for fallers with serious injury were $13,316 higher than nonfallers.[c] As of 2008, Medicare no longer reimburses hospitals for increased costs due to injury from an inpatient fall.[d]
- Falls harm our patients: Thirty to 51 percent of falls in hospitals result in some injury,[b] varying from bruises to severe wounds or bone fractures.

1. [a] Currie LM. Fall and injury prevention. Patient safety and quality. an evidence-based handbook for nurses. Rockville, MD: Agency for Healthcare Research and Quality; 2008. AHRQ Publication No. 08-0043. Available at: www.ahrq.gov/qual/nurseshdbk/docs/CurrieL_FIP.pdf.
2. [b] Oliver D, Healey F, Haines TP. Preventing falls and fall-related injuries in hospitals. Clin Geriatr Med 2010;26(4):645-92.
3. [c] Wong CA, Recktenwald AJ, Jones ML, et al. The cost of serious fall-related injuries at three Midwestern hospitals. Jt Comm J Qual Patient Saf 2011;37(2):81-7.
4. [d] See www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/HospitalAcqCond/Downloads/HACFactsheet.pdf and www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/HospitalAcqCond/EducationalResources.html for details.

Lasting improvement is more likely to occur if the various people influencing fall prevention have a shared set of knowledge and motivations. Those initiating interventions to prevent falls may clearly understand the needed changes. However, knowledge and motivation to change may vary greatly across the organization. Others in your hospital may have different reasons for wanting change, so it is important to define the issues and reasons for change in advance. This process will help make the case for why a fall prevention initiative is needed now.

Updating knowledge and changing attitudes require both sharing new information and dealing with existing knowledge and attitudes that may undermine change efforts if left unaddressed. Be sure to assess the knowledge and attitudes of all types of staff members involved in clinical care, since awareness of the importance of fall prevention is an interdisciplinary responsibility.

- Consider administering a survey to assess the culture of safety in your hospital. The AHRQ Hospital Survey on Patient Safety Culture examines patient safety culture from a hospital staff perspective. This survey can be found in Tools and Resources (Tool 1A, "Hospital Survey on Patient Safety Culture"). The results of the survey can be used to identify areas for improvement in your hospital's culture.

Develop consensus on reasons a fall prevention program needs to go forward. Developing consensus involves multiple steps:

- Identify the reasons for having a fall prevention program in your organization. If the reasons are general and not specific to your hospital, try to find cases or examples that help bring the issue home to your facility.
- Determine your facility leadership's interests and needs in this area, and assess how much effort will be needed to obtain and sustain their support.
- Talk with other people (from various levels, roles, and clinical areas) who support implementing a fall prevention program. This group may include as many as 10 or 20 people who have a stake in this issue.
- Based on this input, begin to clarify the shared reasons justifying change.
- Assess the extent to which organizational members beyond potential supporters understand why a comprehensive fall prevention program is important. This step can be completed in a variety of ways, such as small group meetings, surveys, or a review of quality concerns raised by organizational members.
- Consider identifying one unit where the problem with falls is worst or where staff are most enthusiastic about fall reduction. These staff are most likely to understand why change is needed, so find out what they think.

1.2. Is there urgency to change?

Beyond understanding why change is needed to improve fall prevention, do organizational members find the need compelling? If a sense of urgency does not yet exist among key organizational leaders and members, your job as change agents is to increase or create it. At this early stage, the focus is on urgency at the organizational level. Awareness and knowledge for change at the unit level will be discussed in section 2.2.

Consider the aspects of the problem that will be most compelling to your stakeholders. Are there different aspects that are relevant and persuasive for different audiences within the hospital? For example, for some audiences, a business case for reducing falls may be more compelling; for others, the clinical benefits may be more relevant.

In considering your arguments, you will need to evaluate current organizational attention to falls. For example, who has lead responsibility for fall prevention? Are fall rates regularly documented

and reported? If so, who receives and acts on the reports? Answers to these questions will influence the way you make your case for improving fall prevention.

If your facility staff do not understand why improving fall prevention is important, your task of increasing urgency will be more difficult. Mounting an effective improvement effort will likely require greater support from leadership, as discussed in section 1.3, and more resources, as described in section 1.5.

Based on your current understanding of the situation, begin to explore topics or themes that can be used to increase awareness and urgency. Consider framing your efforts in line with broader initiatives, such as the Institute for Healthcare Improvement Triple Aim (www.ihi.org/offerings/Initiatives/TripleAim/Pages/default.aspx).

- Reach out beyond those who already support efforts to strengthen fall prevention. Begin talking with additional colleagues about fall prevention and why it is important at **your** health care organization.
- Listen to their responses to gather important information about barriers of awareness and understanding that you may need to address later with education.
- Conduct a stakeholder analysis to identify key people and departments that may have a stake in the success of this program.

A template for stakeholder analysis can be found in Tools and Resources (Tool 1B, "Stakeholder Analysis").

Consider using the introductory slide presentation developed by ECRI Institute. [PowerPoint file, 92 KB] *Note: ECRI Institute should be cited as the source.*

1.3. Does senior administrative leadership support this program?

You will need to ensure that your organization's leadership team (i.e., top-level administration, medical staff leadership, and board of trustees) shares the urgency to change fall prevention practices and is willing and able to provide complete and ongoing support for this effort. Lessons learned from key fall prevention initiatives show that support is needed from both the top-level administration as well as those at the bedside.

To make your case most effectively to leadership, ask yourself how support for a fall prevention program fits with other institutional values and commitments. While you may not know at the outset **all** the kinds of support that will be needed, you know that changes are going to require new or reallocated resources, most likely both human and material. The changes will also require focus and accountability for results, which will also need senior leadership oversight.

If senior leaders do not already strongly support the effort to strengthen fall prevention, you will need to build the case for change. For some stakeholders, such as your chief financial officer, the most compelling case may be a business case. You may discuss how much falls cost hospitals each year in terms of longer lengths of stay, additional staff time, and reduced reimbursement because Medicare no longer pays for preventable complications from falls. For other stakeholders, such as clinical chiefs and nurse executives, it may be a clinical case discussing how falls increase pain, functional impairment, morbidity, and mortality.

Many hospitals have a strong emphasis on quality improvement, with an improvement infrastructure in place. Consider contacting quality improvement leaders in your organization for guidance and possible assistance in enlisting leadership support. Also, you may want to enlist quality improvement advisors to participate on your Implementation Team as described in section 2.1.1.

To assess leadership support and other questions raised here, consider using a facility-level assessment similar to Tool 1C, "Leadership Support Assessment."

Hospital Leadership Team

A typical hospital includes these three leadership groups:

- **Top-level administration** (e.g., chief executive officer, chief financial officer, chief operating officer, chief medical officer, chief nursing officer, chief quality officer, vice president of facilities and other vice president-level staff).
- Board of trustees.
- Medical staff.

Hospitals vary with how they involve these groups in decisionmaking. Depending on your goals for change, you should approach some or all of these leadership groups to ensure buy-in.

The influence of top management, board, and physician leadership on hospital quality improvement efforts is detailed in: Weiner BJ, Shortell SM, Alexander J. Promoting clinical involvement in hospital quality improvement efforts: the effects of top management, board, and physician leadership. Health Serv Res 1997;32(4):491-510. Available at: www.ncbi.nlm.nih.gov/pmc/articles/PMC1070207/pdf/hsresearch00036-0116.pdf.

The tool for assessing leadership support be found in Tools and Resources (Tool 1C, "Leadership Support Assessment").

- Assess the level of leadership support for this change effort. Look carefully at the "yes" and "no" answers in the leadership support assessment. If no senior managers have been designated to oversee patient safety, or no funds are earmarked for patient safety, patient safety education, or champions for fall prevention, launching a fall prevention program is likely to be extremely difficult, if not impossible. Ideally, leaders will share the urgency to improve and will help drive that urgency through the organization. However, if their support is not adequate, take steps to inform leaders of the importance and potential benefits associated with fall prevention.
- Answer the following questions: Who are the key leaders? What will get them on board, if they are not already on board? What will keep them on board? Which senior leader can be the sponsor, link, or champion for this effort?
- Use what you learned about reasons for change identified by the management and staff in your assessments.

A template for developing a business case for fall prevention can be found in Tools and Resources (Tool 1D, "Business Case Form").

For more information on making the business case for fall prevention, see Forte J. How to build a successful business case for a falls-reduction program. Best practices for falls reduction: a practical guide. Am Nurse Today 2011;6(2). Special Supplement. Available at: www.americannursetoday.com/article.aspx?id=7634&fid=7364.

1.4. Who will take ownership of this effort?

Beyond the support of organizational leaders, improvement and change projects need strong advocates, members of the organization who are committed to the project's goals and who can influence others to get involved. Successful change projects must have broader support than just one or two champions. Individuals who can take ownership of the effort can come from various disciplines and may include physicians, nurse managers, physical or occupational therapists, pharmacists, or staff members with a particular interest and expertise in fall prevention. Some or all of these staff should make up the interdisciplinary **Implementation Team** that will guide the improvement effort, as described in section 2.

- Assess your organization to identify who the potential advocates of fall prevention are likely to be. Some may be obvious, but others may not be immediately evident.
- Who cares about this issue? Why might it be important to them?
- Organizationally, what would be the logical home base for this effort?
- Would any individuals in that part of the organization be willing to take ownership?

In identifying potential owners or champions for the effort, consider visiting the AHRQ TeamSTEPPS Web site, which offers tips and suggestions for enhancing organizational readiness: http://teamstepps.ahrq.gov/abouttips.htm.

1.5. What resources are needed?

In addition to the Implementation Team, improvement projects require resources of various kinds, depending on the size and scope of the program. Launching an effort without first ensuring adequate resources can derail your program at almost every step. Needed resources are likely to include staff time for team meetings and initiatives, leadership time to monitor and support team efforts, training and education time, and more tangible resources such as new care products and communication materials. Cultivating local expertise in fall prevention is particularly key in hospitals that do not have a content expert readily available.

Consider creating a checklist to identify resource needs, such as funds, staff education programs, and information technology support. At the beginning of the program, the list of resources needed is likely to be broad and will require refinement as the improvement efforts progress. In developing the list, consider the resources already in place, such as a data system for reporting fall rates and staff education programs. A detailed approach to determining current prevention practices is described in section 2.2.2. At this early stage of determining whether change is needed, the assessment of resources can be at a more general level.

This tool can be found in the Tools and Resources section (Tool 1E, "Resource Needs Assessment").

- Take the time to develop a list of resources that are likely to be needed as part of a fall prevention program.
- Ask for what you will need to accomplish some significant changes.

1.6. What if you are not ready for full-scale change?

You should not move ahead with full-scale organizational change until you are confident of organizational readiness. You can use the checklist in section 1.7 below to assess each of the areas of organizational readiness for change that has been discussed in this section. To the extent that readiness is not yet evident, or is only partial, it is critical to address those areas. At a minimum, the facility must have one senior leader who understands the importance of this effort and is committed to supporting the effort both in terms of resources and necessary changes to work processes. In addition, evidence of a broader commitment to patient safety is an essential component. If any of these elements are missing, you will need to first build support and readiness before launching a full-scale change effort.

Some ways to build support and readiness may include:

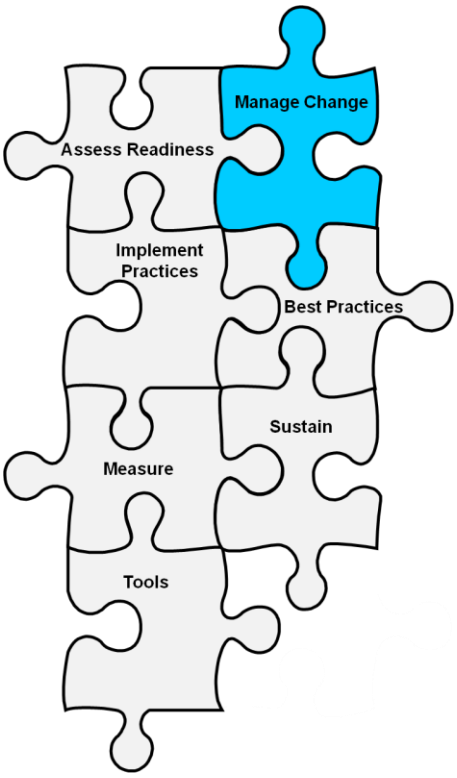
a. Trying the changes in a single receptive unit to demonstrate success to the rest of the organization and build the case for change;
b. Holding one-on-one meetings with key formal and informal leaders to present information about the need for change and persuade them that the improvement efforts will pay off;
c. Collecting and sharing data on fall rates in your facility to establish program relevance;
d. Identifying and recruiting program allies who can help spread the word; and
e. Conducting a general staff awareness campaign.

1.7. Checklist for assessing readiness for change

The Organizational Readiness Checklist and other end-of-chapter checklists are designed to provide toolkit users with ways to check their progress through the assessment and implementation steps discussed in the toolkit. They may be useful in ensuring that toolkit users have not skipped essential steps (e.g., ensuring leadership support) in pursuing their fall prevention efforts.

The checklist for assessing readiness for change can be found in Tools and Resources (Tool 1F, "Organizational Readiness Checklist").

2. How will you manage change?



Being ready for change is a necessary, but not sufficient, prerequisite to changing your organization's approach to fall prevention. Even when a health care organization is armed with the best evidence-based information, willing staff members, and good intentions, the implementation of new clinical and operational practices still requires additional careful organizational planning. Once you have established organizational readiness, the next practice change step is completing a thoughtful assessment of your organization's current practices and knowledge about fall prevention.

Your timeline should balance the need to act systematically and thoughtfully with the need to move quickly enough to maintain momentum by demonstrating progress. This section is designed to help you manage change at the organizational level. We will discuss managing change at the unit level in section 4 and sustaining change in section 6.

In section 1.4, you identified members of the organization who would be willing to take ownership of the improvement effort. As mentioned, we recommend that some or all of those members serve on an Implementation Team to oversee the improvement effort and manage the changes required. To maximize the possibility of successful implementation of the fall prevention initiative, you need to consider the following questions:

- How can you set up the Implementation Team for success?
  - Who should serve on the Implementation Team?
  - How can you help the Implementation Team get started on its work?
  - How does the Implementation Team work with other teams involved in fall prevention?
- What needs to change and how do you need to redesign it?
  - How do you start the work of redesign?
  - What is the current state of fall prevention practice?
  - What is the current state of staff knowledge about fall prevention?
- How should goals and plans for change be developed?
  - What goals should you set?
  - How do you develop your plan for change?
- How do you bring staff into the process?
  - How do you get staff engaged and excited about fall prevention?
  - How can you help staff learn new practices?

Managing Change: Locally Relevant Considerations

In trying to manage change at the organizational level, your hospital may experience some of these challenges:

- The need for an effective fall prevention program, an interdisciplinary approach, and shared ownership and accountability not penetrating through all levels of staff.
- Issues with staffing and culture: high turnover rates, inertia, and too many initiatives competing for staff attention.
- Difficulty establishing interdisciplinary teams:
    - Many hospitals have nurse-driven fall prevention committees and are transitioning to interdisciplinary teams.
    - Fall prevention roles need to be better defined across disciplines, and some disciplines have not bought into the need to play a proactive role in fall prevention.

These types of challenges are addressed in this section.

2.1. How can you set up the Implementation Team for success?

The center of successful improvement efforts in fall prevention tends to be an **interdisciplinary Implementation Team that has:**

- A strong link to hospital leadership,
- Members with the necessary expertise,
- **A clearly defined aim** (e.g., develop a program to reduce fall incidence by 15% in our hospital in the next year), **and**
- Access to the resources needed to accomplish the aim.

If you already have a hospital fall prevention committee, the committee can become your Implementation Team. This team should include stakeholders who represent the broad range of organizational members with potential roles in fall prevention.

Trying to find one person who can do all these things, instead of a team, is both difficult and risky. Fall prevention is a process that cuts across many different areas of hospital operations and thus requires input from all those areas. In addition, forming a team ensures that efforts will continue even if one or more members move to other activities.

The Implementation Team generally assumes overall responsibility for the design and evaluation of a large-scale change in clinical practices, working with and through other teams throughout the facility. The relationships among these teams will be addressed in later sections.

This interdisciplinary team will have responsibility for overseeing the fall prevention program in your organization, making key design decisions, working with unit-level teams to carry out

improvement activities, and monitoring progress. Thus, the implementation team will need some members with clinical expertise and experience.

Successful teams have capable leaders who help define roles and responsibilities and keep the team accountable for achieving its objectives. You will face a number of decisions in setting up the team to lead the fall prevention program. In section 1, we discussed the process of choosing someone to spearhead your fall prevention program, so that person should be identified and involved in the discussion of these questions. Decisions that need to be made before convening the team include:

- How do we determine members of the Implementation Team?
- How can we help the Implementation Team get started on its work?

2.1.1. Who should serve on the Implementation Team?

The most effective teams for overseeing a change project such as this one have several characteristics:

- **An interdisciplinary team, including members from many areas with the necessary expertise to address the problem.** Senior leadership support is a prerequisite for system change, but change itself comes most effectively from the ground up. Change happens as teams that include frontline health care workers actively engage in high-priority problem solving, such as redesigning processes of care. Including bedside staff as members will be key to tapping their practical knowledge and engaging them in the change process. Tool 2A ("Interdisciplinary Team") provides a list of potential team members.
- **Strong link to leadership.** While some organizations have found that the only way to have adequate senior leadership support for an initiative is to include a senior leader on the team, this may not be feasible or appropriate in every case. As an alternative, consider asking senior leadership to designate a member of the top management team as the champion for the fall prevention program. The team's leader should stay in frequent contact with the senior leader champion and can approach that person when the team encounters obstacles or needs access to senior leadership.
- **Link to quality improvement expertise.** The Implementation Team will be strengthened by having a member with expertise in systematic process improvement methods and in team facilitation from the quality improvement or performance improvement department. If your organization does not have a separate department with these functions, consider using informal channels to identify a person with these skills to recruit to the team. In some organizations, a member with improvement expertise successfully coleads the Implementation Team with a clinical colleague.
- **Members who influence the areas that will need to be involved in fall prevention.** Sometimes it is not possible to anticipate every area that needs to be involved. It is always possible to add team members later, but new members will need to be oriented to the team's history and process.

You may find a checklist useful in considering potential team membership. Your list can include the position/discipline, possible team members, and area of expertise.

	The team member checklist can be found in Tools and Resources (Tool 2A, "Interdisciplinary Team").
	This Institute for Healthcare Improvement Web site ("Science of Improvement: Forming the Team") provides both general principles for team composition and several examples of different clinical improvement teams and their membership: www.ihi.org/knowledge/Pages/HowtoImprove/ScienceofImprovementFormingtheTeam.aspx).
	Implementation Team Composition Hospitals often find it very important that their team be truly interdisciplinary. This composition ensures that as a group, they can understand fall prevention from multiple perspectives and integrate hands-on knowledge and expertise into their prevention efforts. Hospitals find the Interdisciplinary Team tool (Tool 2A) useful to identify additional Implementation Team members to invite to team meetings. For example, hospitals use the tool to involve additional individuals with such roles as risk manager, physical rehabilitation director, and pharmacist. Hospitals report it is important to include senior leadership to help secure resources and connect the team to other helpful staff and departments. Because hospitals are organized differently, the exact titles and roles of the people you invite to the team may be different from these examples.

2.1.2. How can you help the Implementation Team start its work?

Changing routine processes and procedures to alter the ways people conduct their everyday work is a major challenge. Successful implementation teams—teams that achieve their goals and sustain improved performance—pay attention to the **development of routines that make the new practices for fall prevention better than existing practices. They identify and implement new practices that are easier, more reproducible (not reliant on memory), and more efficient than old practices.**

The Implementation Team itself needs structure to achieve its objectives. Items to settle on early include:

- How often to meet (e.g., monthly).
- Ground rules or guidelines for how to manage meeting time and for how to communicate, both internally and externally.
- Timeline for the team's work so that there is a shared understanding of the level of urgency and priority this effort requires.

Consider:

- **How will the team do its work?** This question refers both to the resources the team may need (information, material) and to its methods of working. How will the team track issues raised, explored, and addressed? How will the team assess current knowledge and practice? How will the team use that information to redesign practice?
- **What is the team's agenda?** This related question emphasizes the importance of giving the team a clear charge and scope for its work. Can leadership provide team members with a clear understanding of the short- and long-term goals and timeframes for the implementation of improved fall prevention practices? For example, leadership may provide the team with a written charge that specifies target dates and improvement goals.

- Establish the scope of the Implementation Team's charge.
- Develop a clear statement of the team's charge.
- Ensure that senior leadership agrees with this charge.
- Make sure that the team has access to the necessary tools and structures to allow it to succeed.
- Make sure that team members understand why they have been selected, and find ways to recognize their efforts.
- Ask the member from the quality improvement or performance improvement department to orient the team to key principles and approaches used in process redesign work.
- Ensure that the team has the information it needs about the scope of the problem of falls in **your** facility (e.g., fall rates, repeat fall rates, severity of injury), the reasons for the team's work, and the expected outcomes.
- Make sure the team meets regularly at the most convenient time and place and that it meets often enough to make progress.
- Develop a timetable for specific team tasks and assign members to be responsible for completing those tasks.

This Institute for Healthcare Improvement Web site ("Science of Improvement: Setting Aims") has guidance on setting team goals and other aspects of team startup: www.ihi.org/knowledge/Pages/HowtoImprove/ScienceofImprovementSettingAims.aspx.

2.1.3. How does the Implementation Team work with other teams involved in fall prevention?

The remainder of this section discusses activities that the Implementation Team will typically be charged with, but the Implementation Team cannot carry out the entire program alone. The Implementation Team will need to collaborate with at least the staff who provide routine patient care in any unit where changes are to be implemented. These staff may be physically based on the unit (e.g., nurses or nursing assistants) or may be assigned to work with specific units (e.g., rehabilitation therapists, pharmacists, or physicians). We call these staff the **Unit Team**. Both teams have unique responsibilities but communicate and work together to make the program a success.

The Implementation Team will look at the big picture, including strengths and opportunities in current practices and the current status of prevention and fall incident reporting. This team will then identify needed changes and the specific practices, tools, and resources needed to implement these changes. Unit Teams, with members also represented on the Implementation Team, will actually implement the changes, integrating them into existing workflows and providing feedback about how the changes work. The Unit Team should include staff from all shifts and will have ongoing responsibility for maintaining effective fall prevention practices.

No single team can make the program a success by itself. To help develop the Unit Team, the Implementation Team should:

- Outline roles for the Unit Team members that are clear and workable.
- Consider each Unit Team member's existing responsibilities on the unit and how the unit team member's new role interacts with those responsibilities.
- Define what ongoing communication and reporting are needed and what the best linking methods across the Unit Team and the Implementation Team might be. For instance, in some organizations, **Unit Champions** provide this coordination function. Unit Champions belong to both the Implementation Team and their own work units and thus serve as critical communication links.

Keep in mind that there is more than one way to organize. A useful guide is to consider how Implementation Teams for other clinical change efforts have operated successfully within your organization. Your organization's quality improvement or performance improvement experts are likely to have expertise in how to best organize and coordinate such teams. In many hospitals, the training and development area may also be a resource for team organization expertise.

- Clarify the Unit Team's roles in the change process.
- Define the communication that is needed and the methods for linkages across teams.

2.2. What needs to change and how do you need to redesign it?

In this section, we identify the steps the Implementation Team needs to take to assess the current state of policy, procedures, and practice, and we indicate tools that may be useful in this process. These steps are based on the principles of quality improvement, defined broadly to include system redesign and process improvement. These methods are appropriate for an effort that seeks to prevent falls by improving quality of care.

2.2.1. How do you start the work of redesign?

For the Implementation Team, the work of redesign has already begun through gathering the information about organizational readiness (see section 1) and defining the team's members and structure. This quality improvement process may already be familiar to your organization. If you are not sure about the strength of your organization's quality improvement infrastructure, you may want to complete Tool 2B, "Quality Improvement Process."

Committees that oversee quality improvement for the hospital may go by different names, such as Quality Council or Patient Safety Committee. If some of the quality improvement processes listed in this inventory are not fully operational or present in your organization, you may need to build your team's improvement capability. In addition to identifying team members with improvement expertise, the Implementation Team can develop basic improvement skills through an education process.

Improvement efforts tend to be most successful when teams follow a systematic approach to analysis and implementation, and there are multiple approaches to consider. Team leaders and members may want to consult more general resources for approaches to quality improvement projects, such as information on the Plan, Do, Study, Act (PDSA) approach (described below in "Practice Insights").

If your organization already has well-established quality improvement processes and structures, it will be beneficial to connect the fall prevention program with those processes. For example, if you have an established reporting structure to leadership, including this program will help keep it on the leadership agenda. If managers are already evaluated based on their quality improvement efforts and results, making this program a part of the large quality improvement enterprise in your organization will help ensure managers' interest.

	Assess your organization's current resources for quality improvement by completing the "quality improvement process inventory" found in the Tools and Resources section (Tool 2B, "Quality Improvement Process").
	This Institute for Healthcare Improvement Web site ("Science of Improvement: Testing Changes) includes a brief summary of the PDSA cycle and a clinical example of it in use: www.ihi.org/knowledge/Pages/HowtoImprove/ScienceofImprovementTestingChanges.aspx.

Examples of Improvement Processes

PDSA (Plan, Do, Study, Act)

PDSA is an iterative process based on the scientific method in which it is assumed that not all information or factors are known at the outset; thus, repeated cycles of change and evaluation will be needed to achieve the goal, each cycle closer than the previous one. With the improved knowledge, you may choose to refine or alter specific goals.

For more information, refer to Chapter 5 in the RAND report *Putting Practice Guidelines to Work in the Department of Defense Medical System. A Guide for Action*, available at www.rand.org/pubs/monograph_reports/2007/MR1267.pdf.

Johns Hopkins Translating Research Into Practice (TRIP) Model

This model elaborates a specific strategy for researchers, clinicians, and managers to collaborate in quality improvement. The model uses 4 "E's" (Engage, Educate, Execute, and Evaluate) and has been successfully applied in both large-scale quality improvement (QI) collaboratives and small-scale, clinically focused QI projects at the individual unit or hospital level. For more information, refer to: Pronovost PJ, Berenholtz SM, Needham DM. Translating evidence into practice: a model for large scale knowledge translation. BMJ 2008;337:a1714.

A practical case study applying this model at an individual unit level is described in: Needham DM, Korupolu R. Rehabilitation quality improvement in an intensive care unit setting: implementation of a quality improvement model. Top Stroke Rehabil 2010;17(4)271-81.

Six Sigma

Developed at Motorola, Six Sigma methodology is based on the careful analysis of data on process deviations from prespecified levels of quality and use of redesign to bring about measurable changes in those rates. Six Sigma incorporates a specific infrastructure of personnel with different levels of training in the method (e.g., "Champions," "Black Belts") to take different roles in the process. For more information, read "What Is Six Sigma?" at: www.motorola.com/web/Business/_Moto_University/_Documents/_Static_Files/What_is_SixSigma.pdf.

LEAN/Toyota Production System (TPS)

TPS is an integrated set of practices designed to systematically and continuously identify problems at the point of production and empower workers to identify and fix problems when they are identified. For more information, refer to"Reducing Waste and Inefficiency in Health Care Through Lean Process Redesign: Literature Review" at www.ahrq.gov/qual/leanprocess.htm.

Further reading relevant to quality improvement:

- Rogers EM. Diffusion of innovations. New York: Free Press; 2003.
- Langley GJ, Nolan TW, Provost LP, et al. The improvement guide: a practical approach to enhancing organizational performance. 2d ed. San Francisco: Jossey-Bass; 2009.

2.2.2. What is the current state of your fall prevention practice?

The work of redesign requires an assessment of your organization's current practices. In addition to the tools suggested below, you may want to look ahead to section 5 for additional tools for assessing current fall rates and care processes to prevent falls. We suggest looking carefully at the gap between current practice and the recommended practices discussed in section 3. For example:

- Do any care processes already follow best practices?
- Do others diverge in small ways or in major ways?
- Which gaps are organizationwide, and which are specific to one or more units?

If your hospital is large and complex enough that you suspect variation in current practice across units, the Implementation Team may want to start by focusing on one or two units.

Understanding the Organizational Context of Fall Prevention Practice

As a preliminary step in documenting prevention practices on the units, the team will need to review the organizational context for the practices. Among the questions to consider:

- Have there been prior efforts to improve fall prevention? If yes, are there lessons on which you can build? For example, what supported those efforts? What barriers were encountered and how can you avoid the same problems?
- Are staff who prescribe and review medications (e.g., physicians and pharmacists) involved in fall prevention practices? In what ways? What are their attitudes?
- How are rehabilitation staff involved in fall prevention? In what ways do rehabilitation staff and nurses coordinate their efforts to prevent falls?
- How is information about patient fall risk factors documented and shared? What metrics, if any, are currently used to assess organizational performance with respect to managing these risk factors?

Understanding Current Processes on the Units

To change practice, it is critical to understand what the current practices are. The fact that fall prevention has taken on new urgency reflects one or more perceived performance problems in this area. Thus, it is important to identify any gaps between current best practices and actual work practices. For example, staff may report a policy of accompanying all patients with abnormal gait to the bathroom but may not always do this. The extent of these gaps is usually not known until current practice is systematically examined. Understanding where any unit that is targeted for change is starting from will help you identify gaps in knowledge and resources and will allow you to see how much progress is made.

Process Mapping To Document Current Practices

One useful approach to understanding current practices is to use **process mapping** to examine key processes where fall prevention activities could or should be happening. (Detailed instructions on process mapping may be found in Tool 2C, "Current Process Analysis").

Mapping can specify which organizational unit or person carried out each step in the process, with particular attention to both the movement of the patient and the movement of information about the patient. The goal of process mapping is to come to a common understanding of how a particular care process is being carried out, which then leads to further discussion about how the process *should* be carried out.

There are different approaches to process mapping, but each approach provides a systematic way to **examine each step in the delivery of a specific procedure or service**. Experimentation with different approaches can be helpful during the redesign planning phase because each approach can provide different insights and answer different questions.

Integrating Change Into Current Work Routines

Beyond gap analysis and mapping of current practices, the team should consider how the recommended practices for fall reduction can be integrated into current workflow and processes, rather than layered on top of them. One way to approach this task is to systematically assess the barriers to using evidence-based practices. For example, if eligible patients are not being mobilized out of bed within a specific period of time from admission, what are the reasons? Is it due to a lack of staff awareness that this should happen? Is it because nobody has specific responsibility for this task? Is it because staff lack training in how to mobilize patients or document that they did so?

- Assess current practice on a sample of representative units to determine which, if any, fall prevention practices are already in place (see sections 3 and 5). For example, is an initial risk factor assessment completed within a certain timeframe of admission? Are the results used to determine risk factors that can be intervened upon?
- Use process mapping to describe current prevention practices and to identify problem points. Process mapping will enhance understanding of how and when fall prevention fits into existing processes such as surgical or medical admissions, or admissions through the emergency department.
- Compare assessment results across units to determine which prevention challenges are organizationwide and which may be unit specific.
- Determine which practices need changing and consider how the new practices can be built into ongoing routines (discussed in section 4.1).

This worksheet in Tools and Resources has a possible approach to process mapping (Tool 2C, "Current Process Analysis").

Use these worksheets to assess existing fall prevention practices in your facility (Tool 2D, "Assessing Current Fall Prevention Policies and Practices").

If you would like to learn more about process mapping, the AHRQ publication *Toolkit for Redesign in Healthcare* provides a detailed example and data collection tools, starting on page 14: www.ahrq.gov/qual/toolkit/toolkit.pdf.

2.2.3. What is the current state of staff knowledge about fall prevention?

Due to turnover, differences in training, and other factors, staff members will likely vary in their knowledge of recommended fall prevention and treatment practices. To address these gaps through education, you need to know what the gaps are. Thus, assessing the current state of staff knowledge is critical.

One assessment tool is the Fall Knowledge Test (Tool 2E), which was developed through a consensus process and used in a randomized controlled trial to measure nurses' knowledge about falls and their prevention (see box below for details).

By themselves, assessment of knowledge and training focused on increasing knowledge are not enough. Training needs to be integrated with current work routines (see section 4.3.4). Based on analysis of the knowledge test results, the team can assess barriers to change among the staff that most likely will need to be addressed, a process that began with assessing their attitudes, as suggested in section 1. These barriers can be discerned through the assessment of staff knowledge and assessment of current practice. For instance, do staff believe that risk factor assessment is unnecessary because preventive procedures are applied to "everyone"? Keep in mind that not all barriers may be evident at the outset, so it is important to be attentive to potential barriers as the first wave of changes are implemented.

- Administer an inventory of fall prevention knowledge to staff members. See the tool listed below for this task.
- Consider collecting information on unit and occupation of respondents so that you can use this information to analyze results and better target training. Since this is an educational needs assessment, we do not recommend asking staff to include their names, unless they want direct feedback on their score. Using names may decrease participation.
- Develop methods to correct knowledge gaps and misunderstandings.

The following tool can be used to assess staff knowledge:

- Staff Knowledge Test (Tool 2E, "Fall Knowledge Test").

A 14 multiple-choice question knowledge test was administered before and after staff education following implementation of the Singapore Ministry of Health Fall Prevention Clinical Practice Guideline.

For more details, refer to: Koh SLS, Hafizah N, Lee JY, et al. Impact of a fall prevention programme in acute hospital settings in Singapore. Singapore Med J 2009;50(4):425-32.

2.3. How should goals and plans for change be developed?

2.3.1. What goals should you set?

Once the Implementation Team completes its analysis of the gaps in fall prevention, the team will need to review the evidence on various best practices (discussed in section 3) that may help address those gaps. However, before turning to those steps, the Implementation Team will need to set goals for improvement. These goals should be related both to outcomes (e.g., a reduction in falls per 1,000 bed days) and to processes (e.g., adherence to hourly rounds).

Goals should be related to data the hospital already collects or can collect (e.g., through incident reports or a chart audit). External benchmarks should be used with caution, since fall rates vary substantially by hospital unit (see section 5). Goal-setting will help determine the team's next steps to redesign fall prevention activities within your hospital.

Once goals are chosen, your gap analysis may reveal problems in performance related to care processes such as these:

- Staff are not conducting the initial fall risk factor assessment within 24 hours of admission.
- Patients' medications are rarely reviewed for fall risk.
- Patients who are at risk for prolonged weakness from their hospital stay are not mobilized within 48 hours of admission.
- Patients with frequent toileting needs are not assisted in a timely fashion.

In this case, you may want to set goals related to the improvement of these measures to certain levels within a certain timeframe, such as improving the number of at-risk patients who are mobilized within 48 hours from 50 percent to 75 percent over the next 3 months. Alternatively, you may find that after you examine staff knowledge, certain gaps should be addressed. Other reasons for poor performance could be confusion in roles or a lack of staff communication. In these cases, goals could be set for addressing and improving these issues within a certain timeframe.

- Set goals for improvement based on outcomes and processes.
- Identify benchmarks against which to judge goals and progress.
- Use goals to guide next steps in redesigning fall prevention.

2.3.2. How do you develop the plan for change?

Once goals have been set, the next step is to begin developing a more specific plan for implementing new practices and for assessing that plan through the consistent collection and analysis of data. This plan will be extended and refined by work to be completed in response to additional questions (described in section 4).

While this plan will need to be flexible to meet the needs of specific units, a comprehensive plan is still necessary. The best practices that will be discussed in section 3 are critical to the implementation plan but are not enough, as they must be implemented within the context of many other factors. Also, it is important to begin thinking early about sustaining the

improvements you put into place (as discussed in section 6). Thus, the implementation plan should address:

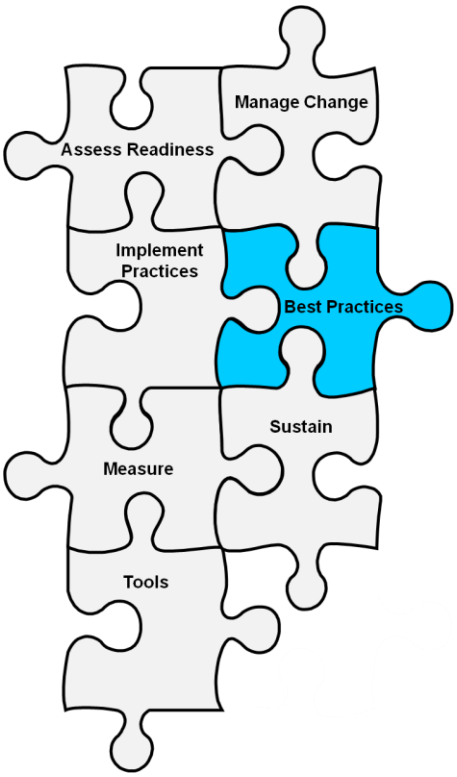
- Membership and operation of the interdisciplinary Implementation Team.
- Standards of care and practice to be met.
- Ways gaps in staff education and competency will be addressed.
- Plans for rolling out new standards and practices, where needed.
- Staff accountable for monitoring the implementation.
- Ways changes in performance will be assessed.
- Ways this effort will be sustained.

The "plan of action" found in Tools and Resources can be a useful template for developing your implementation plan (Tool 2F, "Action Plan").

2.4. Checklist for managing change

The checklist for monitoring your progress on completing the managing change activities can be found in Tools and Resources (Tool 2G, "Managing Change Checklist").

3. Which fall prevention practices do you want to use?



Once you determine that you are ready for change, the Implementation Team and Unit Team need to state their plans for implementing best practices. In this section, "best practices" are those care processes that, based on literature and expert opinion, represent the best way we currently know of preventing falls in the hospital.

Team members should reach consensus on the following questions:

- Which fall prevention practices should you use?
- Which universal fall precautions should be applied throughout the hospital?
- How should a standardized assessment of fall risk factors be conducted?
- How should identified risk factors be used for fall prevention care planning?
- How should you assess and manage patients after a fall?
- How can your hospital incorporate these practices into a fall prevention program?

This section helps your organization address these questions. Further information regarding the organization of care needed to implement these best practices is provided in section 4 and additional clinical details are in Tools and Resources.

Recognize at the outset that implementing these best practices is a complex task. Some factors that make fall prevention challenging include:

- **Fall prevention must be balanced with other priorities for the patient.** The patient is usually not in the hospital because of falls, so attention is naturally directed elsewhere. Yet a fall in a sick patient can be disastrous and prolong the recovery process.
- **Fall prevention must be balanced with the need to mobilize patients.** It may be tempting to leave patients in bed to prevent falls, but patients need to transfer and ambulate to maintain their strength and to avoid complications of bed rest.
- **Fall prevention is one of many activities needed to protect patients from harm** during their hospital stay. How should fall prevention be reinforced while maintaining enthusiasm for other priorities, such as infection control?
- **Fall prevention is interdisciplinary.** Nurses, physicians, pharmacists, physical therapists, occupational therapists, patients, and families need to cooperate to prevent falls. How should the right information about a patient's fall risks get to the right member of the team at the right time?
- **Fall prevention needs to be customized.** Each patient has a different set of fall risk factors, so care must thoughtfully address each patient's unique needs.

3.1. Which fall prevention practices should you use?

Given the complexity of fall prevention, the task of implementing a program may seem daunting. To simplify things, we have broken down fall prevention activities into separate steps:

- Universal fall precautions, including scheduled rounding protocols (section 3.2).
- Standardized assessment of fall risk factors (section 3.3).
- Care planning and interventions that address the identified risk factors within the overall care plan for the patient (section 3.4).
- Postfall procedures, including a clinical review and root cause analysis (section 3.5).

Your practices should be tailored to your organization. In addition, at the unit level, you should cover these components in a manner tailored to the types of patients and care flow on each unit (see section 3.6).

Your program is more likely to be successfully implemented and sustained when it is compatible with hospital priorities and what is best for the patient. The hospital's first priority is acute medical care; patients come to the hospital because they are ill and their primary purpose is to receive treatment for their illness.

The goal of patient safety practices like fall prevention is to prevent additional harm to patients while they are hospitalized. Hand hygiene to prevent spread of nosocomial infection is an example of a patient safety practice that avoids patient harm without interfering with the patient's medical care. As you read through this section, think about how you can integrate your fall prevention program with the variety of acute medical treatments that your hospital must deliver.

Another key point to remember is that fall prevention alone cannot be the goal of a fall prevention program. A theoretical example can illustrate this point. In theory, we could prevent all falls by restraining all patients, thereby preventing them from leaving the bed (in actuality, restraints may not prevent falls). But restraining patients would be unethical and represent poor care. It would conflict with the principles of patient autonomy and cause all the complications of bed rest, such as deconditioning, pressure ulcers, aspiration, and deep vein thrombosis, thereby keeping the patient in the hospital longer and making it harder for the patient to recover.

This example illustrates how fall prevention programs need to be tied to the fundamental goal that patient care improve each patient's function and well-being. It also demonstrates that our goal should be keeping fall and injury rates as low as possible, rather than getting to a zero fall rate at the expense of other priorities. Fundamentally, fall prevention is about balancing multiple priorities, as health itself is multifaceted.

Whatever set of recommended practices you select, you will need to take additional steps. Section 4 describes strategies to ensure their successful implementation. The challenge to improving care is how to get these key practices completed on a regular basis.

Understanding the causes of falls is important to developing your prevention program. The classification system developed by Janice Morse is useful. Falls can be classified into three types:

Physiological (anticipated). Most in-hospital falls belong to this category. These are falls that occur in patients who have risk factors for falls that can be identified in advance, such as altered mental status, abnormal gait, frequent toileting needs, or high-risk medications. Key actions to take for prevention include close supervision of the patient (see section 3.2) coupled with attempts to address the patient's risk factors (see sections 3.3 and 3.4).

Physiological (unanticipated). These are falls that occur in a patient who is otherwise at low fall risk, because of an event whose timing could not be anticipated, such as a seizure, stroke, or syncopal episode. Appropriate postfall care (see section 3.5), coupled with injury prevention measures in the case of recurrence (see section 3.4), are key for these patients.

Accidental. These falls occur in otherwise low-risk patients due to an environmental hazard. Improving environmental safety will help reduce fall risk in these patients but is helpful for all patients (see section 3.2).

For more information, see Morse JM, Tylko SJ, Dixon HA. Characteristics of the fall-prone patient. Gerontologist 1987;27:516-22.

3.1.1. How are the different components of the fall prevention program related?

Each component of the fall prevention program is critical and each must be consistently well performed. It is therefore important to understand how the different components are related. A useful way to do this is by developing a clinical pathway.

A **clinical pathway** is a structured interdisciplinary plan of care designed to support the implementation of clinical guidelines. It provides a guide for each step in the management of a patient and reduces the possibility that busy clinicians will forget or overlook some important component of evidence-based preventive care.

An example of a clinical pathway detailing the different components of a fall prevention program is found in Tools and Resources (Tool 3A, "Master Clinical Pathway for Inpatient Falls"). This tool can be used by the hospital Unit Team in designing the new system, as a training tool for frontline staff, and as an ongoing clinical reference tool on the units. This tool can be modified, or a new one created, to meet the needs of your particular setting.

If you prepared a process map describing your current practices using Tool 2C, you can compare that to desired practices outlined on the clinical pathway.

Implementing Fall Prevention Practices: Locally Relevant Considerations

Hospitals have experienced local challenges in trying to implement best practices. Has your hospital experienced any of the challenges listed below? This section of the toolkit will help to address these challenges.

Examples of challenges with risk assessment tools include:

- Hospitals indicate that their current risk assessments do not sufficiently cover some factors (e.g., medications, mobility).
- The fall risk score is associated with a standard set of interventions that is not customized to individual patients' needs.
- The current fall risk assessment results in almost all patients being categorized as high risk for falls, which dilutes the value of this designation with staff and their compliance with fall prevention strategies.

Examples of challenges with specific interventions include:

- Some medication order sets include medications that are known to have a high risk for falls.
- There is overreliance on bed alarms as a fall prevention strategy.
- The use of various flags to indicate fall risk is so prevalent that their use becomes ineffective.
- Early mobilization may be compromised by extended bed rest orders that are not discontinued.

3.2. What are universal fall precautions and how should they be implemented?

Universal fall precautions are the cornerstone of any hospital fall prevention program, because they apply to all patients at all times. Implementing universal fall precautions requires training all hospital staff who interact with patients, regardless of whether they are clinicians (covered more in section 4). Implementation also requires that the importance of fall prevention become embedded into the hospital's culture (covered in section 6).

3.2.1. What are universal fall precautions?

Universal fall precautions are called "universal" because they apply to all patients regardless of fall risk. Universal fall precautions revolve around keeping the patient's environment safe and comfortable. Although the choice of which precautions to emphasize may vary by hospital, a good starting list adapted from the Institute for Clinical Systems Improvement guideline (see section 3.7) is provided here:

- Familiarize the patient with the environment.
- Have the patient demonstrate call light use.
- Maintain call light within reach.
- Keep the patient's personal possessions within patient safe reach.
- Have sturdy handrails in patient bathrooms, room, and hallway.

- Place the hospital bed in low position when a patient is resting in bed; raise bed to a comfortable height when the patient is transferring out of bed.
- Keep hospital bed brakes locked.
- Keep wheelchair wheel locks in "locked" position when stationary.
- Keep nonslip, comfortable, well-fitting footwear on the patient.
- Use night lights or supplemental lighting.
- Keep floor surfaces clean and dry. Clean up all spills promptly.
- Keep patient care areas uncluttered.
- Follow safe patient handling practices.

3.2.2. Why are universal fall precautions important?

Universal fall precautions constitute the basics of patient safety. They apply across all hospital areas and help safeguard not only patients, but also visitors and staff in many cases. Maintaining a safe and comfortable environment is the responsibility of the hospital independent of a patient's particular risks for falls, because failure to do so can put any patient at risk. For example, virtually any patient could slip and fall if there is a spill on the floor.

3.2.3. How are universal fall precautions performed?

Universal fall precautions should be performed from both the standpoint of the patient and the physical environment. For those precautions that require checking on the patient, such as making sure the patient's personal possessions are within reach, hourly rounding is an excellent basic strategy. (Hourly rounding is typically defined as hourly visits between 6 a.m. and 10 p.m. and visits every 2 hours between 10 p.m. and 6 a.m.; see Tool 3B, "Scheduled Rounding Protocol").

Hourly rounding can be carried out by a nurse alternating with a nursing assistant (such as a certified nurse assistant, patient care technician, or nurse's aide). Patients are not disturbed if sleeping, except as needed to provide care. Tool 3B, "Scheduled Rounding Protocol," provides a scripted approach to a strategy that can be used during bedside rounds. Called the "4 P's" or "5 P's," it represents a set of items to mentally review when rounding on the patient. For example, the 5 P's could be:

- **Pain:** Assess the patient's pain level. Provide pain medicine if needed.
- **Personal Needs:** Offer help using the toilet; offer hydration, offer nutrition, empty commodes/urinals.
- **Position:** Help the patient get into a comfortable position or turn immobile patients to maintain skin integrity.
- **Placement:** Make sure patient's essential needs (call light, phone, reading material, toileting equipment, etc.) are within easy reach.
- **Prevent Falls:** Ask patient/family to put on call light if patient needs to get out of bed.

One benefit of hourly rounding is that it is proactive; it reduces patients' need to use the call light to ask for help and therefore decreases the number of unscheduled call lights that require response. These regular rounds allow many needs like toileting and access to drinking water to be met by staff who are scheduled to visit the patient's room.

Hourly rounding has been carried out in different ways by different hospitals. Despite its seeming simplicity, it requires careful planning to implement. See section 4 for strategies on implementing new care processes at your hospital.

To read more about the evidence that supports hourly rounding, see:

- Halm MA. Hourly rounds: what does the evidence indicate? Am J Crit Care 2009;18:581-4.
    - To read more about the challenges of implementing hourly rounding, see: Deitrick LM, Baker K, Paxton H, et al. Hourly rounding: challenges with implementation of an evidence-based process. J Nurs Care Qual 2012;27:13-19.

Local Approaches to Implementing Scheduled Rounding

- An opening and closing script for interaction with the patient is provided. The closing script states, "If you need a nurse before I come back, use the call bell or contact the charge nurse at the phone number on the white board."
- Integrate "5 Ps" into the rounding protocol.
- Document completion of rounding on an hourly rounding tracking tool kept in the patient rooms.
- Conduct rounds every 2 hours between the hours of 10 p.m. and 6 a.m. to let the patient sleep.

In addition to nursing staff, many different hospital staff members enter patients' rooms throughout the day, which provides additional opportunities to ensure that universal precautions are followed. Having a member of senior management periodically tour hospital rooms to talk with patients and see that their needs are being addressed is an excellent stimulus to frontline staff to continue their efforts.

To cover environmental safety, regular environmental inspection rounds with nursing staff and facilities engineers (Tool 3C) can be valuable. In between regular inspections, staff can use a hazard reporting form (Tool 3D) to alert the unit manager to items that require fixing.

In addition to thinking about patient needs and environmental safety, remember to consider the interaction of the patient with the environment. An environment that is safe for one patient may not be safe for another. For example, a bathroom door may be wide enough for an independent patient to enter but not wide enough for a patient with an assistive device, thereby putting the latter patient at risk.

Another critical element of universal fall precautions is safe patient handling (Tool 3E, "Clinical Pathway for Safe Patient Handling"). This is particularly important for patients who require assistance with transfers. If staff members are not trained in safe patient handling, a patient could fall or staff could be injured because appropriate assistive equipment was not used.

The following tools can be found in Tools and Resources:

- Hourly rounding protocol to ensure that universal precautions are in place (Tool 3B, "Scheduled Rounding Protocol").
- Inspection checklist for regular environmental rounds with nursing staff and facilities engineers to identify and resolve environmental safety issues (Tool 3C, "Tool Covering Environmental Safety at the Bedside").
- Hazard report form to alert the unit manager that items require fixing (Tool 3D, "Hazard Report Form").

A clinical pathway that illustrates appropriate application of safe patient handling principles (Tool 3E, "Clinical Pathway for Safe Patient Handling").

- The way that hospitals are designed is an important part of reducing fall risk. The Facilities Guidelines Institute (www.fgiguidelines.org) provides guidelines for the design and construction of health care facilities, including hospitals. Some design changes (e.g., recommendations for furniture) can be incorporated into existing hospitals. The guidelines are available for purchase and are also available for free reading at: http://openpub.realread.com/rrserver/browser?title=/FGI/2010_Guidelines. A draft of updated guidelines (*Guidelines for Design and Construction of Hospitals and Outpatient Facilities*) is also available at the Facilities Guidelines Institute Web site: www.fgiguidelines.net/comments/draft.php.
- The Center for Health Design (www.healthdesign.org/) features workshops and seminars on the relationship between hospital design and patient safety.

One hospital found that performing an environmental inspection identified stability problems with existing patient beds. The hospital was able to justify implementation of a bed replacement plan in the subsequent year.

To read more about the evidence for improving hospital design, including safe patient handling, see:

- Sadler BL, Berry LL, Guenther R, et al. Fable hospital 2.0: the business case for building better health care facilities. Hastings Cent Rep 2011;41:13-23.

3.2.4. How should universal fall precautions be documented?

Universal fall precautions can be documented in many ways, including progress note templates in the chart and logs used for hourly rounding (hourly rounding is described in section 3.2.3). Any documentation strategy should be carefully integrated into workflow, so as not to become just another charting task.

3.2.5. What are some barriers to implementing universal fall precautions?

The rapid pace of activity in the hospital can be a barrier to implementing universal fall precautions. Patients are frequently transported on and off the unit for tests and procedures. In addition, patients may be required to change beds within the unit or be transferred to a new unit. Every time a change occurs, universal fall precautions such as making sure the patient's call light is within reach and that the patient is oriented to his or her environment need to be reassessed.

Another barrier to implementing universal fall precautions is that some precautions require patient understanding and cooperation. For example, patients may need to cooperate with using appropriate footwear or using the call light when they need help. Patients who do not know their own limitations may put themselves at risk for a fall despite the best efforts of hospital staff.

3.3. What is a standardized assessment of risk factors for falls, and how should this assessment be conducted?

Assessing the patient for fall risks gives you the information you need to develop an individualized care plan. There are multiple risk factors for falls, and different patients may have different combinations of risk factors. These can change over time while a patient is in the hospital. To identify the risk factors most important to the patients on your unit or in your hospital, you need a system in place to ask the same key questions of each patient so that risks are not missed. This can best be accomplished through a standardized assessment of fall risk factors.

3.3.1. What is a standardized assessment of risk factors for falls?

After universal fall precautions, a standardized assessment of risk factors for falls is the next step in fall prevention. By virtue of being ill, all patients are at risk for falls, but some patients are at higher risk than others. Assessment of risk factors for falls is a **standardized and ongoing process** with the goal of identifying patients' risk factors, which can then be addressed in the care plan.

3.3.2. Why is a standardized assessment of risk factors necessary?

Assessment of risk factors for falls is essential for a number of reasons:

- **It aids in clinical decisionmaking.** Use of a standardized assessment helps ensure that key risk factors are identified and therefore can be acted on.
- **It allows the targeting of preventive interventions to the correct patients.** Fall prevention is resource intensive. Resources should be targeted toward those who would most benefit.
- **It facilitates care planning.** Care plans can better focus on the specific dimensions that place the patient at greatest risk.
- **It facilitates communication** between health care workers and between care settings. Workers have a common language by which they describe risk.

3.3.3. How is the assessment of risk factors performed?

An assessment of risk factors for falls is a **standardized process** that uses an **assessment tool.** The tools evaluate several different dimensions of risk, including fall history, mobility,

medications, mental status, and continence. A tool could be a simple checklist of risk factors, or it could be more complex, depending on the needs of the hospital or unit.

Because assessment is a defined task, clinicians can perceive that completing the assessment tool is all they need to do. The Unit Team can help staff understand that these assessment tools are only one small piece of the process. The risk assessment tools are meant to complement clinical judgment, not to replace it.

Many other factors that are not listed in a typical risk factor assessment may be considered as part of clinical judgment. In fact, specialized wards may need to collect additional risk factors as part of their intake assessment. For example, on geriatric psychiatry wards, because of the medications patients are taking, orthostatic hypotension may be an important fall risk factor (see Tool 3F for instructions on measuring and evaluating orthostatic vital signs). However, for consistency, we recommend that your hospital use a standard assessment tool throughout adult units in the hospital as a foundation on which additional unit-level risk factors may be added. This permits staff floating across different hospital units to share a common and familiar tool.

Key risk factors common to assessments include:

- **History of falls:** All patients with a recent history of falls, such as a fall in the past 3 months, should be considered at higher risk for future falls.
- **Mobility problems and use of assistive devices:** Patients who have problems with their gait or require an assistive device (such as a cane or a walker) for mobility are more likely to fall.
- **Medications:** Patients on a large number of prescription medications, or patients taking medicines that could cause sedation, confusion, impaired balance, or orthostatic blood pressure changes are at higher risk for falls.
- **Mental status:** Patients with delirium, dementia, or psychosis may be agitated and confused, putting them at risk for falls.
- **Continence:** Patients who have urinary frequency or who have frequent toileting needs are at higher fall risk.
- **Other patient risks** include being tethered to equipment, such as an IV pole, that could cause the patient to trip; impairment in vision that could cause a patient not to see an environmental hazard; and orthostatic hypotension, which could cause the patient to become lightheaded or pass out when standing.

Instructions on measuring and evaluating orthostatic vital signs can found in the Tools and Resources section (Tool 3F, "Orthostatic Vital Sign Measurement").

3.3.4. What is the role of fall risk scores?

Assessment of risk factors for falls includes both the use of a standardized tool and an assessment of other factors that may increase risk of falls. Which other factors to consider beyond the standardized tool depend on clinical judgment and unit-specific policy.

Some tools that assess risk factors for falls also include a scoring system to predict risk for falls, and many facilities plan care according to the amount of risk (according to high, moderate, and low risk, for example). The problem with using the risk score to plan care is that the care plan is not tailored to the individual patient's risk factors. For example, two patients deemed "high risk" by score might have different risk factors; one could have delirium, and the other could have impaired gait. The responses to these risk factors need to be different. Trying to apply the same care plan to all "high risk" patients may distract staff from implementing the elements of the care plan that actually address each individual patient's risk factors.

For these reasons, we think the most important application of an assessment tool is to identify fall risk factors for which care plans can be developed. Because it takes time for a hospital's culture to move away from relying on a summary score, we provide the scales in full here, but we do not recommend excessive focus on the score.

Research has shown that scores from fall risk prediction tools do not actually predict falls any better than a clinician's judgment. For this reason and others, the creator of one commonly used scale (Tool 3G, "STRATIFY Scale for Identifying Fall Risk Factors") argues against the scores being used for predictive purposes. For details, see:

Oliver D. Falls risk-prediction tools for hospital inpatients. Time to put them to bed? Age Ageing 2008;37(3):248-50. Available at: http://ageing.oxfordjournals.org/content/37/3/248.long.

3.3.5. Which assessment tools are used most often?

While some institutions have created their own tools, two tools have been studied most: the Morse Fall Scale (Tool 3H) and the STRATIFY (Tool 3G). Both scales have established reliability and validity. When used correctly, they provide valuable data to help plan care. Because each hospital setting is unique, we do not take a position as to which scale you should use. Also, these scales do not cover all key fall risk factors, so for your unit's needs, you may have to supplement these tools with additional assessment items, such as those found in some of the other tools covered in this section.

The Morse Falls Scale is made up of six subscales (history of falls, secondary diagnosis, ambulatory aid, IV/heparin lock, gait, and mental status). The STRATIFY is made up of five subscales (transfer/mobility, history of falls, vision, agitation, and toileting). Other scales may be used instead of the Morse Falls Scale or the STRATIFY. The key point is to ensure that a standard scale is used throughout adult units in the hospital, with additional risk factors assessed as needed for specific units or as suggested by clinical judgment.

We also encourage you to review medications as part of fall risk assessment (see Tool 3I, "Medication Fall Risk Scale and Evaluation Tools"). Strategies for reviewing medications will depend on your hospital but may consist of a pharmacist reviewing medications for patients with other risk factors or a nurse checking the patient's medications against a standard list and referring patients with a high-risk medication to a pharmacist. In either case, the pharmacist will make recommendations back to the medical team regarding medications to discontinue or doses to change.

Ask yourself and your team:

- Do unit staff understand why they are assessing fall risk factors?
- Do they systematically assess the most important risk factors for falls among patients in your units?

For instructions on how to locally validate your preferred fall risk factor tool, you can use this spreadsheet ("How effective is your Falls Prediction Tool?") on the UK Patient Safety First Web site: www.patientsafetyfirst.nhs.uk/ashx/Asset.ashx?path=/Intervention-support/Effectiveness%20tool%20v3.xls

Copies of the Morse and STRATIFY scales are included in Tools and Resources (Tool 3H, "Morse Fall Scale for Identifying Fall Risk Factors," and Tool 3G, "STRATIFY Scale for Identifying Fall Risk Factors"). The Morse tool also has links to a training module.

Tool 3I, "Medication Fall Risk Scale and Evaluation Tools," can be used to identify medication-related risk factors for falls.

3.3.6. How should risk factors be assessed in pediatric populations?

The risk assessment tools described above are appropriate for the general adult population. However, these tools may not work as well in differentiating the level of risk for hospitalized children. Risk assessment tools exist for pediatric settings but they may not have been as extensively validated as the Morse and STRATIFY scales.

For a review of pediatric assessment tools, see:

- Harvey K, Kramlich D, Chapman J, et al. Exploring and evaluating five paediatric falls assessment instruments and injury risk indicators: an ambispective study in a tertiary care setting. J Nurs Manage 2010;18:531-41.

3.3.7. How often is the assessment of fall risk factors done?

Consider performing a fall risk assessment in general acute care settings on admission, on transfer from one unit to another, with a significant change in a patient's condition, or after a fall. For patients with longer lengths of stay, performing a fall risk assessment at some regular interval may be valuable. However, the optimal frequency of risk assessment is unclear and may vary by unit.

Considering the specific patient situation, ask yourself and your team:

- How often should the assessment of fall risk factors be done on your unit?
- How often is it actually being done?

3.3.8. How can we improve the accuracy of the fall risk factor assessment?

The accuracy of a risk factor assessment tool depends on the person using the tool. Experience has shown significant variability among untrained staff even when evaluating the same patient. The results of the fall risk factor assessment need to be trustworthy; otherwise, they will be ignored. Therefore, training in how to complete the risk factor assessment is needed.

Check how risk factor assessment is performed on each unit:

- Unit managers can look at the patient record and see if the risk factors identified have been consistent (see Tool 5B, "Assessing Fall Prevention Care Processes"). Wide fluctuations in risk factors are unusual in stable patients. Similarly, when there is a major change in clinical condition, check whether the patient's risk factors have changed.
- Select a patient and see if the assessment is accurate. Staff may give the patient "the benefit of the doubt" and underreport the number of risk factors.

A training module developed by the Partners HealthCare System Fall Prevention Task Force on proper use of the Morse Fall Scale may be found at www.brighamandwomens.org/Patients_Visitors/pcs/nursing/nursinged/Medical/FALLS/Fall_TIPS_Toolkit_MFS%20Training%20Module.pdf. In addition to the module, training should include real cases where the provider conducts an assessment. Mental status and gait parameters require actual assessment of a real patient (as opposed to a chart review by itself).

Please fill out the Partners HealthCare Morse Fall Scale Competency Request Form at www.brighamandwomens.org/Patients_Visitors/pcs/nursing/nursinged/Medical/FALLS/Permissions/PHS%20MFS%20Competency.pdf prior to use.

Learn more about risk assessment:

- Oliver D, Healey F. Falls risk prediction tools for hospital inpatients: do they work? Nursing Times 2009;105:18-21. Available at: www.nursingtimes.net/nursing-practice-clinical-research/falls-risk-prediction-tools-for-hospital-inpatients-do-they-work/1999146.article.

3.4. How should identified risk factors be used for fall prevention care planning?

Knowing which patients have risk factors for falls is not enough; **you must do something about it**. Care planning guides what you will do to prevent falls. Once risk assessment has helped identify patient risk factors, care planning should match the identified risks. This includes planning for any risks found on the risk factor assessment tool, such as mobility challenges, medications, mental status, and continence needs. It also includes planning around a patient's personal risks that may not have been captured by the assessment tool.

3.4.1. What is fall prevention care planning?

Fall prevention care planning is a **process** by which the patient's risk assessment information is translated into an action plan to address the identified patient needs. These are the patient-specific actions that, in addition to the universal precautions described in 3.2, aim to prevent falls. Care planning's specific purpose is to identify specific care practices that will be implemented so that the patient is less likely to fall during the hospitalization.

Care planning accounts for multiple factors that pertain to the patient's problems, and the clinician therefore must synthesize multiple types of clinical data rather than just relying on one specific piece of information. Because each patient has a unique risk profile that needs to be integrated with care for the condition that caused hospitalization, the care plan should be individualized for each patient.

A carefully written care plan is a document that ensures continuity of care by all staff members. In addition, it can keep the patient safe and comfortable and can be used to educate the patient and family prior to discharge. The care plan is an active document. It needs to incorporate the patient's response to the interventions as well as any changes in his or her condition.

3.4.2. How should care planning address risk of falls?

The care plan indicates specific actions that should, or should not, be performed. All care planning needs to be individualized to fit the patient's needs. Each risk factor should have a corresponding plan of care.

There are many interventions available to prevent falls and fall-related injuries that you can implement based on the patient's specific risk factors. Below we list some of the major categories, by risk factor, that you can consider in your care plan, with electronic resources where appropriate.

Altered Mental Status

Patients with altered mental status should be assessed for delirium (Tool 3J, "Delirium Evaluation Bundle: Digit Span, Short Portable Mental Status Questionnaire, and Confusion Assessment Method"). Trained nurses or physicians can carry out a delirium assessment. If the patient is found to be delirious, a medical provider should evaluate the patient for causes, such as infections, medications, and electrolyte imbalances. But it is more effective to prevent delirium than to treat it. Delirium prevention may be an important part of the care plan for units that have patients at high risk for delirium (e.g., patients with hip fractures, advanced age, or baseline dementia, for example). Delirium prevention protocols are available on the Hospital Elder Life Program (HELP) Web site at no cost after registration: www.hospitalelderlifeprogram.org/public/public-main.php.[viii]

For cognitively impaired patients who are agitated or trying to wander, more intense supervision (e.g., sitter or checks every 15 minutes) may be needed. These patients should have their medications reviewed, as medications can both contribute to agitation as well as help calm

[viii] These materials are copyright protected, and all forms or their adaptations should acknowledge: © 2000, Hospital Elder Life Program, LLC. The user assumes all risk for use of the materials.

patients whose agitation is a threat to themselves or others or is interfering with the delivery of necessary care.

We do not recommend bed alarms for the purpose of fall prevention in cognitively impaired patients. Unless the patient can be rescued rapidly after the bed alarm goes off, the patient may be able to exit the bed well before anyone can come to help. One large trial of bed alarms failed to show a benefit for prevention of falls.[ix]

Assess whether patients with altered mental status are delirious and therefore require further medical evaluation for delirium using the delirium evaluation bundle found in the Tools and Resources section (Tool 3J, "Delirium Evaluation Bundle: Digit Span, Short Portable Mental Status Questionnaire, and Confusion Assessment Method").

Safety Zones:A Strategy for Supervising Cognitively Impaired Patients

Some hospital units have designated areas for patients at high fall risk. These areas have enhanced staffing to observe patients more closely. One hospital implemented this strategy using safety zones, which consisted of four patient rooms in each unit with one dedicated staff member responsible for those patients. The staff member checks on the patients every 15 minutes. These rooms are designated for cognitively impaired patients requiring (1) closer supervision, and (2) specialty equipment and activities.

Safety zone room equipment includes low beds, mats for each side of the bed, night light, gait belt, and a "STOP" sign to remind patients not to get up. This model was originally implemented as a less costly alternative to the hospital's patient sitter program. The hospital reports the program has been successful in reducing fall rates and improving patient and family satisfaction.

Impaired Gait or Mobility

Patients with impaired gait or mobility will need assistance with mobility during their hospital stay. All patients should have any needed assistive devices, such as canes or walkers, in good repair at the bedside and within safe reach. If patients bring their assistive devices from home, staff should make sure these devices are safe for use in the hospital environment. Even with assistive devices, patients may need help from staff for mobility.

Patients with impaired mobility fall into three groups:

- Patients without mobility problems at home who were admitted to the hospital for a non-mobility-related reason (e.g., pneumonia). Some of these patients are at risk for deconditioning during their hospital stay, which can cause weakness and loss of mobility. These at-risk patients should participate in a mobility program. The HELP Web site includes information about a mobility program for use by trained volunteers,

[ix] Shorr RI, Chandler AM, Mion LC, et al. Effects of an intervention to increase bed alarm use to prevent falls in hospitalized patients. Ann Intern Med 2012;157(10):692-9.

companions, or nursing aides.For appropriate patients admitted for non-mobility-related reasons, this program can help maintain mobility and decrease the risk of deconditioning during hospitalization.

- Patients who enter the hospital with a prior mobility deficit (e.g., from Parkinson's disease) but who are admitted for a non-mobility-related reason. Depending on the severity of the mobility deficit, these patients can be handled through physical or occupational therapy or through a mobility program. Tool 3K, "Algorithm for Mobilizing Patients," provides an algorithm for determining whom to include in a mobility program.
- Patients who were admitted to the hospital for a procedure that directly affects their mobility (e.g., total knee replacement) or a medical event that affects their mobility (e.g., acute stroke). These patients should be seen by a physical or occupational therapist.

A sample algorithm for mobilization of patients can found in the Tools and Resources section (Tool 3K, "Algorithm for Mobilizing Patients").

To read more about the Hospital Elder Life Program, which offers strategies for developing a volunteer-based mobility program, go to www.hospitalelderlifeprogram.org/public/public-main.php.

Registration is required to access the program manuals: www.hospitalelderlifeprogram.org/pdf/Clinical%20Manual.pdf (Hospital Elder Life Program Organizational and Procedural Manual, The Clinical Process)

and

www.hospitalelderlifeprogram.org/pdf/Volunteer%20manual.pdf (Hospital Elder Life Program Volunteer Training Manual).

Mobility programs have been shown to decrease hospital length of stay and costs, and increase the likelihood that a patient is discharged home rather than to a nursing home or rehabilitation facility. For details, see: De Morton NA, Keating JL, Jeffs K. Exercise for acutely hospitalised older medical patients. Cochrane Database Syst Rev 2007 Jan 24(1):CD005955.

Frequent Toileting Needs

Patients with frequent toileting needs should be taken to the toilet on a regular basis, via a scheduled rounding protocol (for example, see Tool 3B).

Visual Impairment

Patients with visual impairment should have corrective lenses easily within reach.

High-Risk Medications

Patients on high-risk medications (see Tool 3I, "Medication Fall Risk Scale and Evaluation Tools") should have those medications reviewed by a pharmacist with fall risk in mind. Recommendations made to the treating provider for discontinuation, substitution, or dose adjustment. If a pharmacist is not immediately available, the treating provider should carry out the medication review.

The medication review may sometimes indicate that the patient needs to stay on a medication that increases the risk for falls because the benefits outweigh the risks, but the important point is that fall risk was considered. In addition, each hospital may need to develop its own approach to pharmacist-physician communication around medications to ensure that physicians carefully consider pharmacists' recommendations.

Units with a high proportion of patients on medications that cause orthostatic hypotension, such as psychotropic medications, may want to use a protocol for checking and reporting orthostatic vital signs (see Tool 3F). Finally, the patient and patient's family should be alerted and educated about fall risk and steps to prevent falls when the patient is taking these medications.

If you have an electronic health record, be cautious about using computerized alerts to identify medications that put the patients at high risk for falls. If these alerts occur too frequently or inappropriately, they will be ignored. We recommend targeting the alerts to the specific population of interest and carefully pilot testing alerts with providers before a full-scale rollout.

Frequent Falls

Patients with frequent falls should have their injury risk assessed. This assessment should include checking for a history of osteoporosis, including prior low-trauma fractures or osteoporosis noted on a bone mineral density test. Although the effects are long term, treatment for osteoporosis should be considered if the patient is not already on treatment. Also, the patient's physical environment should be reviewed to reduce the risk of injury (e.g., making sure the patient's bed is set low when the patient is resting in bed).

In hospital units known to have a high prevalence of patients at risk for injury after a fall, consider making an injury risk assessment part of the admission evaluation. For thorough coverage of options to prevent fall-related injuries, go to the VA Sunshine Healthcare Network (VISN 8) Patient Safety Center of Inquiry Web site at www.visn8.va.gov/visn8/patientsafetycenter/fallsTeam/default.asp.

3.4.3. How should patients and families be involved in the care plan?

Patients and their families should understand the patient's fall risk and how the proposed care plan addresses this risk. Specific aspects of the care plan that patients and families can help implement should be identified. If learning needs have been identified, teaching to address knowledge gaps can occur.

Use of educational resources, such as written materials appropriate to language and reading level (see Tool 3L, "Patient and Family Education"), can augment but not replace instruction. Patients and their significant others need to understand the potential consequences of not following a recommended prevention care plan as well as feasible alternatives and possible outcomes.

Every patient has the right to refuse the care designated in the care plan. In this case, staff are responsible for several tasks, including:

- Documenting patient's refusal.
- Trying to discover the basis for the patient's refusal.
- Presenting a rationale for why the intervention is important.
- Designing and offering an alternative plan and documenting the patient's response, including the patient's comprehension of all options presented. This alternative strategy needs to be described in the care plan and documented in the patient's medical record.

- A sample initial fall prevention care plan for a patient that you can integrate into your overall care plan is available in Tools and Resources (Tool 3M, "Sample Care Plan").
- A sample patient/family education pamphlet on the care plan is also available (Tool 3L, "Patient and Family Education").

Patient Education

One hospital trains volunteers to provide fall prevention education to patients. Each volunteer spends 5-10 minutes visiting each patient every Monday, Wednesday, and Friday to review the fall prevention handout. This education is supplemental reinforcement and does not replace education provided by the nursing staff.

3.4.4. How should the risk factor assessment and care plan be documented and communicated?

Document fall risk factors, and interventions to address those risk factors, in the care plan. Documentation of care planning ensures continuity of care and staff knowledge of what should be done for the patient. Most hospitals choose to have a dedicated care plan form within the medical record. The care plan helps all staff members to be aware of a patient's risks.

Consider the following strategies to enhance awareness of fall risk factors and appropriate documentation:

- Incorporating fall risk factors and interventions in daily patient flowsheets.
- Including a discussion of fall risk factors and interventions as part of patient report or handover.
- Creating an automated daily report at the unit level that identifies which patients on the unit have which risk factors and which interventions are needed for those patients.

Because many of the risk factors for falls are important for other aspects of good care (e.g., mental status, continence status), try to set up a documentation system where the risk factor

information is collected as part of a broader assessment of the patient's needs. That way, you only have to collect and document the information once.

Remember that while medical record documentation is necessary, it alone will not be sufficient. **Communicating** the patient's risk factors should occur orally at shift change, and by review of the written material in the medical record or patient care worksheet. The oral shift handoff should include any change in fall risk factors during the shift, including relevant medication changes, and should incorporate findings from hourly rounding.

The following article describes an effort to communicate a patient's specific fall prevention needs by posting, above the head of the bed, icons that identify specific fall risk factors:

Hurley AC, Dykes PC, Carroll DL, et al. Fall TIP: validation of icons to communicate fall risk status and tailored interventions to prevent patient falls. Stud Health Technol Inform 2009;146:455-9.

Be thoughtful about the use of color-coded nonskid socks, magnets, and wristbands to identify patients at high risk for falls. In some units where virtually all patients are at high risk for falls, these cues may simply be ignored.

Patients demonstrating particularly high risk behaviors can be discussed as part of the unit's safety huddle (or safety briefing). A safety huddle is a short, informal meeting to cover issues related to patient safety. The safety huddle can be enhanced by a standard report (preferably gathered electronically) that summarizes which patients on the unit have which risk factors for falls.

To read more about safety huddles, visit the VA VISN 8 Patient Safety Center of Inquiry Web site at www.visn8.va.gov/VISN8/PatientSafetyCenter/safePtHandling/safetyhuddle_021110.pdf.

Read more on the Pennsylvania Patient Safety Authority Web site about the risks and benefits of communicating high fall risk with colored wristbands, which are often used for this purpose:

http://patientsafetyauthority.org/EducationalTools/PatientSafetyTools/wristbands/Pages/home.aspx

In addition to shift change, medical rounds are an opportunity for interdisciplinary communication. For example, pharmacists may attend these rounds and provide an update to medical providers about medications that put the patient at higher risk of falls. Or, if attendance on rounds is not possible, pharmacists can place recommendations to change drug therapy as a consult note in the medical record.

Mobility programs that combine services of nursing and rehabilitation personnel offer another example of interdisciplinary communication and collaboration. Nursing assistants mobilize patients at risk for deconditioning who are in the hospital for non-mobility-related reasons. Physical or occupational therapists see patients with a need for skilled care or with weight-bearing limitations. See the resource box titled "One Hospital's Approach to Maintaining Patient Mobility" in section 6.4 for details.

Remember that the fall prevention component of the care plan needs to be updated periodically to be accurate. The care plan needs to be reassessed when a patient's risk factors are reassessed and are found to have changed. Typically this is when a patient changes units, has a change in health status, or has a change in medication associated with increased risk of falls. These updates also need to be followed up by a change in your actual care practices for the patient.

Check whether the fall prevention component of the care plan is being updated appropriately on your unit.

Read more about how one hospital developed a "ticket to ride" that summarized key aspects of the care plan for patients who needed to be transported between the unit and procedural areas. The ticket was designed to ensure a smooth handoff of care:

- Pesanka DA, Greenhouse PK, Rack LL, et al. Ticket to ride: reducing handoff risk during hospital patient transport. J Nurs Care Qual 2009;24:109-15.

3.4.5. What are barriers to care planning and solutions to these barriers?

Sometimes, putting together all the discrete parts of a care plan based on patient risk factors can be akin to putting together a puzzle. It takes time and the ability to see the whole picture, and it definitely requires patience and skill. There are many potential barriers to accurately completing care planning. Some that should be considered include:

- **Time:** Acuity of the patient population may mean the staff's time must be spent at the bedside and the development and documentation of care planning is delayed, thus increasing the chances of missed information.
- **Expertise:** Staff may not have the needed expertise to know which interventions to include or what they can do without a health care provider's order.
- **Value of care plan:** There may be a prevailing attitude that taking the time to write the care plan is not a priority. This is a unit or facility culture issue that needs to be addressed systemwide.
- **Responsibility:** The plan of care should be interdisciplinary. It is not just the nursing staff who develop and implement treatment plans. Physical and occupational therapists, pharmacists, and others are important contributors to fall prevention and need to be an integral component of the care planning process.

- **Information technology:** Some facilities have computerized charting that prompts care planning based on risk. These care plans may not be sufficiently individualized to the needs of the patient. With other systems, staff have to go to multiple screens, which can be time consuming and increases the chance of overlooking key elements.

Some solutions to the barriers above include:

- Using or creating systems that make care planning more streamlined by linking to the admission and followup fall risk factor assessments. Computer systems that tie assessment results directly to the care plan can provide useful decision support to staff, as long as the systems are flexible in allowing individualized care planning. For example, patients who are newly identified as at risk due to mobility problems may generate an automatic order for a physical therapy consult or a mobilization protocol, avoiding delays arising from care planning.
- **Linking the care plan to routine practice.** The plan of care, including addressing fall risk factors, should be routinely included in shift reports and patient handoffs. Prompts may be needed at first to incorporate the prevention program into everyday care practices.

Read more about how one health care system that uses an electronic health record developed a new system of tailored fall prevention care plans and overcame anticipated barriers through careful usability testing:

- Zuyev L, Benoit AN, Chang FY, et al. Tailored prevention of inpatient falls: development and usability testing of the fall TIPS toolkit. Comput Inform Nurs 2011;29:TC21-8.

3.5. How should you assess and manage patients after a fall?

Despite our best efforts, patients will nonetheless fall. Some may even sustain an injury. When a fall happens, you will need to carefully assess the patient for any injuries in a systematic way. After the patient's needs are attended to, you need to document your findings in the medical record and complete an incident report.

In this section we highlight some elements of a careful clinical review for injuries and also discuss conducting a root cause analysis to understand the causes of the fall. An understanding of the events surrounding a fall can inform the care plan for the patient who fell, as well as guide ongoing quality improvement efforts at the unit level. Using data on falls to monitor your improvement efforts is discussed in more detail in section 5.

3.5.1. What is a postfall clinical review?

A postfall clinical review is a structured way to collect information after a fall. The clinical review aims to determine whether there are injuries or other complications (Tool 3N, "Postfall Assessment, Clinical Review"). The clinical review focuses on immediate risk of injury or complications. Depending on the type of fall and patient comorbidities, including clotting disorders and use of anticoagulants, the clinical review may include assessment for injury, serial neurologic exams, and a fresh fall risk factor assessment. The new assessment will include medication review and ordering of laboratory tests.

3.5.2. How is the clinical review performed?

Key components of the clinical review[x] include:

- Checks for signs or symptoms of fracture or potential for spinal injury *before* the patient is moved.
- Safe manual handling methods for patients with signs or symptoms of fracture or potential for spinal injury.
- Regular neurologic observations for all patients where head injury has occurred or cannot be excluded (e.g., unwitnessed falls).
- Medical evaluation, with an expedited examination of patients who have signs of serious injury or high vulnerability to injury or have been immobilized.

Details on how to perform the clinical review can be found in Tools and Resources (Tool 3N, "Postfall Assessment, Clinical Review").

For tools and resources on safe patient handling, see the VA VISN 8 Web page on safe patient handling and movement: www.visn8.va.gov/VISN8/PatientSafetyCenter/safePtHandling/

3.5.3. What is a root cause analysis?

Root cause analysis is used in organizations to evaluate and understand what problems contributed to error or undesired outcomes. After a fall, you will collect data to reconstruct the event and determine the causes of and contributing factors to the fall (Tool 3O, "Postfall Assessment for Root Cause Analysis"). The data collection will obtain information that may help prevent the next fall in this patient or future patients. The postfall assessment for root cause analysis captures information from the patient, staff, and other witnesses about how the fall occurred. For more on root cause analysis, see section 5.1.6.

Details on how to perform a root cause analysis can be found in Tools and Resources (Tool 3O, "Postfall Assessment for Root Cause Analysis").

[x] Adapted from the U.K. National Patient Safety Agency, "Essential care after an inpatient fall." Available at: http://www.nrls.npsa.nhs.uk/EasySiteWeb/getresource.axd?AssetID=94054&type=full&servicetype=Attachment

3.5.4. How are the clinical review and root cause analysis documented and communicated?

Many components of the clinical review and root cause analysis overlap. For example, understanding the circumstances of the patient's fall can assist in assessing the patient for injuries, while also being important for understanding potential causes. You may need to adapt Tools 3N and 3O to your hospital's specific needs.

Documenting and communicating the clinical review are critical to the patient's safety, because a medical provider may need to take action based on the assessment, such as ordering lab tests or imaging studies or changing medications. In cases of falls with significant trauma, the patient may need to be taken to surgery. An oral handoff to the treating medical provider is therefore essential.

Careful documentation and communication of your root cause analysis are critical to preventing future falls in the same patient. For example, if a patient was given a sedative overnight for insomnia and then fell due to being drowsy, the entire treating team (including nursing, pharmacy, and medical provider) needs to know what happened. That way, they will not prescribe the sedative again to that patient or future patients in similar circumstances. After a fall occurs and the patient's root cause analysis is complete, a safety huddle (see section 3.4.4) may be appropriate so that the whole unit can learn from the event.

With frequent handoffs between hospital personnel, whether it be nursing staff who change shift every 8 hours, or hospitalists who rotate every week and have separate night or weekend coverage, communication is critical. The care plan discussed in section 3.4 (see also Tool 3M, "Sample Care Plan") is an ideal place to document findings from the clinical review that the unit team should keep in mind throughout the hospital stay.

If applicable, the patient's risk factor profile can also be updated electronically by a designated member of the unit team to reflect the recent fall and any new risk factors that were discovered. For more information about what information should go into the hospital's incident reporting system, see section 5.

3.5.5. What are challenges to performing the clinical review and root cause analysis?

There are significant challenges to performing a good clinical review and root cause analysis:

- Many falls are unwitnessed, and the patient may not be able to provide accurate information about what occurred.
- Falls often occur due to the confluence of multiple risks, which makes it difficult to identify a "smoking gun." For example, a new medication may interact with a patient's underlying cognitive or mobility limitations to precipitate a fall.
- A good root cause analysis requires input from multiple team members, and it may be difficult to assemble them rapidly.
- Time to perform a root cause analysis may be limited, especially at certain busy times of the day, such as at change of shift. Having a standard protocol, as described in 3.5.6 below, may address this challenge.

3.5.6. How can performance of postfall assessments be improved?

Performance of postfall assessments, whether for clinical review or root cause analysis, may be improved by having a standard protocol and ensuring that this protocol is easily accessible to staff on the unit. Also, the information gathered on the assessment tool should contain all the information needed to file an incident report (see section 5) so that information does not need to be gathered twice. In settings where a medical provider makes scheduled rounds, having a nurse or pharmacist join rounds to discuss potential culprit medications related to the fall may improve the assessment process.

Read more about how one hospital used a dedicated fall evaluation service to improve postfall assessment:

- Shorr RI, Mion LC, Chandler AM, et al., Improving the capture of fall events in hospitals: combining a service for evaluating inpatient falls with an incident report system. J Am Geriatr Soc 2008;56:701-4.

A modified version of the tool used in this study is presented as Tool 3O.

3.6. How can your hospital incorporate these practices into a fall prevention program?

In section 3, we have outlined best practices in fall prevention that you can use to improve your fall prevention program. Research evidence suggests that your program is most likely to succeed when it addresses multiple components, including universal precautions (section 3.2), risk factor assessment (section 3.3), care planning (section 3.4), and postfall assessment (section 3.5). However, it may not be possible to tackle all these elements at once. In addition, you may want to include additional items beyond what is discussed here. Some of these items can be identified through the use of additional guidelines (see section 3.7).

In addition to creating a program that is tailored to your hospital, you will need to customize the fall prevention program to each unit due to patient acuity and specific individual circumstances. Thus, it is important to identify fall risk factors that are more prevalent on each specific unit. For example, a neurology unit may have a high proportion of cognitively impaired patients requiring closer monitoring. A rehabilitation unit may have a high number of patients with mobility problems. Other units may have patients whose needs fluctuate rapidly or involve frequent patient transport. These include the emergency department, observation units for patients staying less than 24 hours in the hospital, and radiology. In addition, pediatric patients have special assessment tools, as discussed in section 3.3.5.

- Identify the units that will require customization of the fall prevention program.
- Adapt your program to meet the needs of the specific units.

Examples from some hospital units addressing fall prevention. Note that some of these examples include activities that may be applicable to other units as well.

Geri-psych unit:

- Direct line of sight to patients.
- 1:1 staff assignment for selected patients
- Rounds every 15 minutes.
- Annual fall prevention education for staff.
- Routine assessment and documentation of orthostatic blood pressure and pulse changes.

Medical unit:

- Nurses assess whether patient has a mobility deficit and request a physician order for a physical therapy consult if needed.
- The unit also uses patient sitters if a patient has had a fall.
- Patientsare moved near the nurses' station if they do not follow instructions to get assistance to get out of bed.
- Pharmacists review medication profiles of patients. Triggers in computerized physician order entry provide an alert indicating high fall risk for various medications. Pharmacy tries to eliminate medications with high fall risk from formulary.
- Patient care technicians take patients to the bathroom.
- Physical therapist or nurse shows patient how to use mobility aid.

Inpatient rehab:

- Interdisciplinary care planning includes nursing, occupational therapy, physical therapy, speech therapy, dietary, nurse practitioner, and social services.
- Nurse practitioner has responsibility for trying to wean patients off narcotics, and clinical pharmacist consult is ordered if needed.
- Pharmacy reviews each patient's medication profile within 24 hours of admission.
- Some patients are placed in safety zone (semiprivate rooms with a patient care observer on duty; see section 3.4.2).
- Rehab aide is available to assist patients in ambulating during the day. Nurses assist during the evening and on weekends.
- Delirium prevention efforts include pharmacist review of patient medication profile, infection control program, and environmental factors.

Neurology and/or postneurosurgical units:

- For high-risk patients, a computerized evaluation is conducted to determine required assistance with mobility aids or use of lift equipment. Decisions from evaluation are posted on white board in patient room.
- Floor has a dedicated physical therapist. If PT consult is ordered, PT determines progressive ambulation needs and fall prevention interventions are customized.
- Interventions for patients with cognitive deficits include involving more staff in care planning, asking family to stay with patient, and moving patient closer to the nurses' station.
- Nurses and physicians work together to evaluate medications that interfere with neurologic exam and alter patient's fall risk status.
- Physician is actively involved with delirium prevention, including avoidance of medications that may contribute to delirium.
- Pharmacy reviews medication profile for each patient.

Read more about preventing falls in radiology in an article released by the Pennsylvania Patient Safety Authority: Falls in radiology: establishing a unit-specific prevention program. Pa Patient Saf Advis 2011 Mar;8(1):12-7. Available at: http://patientsafetyauthority.org/ADVISORIES/AdvisoryLibrary/2011/mar8(1)/Pages/12.aspx.

3.7. What additional resources are available to identify best practices for fall prevention?

A number of guidelines have been published describing best practices for fall prevention in hospitals. These guidelines can be important resources for improving fall prevention programs.

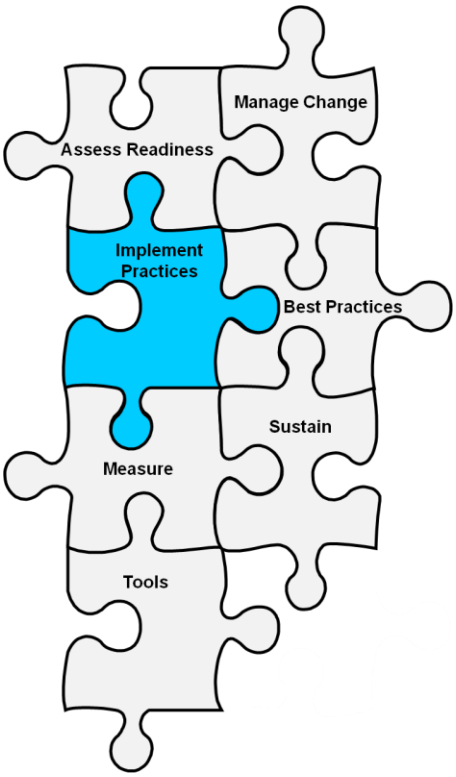
- Prevention of falls and fall injuries in the older adult. Nursing best practice "how to" guidelines. Toronto: Registered Nurses Association of Ontario; 2005. Available at: www.rnao.org/Page.asp?PageID=924&ContentID=810.
- Boushon B, Nielsen G, Quigley P, et al. Transforming care at the bedside how-to guide: reducing patient injuries from falls. Cambridge, MA: Institute for Healthcare Improvement; 2008. Available after free registration at: www.ihi.org/knowledge/Pages/Tools/TCABHowToGuideReducingPatientInjuriesfromFalls.aspx.
- The "How to" guide for reducing harm from falls. London, UK: Patient Safety First; 2009. Available at: www.patientsafetyfirst.nhs.uk/Content.aspx?path=/Campaign-news/current/Howtoguidefalls/
- Guidebook for preventing falls and harm from falls in older people: Australian hospitals. Sydney, NSW: Australian Commission on Safety and Quality in Healthcare; 2009. Available at: www.activeandhealthy.nsw.gov.au/assets/pdf/Hospital_Guidebook.pdf
- Health care protocol: prevention of falls (acute care). 2d ed. Bloomington, MN: Institute for Clinical Systems Improvement; April 2010. Available at: www.icsi.org/falls__acute_care___prevention_of__protocol_/falls__acute_care___prevention_of__protocol__24255.html.

3.8. Checklist for best practices

Once you have read through this section, use the checklist for best practices to monitor your progress on completing the activities that have been described here.

The checklist for best practices can be found in Tools and Resources (Tool 3P, "Best Practices Checklist").

4. How do you implement the fall prevention program in your organization?



Now you are ready to begin implementing the fall prevention practices you have identified. *No matter how good your fall prevention program is in concept, if it is not used by the staff it will not be successful.* To this point, you have looked at your organization's readiness to improve fall prevention (section 1); assessed needs, set goals, and begun preparing for change (section 2); and examined best practices (section 3). In this section, the Implementation Team will work with the Unit Teams to implement the new prevention practices at the frontline care level.

Your organization may already be using some of the best practices that you have identified for implementation, but other practices will involve changes in the way you complete tasks. For the new set of practices to be fully implemented and sustained, it will need to be customized to your organization and integrated into ongoing work processes.

The questions in this section will guide you in multiple aspects of implementation. To successfully implement your change program, you should answer three sets of questions:

What roles and responsibilities will staff have in preventing falls?

- How do you assign roles and responsibilities?
- What role will the Unit Team play?
- What role will the Unit Champions play?
- How should the prevention work be organized at the unit level?

What fall prevention practices go beyond the unit?
How do you put the new practices into operation?

- How do you manage the change process at the front line?
- How do you pilot test the new practices?
- How do you get staff engaged and excited about fall prevention?
- How can you help staff learn new practices?

Implementing Best Practices: Locally Relevant Considerations

Implementing best practices requires attention to detail. Some issues that may need to be sorted out at your hospital include:

- Education of clinical and nonclinical staff:
  - Reaching all nurses with fall prevention education, particularly night shift and weekend staff.
  - Providing fall prevention training for professional disciplines beyond nursing staff and rehabilitation services (e.g., pharmacy, physicians, medical residents) or for nonclinical staff (e.g., environmental services, transport team).
- Communication of fall risk:
  - Developing mechanisms for the emergency department to communicate a patient's risk factors for falls to the admitting department.
- Improving handoff tools between departments and between shifts.

This section will address these types of challenges.

4.1. What roles and responsibilities will staff have in preventing falls?

In section 2 you examined current practices and identified aspects needing improvement; in section 3 you reviewed best practices. Now you need to define specifically what needs to change to implement the best practices you have chosen and to decide who is going to do what. Specific areas of responsibility and paths of communication and accountability will be needed.

Hospitals and units within them vary in their staffing patterns and usual ways of doing business. You will need to consider staff roles based on the features of your organization overall and the individual units involved in fall prevention. The Implementation Team will need to involve members of the Unit Team, especially the unit managers, in these decisions.

Staff roles should be clearly defined so that Unit Team members will understand if and how their roles will change. If you, as the Implementation Team leader, will implement the fall prevention program with current staff, you will need to take their skills and strengths into account in allocating responsibilities. You will need to consider not only what individual responsibilities are, but also how the roles interact and what ongoing communication and reporting are needed.

The questions below will guide you through the process of considering and specifying the roles and responsibilities of the unit staff and Unit Champion. The questions also will guide you in deciding how best to organize work at the unit level and how to customize the set of practices for specific work units in your organization.

4.1.1. How do you assign roles and responsibilities?

Think about who will perform each specific task identified for your chosen set of best practices. Responsibilities should be assigned based on the relevant formal training and informal work experience of each profession or individual. In some cases, a group will perform a task based on their specific role or title, such as certified nursing assistants (CNAs). Other tasks may be assigned to a specific individual. In that case, always make sure you have a backup; it is important that everyone knows who the backup is when the assigned individual is unavailable.

As you work through this section, you should consider taking each task required to implement your chosen fall prevention practices and entering it into the summary page of the worksheet provided as Tool 4A, "Assigning Responsibilities for Using Best Practices, in Tools and Resources. Then assign specific individuals or groups to each task. Sections 4.1.2 through 4.1.4 include examples of responsibilities different staff might take on; those examples are summarized in Tool 4B, "Staff Roles." In making these assignments, make sure you work with the unit manager or Unit Champions from the units in which you are implementing change.

In Tools and Resources, you can find a worksheet to use in deciding how responsibilities will be assigned in your organization (Tool 4A, "Assigning Responsibilities for Using Best Practices") together with a summary page illustrating how responsibilities might be organized (Tool 4B, "Staff Roles").

4.1.2. What role will members of the Unit Team play?

The Unit Team consists of staff members who provide daily direct patient care by conducting fall risk assessments, planning care for fall prevention, and ensuring that care is performed and documented. In other words, they are responsible for the performance of your set of best practices. In most cases, the Unit Team will include everyone on the unit, such as RN, LPN, CNA, medical staff, pharmacist, physical therapist/occupational therapist, and other staff assigned to a unit on a regular basis.

The types of staff working in your hospital may differ from these. *You will need to assign roles appropriate to your staffing configuration.* An example of the allocation of roles between nurses, aides, and other staff is shown below. It is important to be clear on what roles have or have not changed and what is permitted in each State's practice acts.

Nurse

- Completes and documents fall risk assessments.
- Monitors progress or changes in medical condition.
- Documents care and prevention practices.
- Reports patient problems to medical provider.
- Obtains consults and medical orders as needed.
- Educates patient and family as appropriate.
- Supervises aides.
- Knows how to obtain needed supplies and/or equipment (e.g., walker).

Nurse aide

- Evaluates the safety of the patient's environment during care tasks.
- Performs appropriate care plan tasks.
- Reports task completion to the nurse.
- Reports any changes in the patient's condition to the nurse.

Treating medical provider

- Reviews need for specific types of rehabilitation therapy.
- Writes orders for specific interventions, including activity orders.
- Reviews medications for fall risk and makes changes to medications as needed.

Pharmacist

- Reviews medication list of patients at high risk based on medication profile.
- Suggests alternative medications or dosing regimens to medical provider.

Physical or occupational therapist

- Provides skilled therapy to patient to improve ability to perform activities of daily living, such as ambulation and transfers or bathing and dressing.
- Makes recommendations for assistive devices or adaptive equipment.
- Trains patient in safe use of assistive devices or adaptive equipment.
- Reviews appropriateness of activity orders and asks medical provider to review and/or adjust activity orders as needed.

Special attention is required when temporary staff rotate onto the unit. They will not be aware of how care is organized on the unit and what their critical role is in fall prevention. Given how frequently temporary staff work on most hospital units, unit managers should develop plans in advance so that temporary staff can be rapidly oriented to their exact roles on the team. Make

sure you have a plan in place for temporary staff and can provide appropriate monitoring and assistance.

- Define the roles for all members of the Unit Team. Worksheet 4A in Tools and Resources may help in this process. You may need to tailor roles to accommodate differences in staffing and practices in different units.
- Develop a plan for orienting and monitoring temporary staff.
- Be sure staff roles you have developed are in compliance with your State practice acts.
- Highlight which of these responsibilities will differ from the Unit Team members' current roles and therefore will require changes in practice. These will require special attention as you manage implementation of the new set of practices (described in section 4.2).
- If you anticipate barriers to unit staff filling the defined roles, highlight them for use in planning your change strategies (described in section 4.2).

4.1.3. What role will the Unit Champions play?

Many successful improvement efforts have relied on Unit Champions as critical members of the Unit Team, especially during the implementation process. A Unit Champion is a staff member who serves as the liaison between the Implementation Team and the unit staff. The Unit Champion is someone who is familiar with the program goals, care processes, and outcome data that will be used. He or she is often the initial "go to" person when staff have questions.

The Unit Champion posts results, reports on program progress, and provides updates in staff meetings. He or she helps conduct outcome audits. Most important, the Unit Champion is often the "cheerleader" who encourages staff during the difficult implementation process. A Unit Champion may be anyone who works on the unit, including nurses (RN, LPN) and nurse aides. Ideally, there should be at least one champion per shift to provide guidance to other staff. However, the number of champions should be customized to fit the needs of your hospital.

The role of the Unit Champion can be temporary and only needed for getting the program started. Once practices are routinized, the champion may not be needed. However, maintaining a "go to" person may help with program sustainability and ease introduction of additional changes or modifications.

Another approach that has been used successfully is to have several staff on the unit serve as fall prevention resources without the formal title of Unit Champion. This has occurred when frontline staff have become engaged in and excited about fall prevention, usually as a result of their early involvement in improvement efforts. While this approach may not have the public visibility of a Unit Champion, it brings the benefits of engaging more staff and embedding knowledge of good prevention practices more deeply in each unit. The characteristics of these individuals and their roles would be similar to the Unit Champions during the improvement process, and these people would remain in place after fall prevention activities have become routine.

Look for these characteristics in your Unit Champions and resource staff:

- Satisfactory level of performance.
- Excellent communication skills.
- Effective linkage to other staff members.
- Respect from their peers.
- Enthusiasm for patient safety.
- A demonstrated positive image of their unit.
- Good problem-solving skills.
- Knowledge of the benefits and process of fall prevention.
- Ability to collaborate with all key stakeholders in the improvement process.

Tool 4B, "Staff Roles," and Tool 4A, "Assigning Responsibilities for Using Best Practices," in Tools and Resources may help you define the role of Unit Champions and resource staff.

4.1.4. How should the fall prevention program be organized at the unit level?

While the definition of team member roles is the first step in determining how the fall prevention program will be carried out, how to organize the work is also key: What are the paths of ongoing communication and reporting, including the lines of oversight and accountability? What documentation is needed and to whom is it submitted? How will fall prevention be integrated with ongoing work processes?

The mapping of current processes and analyses of gaps from best practices that you did earlier (described in section 2.2.2) will help address these questions. The earlier work will help you identify the key points of communication and accountability that need to be addressed and to highlight problem areas that require special attention.

What paths of ongoing communication and reporting will be used?

Communication needs to occur between staff at all levels: within the unit (e.g., between nurses, nurses and aides, nurses and physicians, nurses and other staff) and between unit staff, the Implementation Team, and senior management. Communication around clinical issues related to fall prevention is covered in further detail in section 3. Here, we talk about what kind of communication is needed to ensure that the new work processes decided on by the Implementation Team are carried out as intended. We also discuss how to obtain feedback from unit staff on changes that may be needed to the implementation plan.

A variety of strategies can be used to communicate about how changes that are being implemented are actually going. Unit Champions can present updates on the implementation of new changes at regularly scheduled meetings of the Implementation Team. Alternatively, unit managers can provide updates based on information they gather from their staff. The key aspects are that the communication processes occur regularly and thoroughly with the least amount of time and effort.

How will fall prevention be integrated into ongoing work processes?

Building new fall prevention practices into ongoing work processes is necessary for sustainability. Strategies for building prevention into ongoing processes include:

- Making certain procedures universal so that staff do not have to decide which patients they apply to (such as the universal fall precautions discussed in section 3),
- Integrating communication regarding fall risk into regular communication, such as shift handoffs, and
- Creating visual cues or reminders in physical locations, such as logos indicating elements of the fall risk care plan (e.g., assistance with toileting) above the patient's bed.

Examples of How Change Can Be Incorporated Into Routine Care

- A newly admitted patient automatically triggers a medication review using the pharmacy risk scale (Tool 3I) to determine whether a full pharmacy evaluation of the medication list should occur.
- A standard order set is used for all patients to institute appropriate mobilization protocols (Tool 3K).
- Patients noted to have a change in mental status automatically receive the standard Delirium Evaluation Bundle (Tool 3J) to determine the need for increased supervision and further medical evaluation.
- A postfall assessment note (Tool 3O) is created as a structured electronic template or paper progress note to guide nurses through the appropriate care processes.
- Hourly rounds (Tool 3B) are used to assess toileting needs alongside other concerns.
- Environmental rounds occur on a regularly scheduled basis by a hospitalwide team to ensure environmental safety (see Tool 3C for checklist).

Many hospitals are now using electronic health records, which provide additional opportunities to integrate best practices into the daily routine. For hospitals that have electronic records, questions to consider include:

- What information about fall risk factors is already part of the patient record?
- Are data already in the system that can be used as part of a new process to assess fall risk factors?
- What is the most logical place in the record to collect/organize/assess information about patient fall risk factors and any necessary precautions?

Suggestions for Building Fall Prevention Into Electronic Documentation Systems

Features that can be added to electronic documentation systems include:

- Automatic consults to physical therapists for mobilization as directed by a mobilization protocol, or to occupational therapists for patients who need retraining to perform an activity of daily living.
- Automatic consults to pharmacists if medication risk score exceeds a threshold.
- Patient education booklet linked to the documentation system so that it is readily available if needed.
- Fall prevention guidelines or quick reference text integrated into the computer charting system.
- Fall risk factor report that summarizes which patients on the unit have specific risk factors.

Working from the process map for fall prevention and gap analysis you developed for your organization in the redesign process (section 2.3), develop your individualized operating rules to specify:

- Paths of ongoing communication and reporting.
- Lines of oversight and accountability.
- Documentation that is needed and people to whom it is submitted.
- Strategies for integrating fall prevention into ongoing work processes.

These rules should include not only regular activities, but also contingencies, such as plans for supervising very high risk patients if a sitter is not available.

- Consistent with those decisions, complete the worksheet provided as Tool 4A in Tools and Resources to assign specific individuals or groups to each task.
- Determine which changes in practice, if any, will require changes in formal hospital policies and procedures.

4.2. What fall prevention practices go beyond the unit?

Our focus in this toolkit is primarily on preventing falls at the unit level. However, as you organize the unit work, you should think beyond the unit in two ways. First, consider how information about fall risks is conveyed in handing off patients to other units or when discharging patients. Handoffs are generally weak links in our systems. Important questions to ask regarding handoffs include:

- When patients are transferred from the hospital ward to radiology for a test, is the person doing the transport alerted to the patient's fall risk?
- What is the strategy for handling patients who are admitted through the emergency department because of a fall?

- On discharge, do patients and families have input into the postdischarge care plan? Are they given information about how to prevent falls in the home, and are referrals made for additional services and supports, such as home physical or occupational therapy, as needed?

Second, consider how the interactions of other hospital staff with patients could contribute to the observation and care of patients on the unit. For example, orderlies who transport patients on and off the unit can assist in care by ensuring that their transfer techniques are consistent with standards of practice (see Tool 3E, "Clinical Pathway for Safe Patient Handling"). Dietary staff who distribute and collect trays can provide information about whether the patient has had poor oral intake, thereby increasing risk for volume depletion. In addition, dietary and environmental staff can report if a patient asks to use the toilet or if patients are sitting in a position that puts them at risk for falling, such as at the edge of a wheelchair.

4.3. How do you put the new practices into operation?

Once you determine which fall prevention practices (described in section 3) to implement and how to define roles and organize work to carry out those practices at the care level in the units (described in section 4.1), you will need to develop strategies to put the practices into action. In this section, we focus on pilot testing and initial implementation of the new practices. In section 6, we will move to sustaining your improvement efforts.

To guide the changes that will be needed, you should consider four questions:

- How do you manage the change process at the front line?
- How do you pilot test the new practices?
- How do you get staff engaged and excited about fall prevention?
- How can you help staff learn new practices?

4.3.1. How do you manage the change process at the front line?

As highlighted in earlier sections, incorporating the new set of practices will involve changes in the way people do their work, which is often difficult. In some cases the changes will be minor, but in others they will be substantial. Therefore, to make the needed changes:

- Ensure that staff understand their new roles, know why the new roles are important, and have the knowledge and tools to carry out their roles.
- Help reduce resistance to change by ensuring that staff understand the reasons for change and agree that change is needed.
- To help staff accept the new set of practices fully, ensure that they understand that those practices offer promising strategies for providing high-quality care for patients and that such care is a priority for their supervisors.
- Identify and minimize practical barriers to using the new practices, such as inadequate access to supplies or equipment. For example, assistive devices, low beds, and floormats should be stored on or near the unit for easy availability.
- At all levels, engage staff to gain their support and buy-in to the improvement effort and help tailor the practices in fall prevention.

To manage the change process effectively, the Implementation Team will guide, coordinate, and support the implementation effort during the pilot phase and as the new prevention practices are rolled out across the hospital. The Implementation Team will work with the Unit Champions described in section 4.1.3 or with others designated as the unit-level lead for this improvement effort. They will need to work in a variety of areas, discussed below.

Involving staff, clinicians, and middle managers

At the unit level, it will be important to involve not only frontline nurses and support staff but also nurse managers and physicians. In section 1 we discussed the importance of leadership support for improvement efforts. The focus then was on senior leadership, but support of middle managers is also needed. For example, nurse managers and service chiefs should be involved in early discussions about how the new set of practices will be introduced and strongly supported in their units.

Physician involvement is often overlooked in fall prevention but needs to be encouraged. Make sure physicians are aware of best practices in fall prevention and hospital policies and procedures. This is particularly true for aspects of care that physicians may need to be involved in, such as medication changes, activity orders, or physical/occupational therapy referrals.

Monitoring implementation progress

The Implementation Team and Unit Champions should develop a process for ongoing monitoring of implementation progress. Part of the process will be gathering feedback from staff and clinicians. For example, Unit Champions can compile questions and problems from staff to send back to the Implementation Team.

In addition, the monitoring process should include tracking changes in fall rates and care processes to prevent falls, as described in section 5. Results should be communicated to staff and to the Implementation Team. The information loop should be closed by having the Implementation Team report to the unit what it did with the information the unit provided.

Sustaining management support

Above the unit level, the Implementation Team should continue to keep senior leaders and middle managers regularly informed about progress with the fall prevention program to sustain their early support for the improvement effort. These individuals' support will be needed during implementation in multiple ways:

- Leaders and managers are important sources of communication. Their expressed support for improving fall prevention will reinforce its importance and thus increase the impetus among staff to adhere to the new practices.
- Leaders and managers can help remove barriers across departments. While the Implementation Team by design should include all divisions affected by fall prevention, some issues may not be resolved within the Implementation Team but need to be taken to a higher level of authority. This will be particularly important if your organization does not have a strong history of quality improvement that gives staff and managers on the improvement team authority to change procedures as needed.

- Senior leaders may need to authorize resources for the prevention initiatives. In the pilot and early implementation phases, the Implementation Team may need, for example, to negotiate with administration (and unit managers) to secure release time for Unit Champions and for staff training. Management's financial support will be needed, for example, if new equipment (e.g., low beds) is recommended in the program or if a fall prevention campaign needs visibility tools such as posters or buttons. You initially considered resource needs for fall prevention in section 1.6. Consider reviewing this list and updating it if needed.

- Building on the work from earlier sections, refine your Implementation Plan to outline the details of your strategies, including lead responsibility and timelines, for managing change at the front line.
- Clarify the roles of the Implementation Team and Unit Champions for the implementation period. Communicate those roles to frontline staff and leadership.
- Confirm management support for the resources needed for hospitalwide implementation in terms of (among other things):
    - Expressed support for the initiative.
    - Additional months for Implementation Team to work.
    - Training resources and release time for the unit staff involved.
    - Resources for equipment and supplies.
    - Policies and procedures in place.
- Develop a process for monitoring implementation closely and making midcourse corrections as needed.
- Carry out your strategies so that you successfully implement the new practices.

4.3.2. How do you pilot test the new practices?

In starting the implementation process, many organizations begin the rollout of new practices in one or two units before launching them across the hospital. Pilot testing will allow you to identify and work out any problems in the recommended practices and processes at an early stage and thus refine the program to better fit your hospital *before* the entire launch. It also can generate early success that will build momentum for later spread across the organization.

Small hospitals may have only a few units, so a formal pilot may not be practical. If so, it is still important to consider a trial period where you get feedback and allow for program refinements. It can bring the same advantages of a more formal pilot in identifying problems and customizing the set of prevention practices to fit your hospital needs early in the implementation process.

To begin the pilot, you should choose one or two units to participate. Different criteria may be applied to select the units. You may identify one unit that was successful with a past improvement project and one that was not so successful. You may use a unit with low fall rates and a unit with high fall rates, or units that present different implementation challenges, such as a medical/surgical unit and a geriatric psychiatry unit.

By selecting several very different units, your Implementation Team can hear from the Unit Champions and staff what they like and any problems they have had implementing the program. Two widely different units will give you a better overall feel for refinement that may be needed and ways to answer staff questions that arise.

You will also need to decide what information you will want to collect and from that decide how long to try out the new set of practices. The pilot test can provide two types of information:

1. The items you will collect to judge the pilot's success, such as completing fall risk factor assessments, including fall prevention in care plans, or improving adherence to care plans; and
2. Feedback from participants on how the new practices are working in terms of, for example, the clarity of what is expected from staff or the impact of the new practices on staff workflow. Section 5 provides tools that will help in measuring care processes and outcomes.

You should use information from the pilot to change the fall prevention program to meet your hospital's needs and to change the ways the program is introduced to staff. You also can use the pilot to identify additional staff barriers to change.

Rather than designing the pilot like a research project where the intervention—in this case the new fall prevention practices—is held constant for the duration of the test period, consider conducting a formative pilot in which changes are made as needed during the pilot to maximize the likelihood of success. In this case, pilot information will be provided to the participating units, Unit Champions, and the Implementation Team on a regular basis throughout the pilot period, rather than simply after it has been completed. Minor modifications can be made along the way and their impact followed within the pilot phase.

- Design and conduct the pilot, making changes as needed if that is your chosen approach.
- Compile staff questions and problems that arose to guide changes and analyze measures of success.
- Communicate the results to the participating units, the Unit Champions, the Implementation Team, and hospital leadership.
- Refine the practices to address problems that surfaced in the pilot test.
- Use the list of staff questions from the pilot units and the answers to those questions to create an implementation tool for the hospitalwide launch.

4.3.3. How do you get staff engaged and excited about fall prevention?

Engaging the buy-in and ongoing participation of staff members is particularly important for staff who are involved in hands-on care and whose involvement will be needed to achieve the improvement objectives. Each unit has its own culture; some people will be willing to try something new and others will have difficulty or be unwilling to make any changes. To have any program succeed, unit staff need to have input and be able to make suggestions on how to individualize the program for their unit.

In preparation for the initial rollout or pilot testing on each unit, the Implementation Team or Unit Champions should meet with unit staff on all shifts. They should review the newly defined roles and responsibilities and work with staff to determine how to adjust roles and paths for communication and reporting among staff on their unit. They also should discuss how to address barriers to adherence.

This process can take place with a unit-level improvement team or with the entire staff, such as at a regular staff meeting. A challenge in facilitating these discussions will be to distinguish between constructive tailoring that will enhance adherence to the new set of practices and weakening of the new practices to reflect reluctance to change or failure to accept them.

Even with involvement in tailoring the changes to their unit or position, some clinicians and staff may be reluctant to use the new set of practices. Strategies for dealing with such reluctance will depend on a number of factors, including the stage of implementation, the positions of and number of people resisting, and the reasons for and strength of resistance.

If reluctance, or active resistance, is localized to specific parts of the hospital or to specific individuals, you may decide not to include those units or individuals in the early implementation. Focus instead on the units and people with the greatest interest and highest likelihood of success. Their early success may convince others that the new set of practices is worth using. Or as implementation advances and the new practices become the norm, peer pressure may spur resisters to change their minds.

Including fall prevention in staff performance evaluations can formalize the new practices as the norm and enhance commitment. If resistance during early implementation is widespread, you will need to understand why. Then you can either redesign the set of practices or implementation strategy to accommodate the resisters' concerns or reconsider your earlier conclusion that the hospital is ready for this change. If the latter, you may want to continue to use the new program in volunteer units until you can build a successful case for hospitalwide use.

- Identify implementation strategies that have worked successfully in your hospital before or that sound promising based on the way things are done in your organization.
    - Consider whether your organization uses big, visible campaigns to introduce new initiatives, or is more comfortable with lower key incremental change.
    - Review staff engagement materials from other health care organizations and from past quality improvement efforts at your hospital.
    - Based on your hospital's culture, history, and values, begin to identify the characteristics of an approach that would engage staff members at large.
- Develop strategies for working with staff at the unit level to get staff input in tailoring the new practices to their units and reducing barriers; include all shifts in this process.
- From staff input and earlier analyses of current practices, identify potential barriers to uptake of new practices, including staff resistance to change, and develop strategies to remove or work around them.
- Develop plans for ongoing communication about the progress, successes, and challenges of the change efforts at multiple levels of the organization.

Examples of Strategies That May Help To Reduce Staff Resistance

- Continue to persuade staff that fall prevention is important:
    - It is a standard of care and a nurse-sensitive issue.
    - It is a reportable event and a highly visible indicator of safety and quality.
    - Hospitals will not be reimbursed by Medicare for hospital-acquired falls with trauma.
- Involve staff in defining the problems and testing solutions so they feel ownership of the changes and see the success that can result.
- Provide staff with data (e.g., through staff meetings, unit bulletin boards, and email) that initially highlight the problem of high fall rates and later show success in preventing them.

Examples of methods and strategies to increase staff engagement can be found in a recent critical care nursing journal article.* Key points from this article include:

- A brief "elevator speech" to describe to staff, in a nutshell, why the fall prevention program was important.
- Surveys of staff and physicians regarding what they felt were successful strategies for fall prevention on the unit in question.
- Multiple inservices and staff reminders about the fall prevention program.
- The presence of an enthusiastic clinical champion with adequate resources and leadership support.

5. * Gutierrez F, Smith K. Reducing falls on a definitive observation unit: an Evidence-Based Practice Institute Consortium Project. Crit Care Nurs Q 2008;31;127-39.

4.3.4. How can you help staff learn new practices?

Once the initial pilot test has been completed, you will have information about areas in which education is required to enhance staff knowledge. This aspect, while valuable, is not enough to change practices. Staff members also need help figuring out how to integrate their new knowledge into their existing practice and how to replace existing practices and skills that may be less effective with others that are more effective. Thus, a variety of methods for sharing information about new practices is needed.

Adult learning theory suggests that adults learn best through methods that build on their own experiences. Since individuals have different learning styles and are at different levels of practice proficiency, a variety of educational approaches is best, including, but not limited to, the following:

- Didactic methods can include a variety of formats, such as lectures, interactive presentations, online lessons, case study analysis, listserv discussion, and grand rounds talks.
- Care practice simulations, expert practitioner observation of care delivery, and competency validation also can enhance learning.
- Clinical bedside rounds and patient case review are excellent ways to translate abstract knowledge into behavior changes.

Any and all plans for new or changed staff education should be worked out in close collaboration with your existing content experts on fall prevention. As discussed in section 6, learning will need to be supported on an ongoing basis, both as refreshers for existing staff and as training for new staff.

- Choose appropriate settings for staff education about best practices in fall prevention and the changes that will be needed to incorporate those practices in this organization, consistent with adult learning principles. For example, combine traditional training sessions, individual coaching, or ongoing discussion in staff meetings.
- Work with your staff education department and other key stakeholders (e.g., residency directors) to interpret the results of the staff fall prevention knowledge assessment (Tool 2E, "Fall Knowledge Test") and to develop an educational strategy. We have suggested a number of materials to use throughout this document that can be found in Tools and Resources.

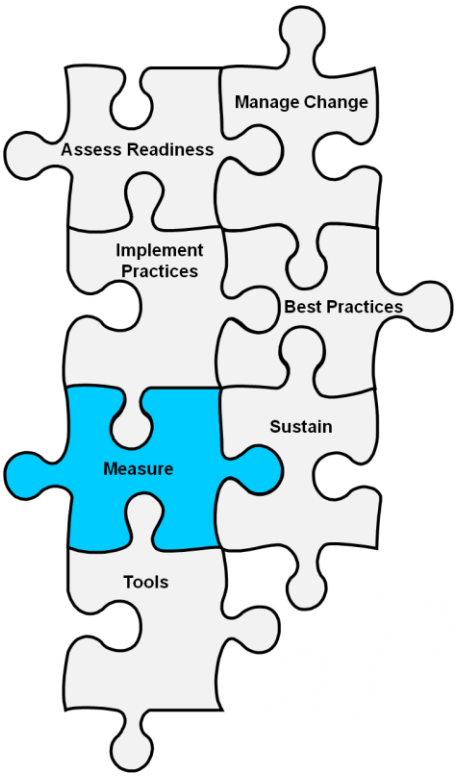
To assess current staff education practices, complete the checklist found in Tools and Resources (Tool 4C, "Assessing Staff Education and Training").

- The Registered Nurses' Association of Ontario Web site offers a model curriculum to use for staff education ("Falls Prevention: Building the Foundations for Patient Safety, a Self-Learning Package"): http://rnao.ca/sites/rnao-ca/files/Falls_Prevention_-_Building_the_Foundations_for_Patient_Safety._A_Self_Learning_Package.pdf
- A range of resources, including many that can be used for staff education, may be found at the Veterans Affairs National Center for Patient Safety falls toolkit Web site: www.patientsafety.gov/SafetyTopics/fallstoolkit/index.html
- The AHRQ-sponsored Falls Management Program (focused on nursing homes) includes a variety of educational content that can be adapted for hospitals. To learn more, go to www.ahrq.gov/research/ltc/fallspx/fallspxman5.htm.

4.4. Checklist for implementing best practices

The checklist for implementing best practices can be found in Tools and Resources (Tool 4D, "Implementing Best Practices Checklist").

5. How do you measure fall rates and fall prevention practices?



A basic principle of quality measurement is: *If you can't measure it, you can't improve it.* Therefore, fall rates and fall prevention practices must be counted and tracked as one component of a quality improvement program. By tracking performance, you will know whether care is improving, staying the same, or worsening in response to efforts to change practice. Moreover, continued monitoring will help you understand where you are starting from and whether your improvement gains are being sustained.

During the course of your fall prevention improvement effort and on an ongoing basis, you should regularly assess your fall rates and fall prevention practices. We recommend that you regularly monitor: (1) an outcome (such as falls per 1,000 occupied bed days), (2) at least one or two care processes (e.g., assessment of fall risk factors and actions taken to reduce fall risk), and (3) key aspects of the infrastructure to support best practices (e.g., checking for interdisciplinary participation in Implementation Team).

The questions below will help you and your organization develop measures to track fall rates and fall prevention practices:

- How do you measure fall and fall-related injury rates?
- How do you measure fall prevention practices?

Measuring Fall Rates and Fall Prevention Practices: Locally Relevant Considerations

Your hospitals may experience challenges in trying to measure fall rates and fall prevention practices, such as:

- Revising incident reports to include more specific fields for contributing factors to falls (e.g., high-risk medications, which medications).
- Finding mechanisms to communicate fall incident report information to the Implementation Team.
- Using process metrics to measure the adherence to fall prevention strategies.
- Spreading lessons learned from postfall safety huddles and root cause analyses from one hospital unit to another.

This section will discuss these types of issues.

5.1. How do you measure fall and fall-related injury rates?

5.1.1. Why measure fall and fall-related injury rates?

Fall and fall-related injury rates are the most direct measure of how well you are succeeding in making patients safer related to falls. If your rates are improving, then you are likely doing a good job in preventing falls and fall-related injuries. Conversely, if your fall and fall-related injury rates are getting worse, then there might be areas in which care can be improved. You can use these data to make a case for initiating a quality improvement effort and monitoring progress to sustain your improvements.

5.1.2. What should be counted?

In measuring fall rates, you will need to count the number of *falls* and the number of *occupied bed days* on your unit over a given period of time, such as 1 month or 3 months. To count falls properly, people in your hospital or hospital unit need to agree on what counts as a "fall." Defining a fall is especially a problem in "borderline" cases, such as when a patient feels her knees giving out while walking with a hospital staff member and the staff member eases the patient onto the floor. Also, staff may feel pressure to underreport borderline cases because of concern that their unit will compare poorly with other units. Therefore, when a uniform definition of fall is shared throughout the hospital, it needs to be coupled with a culture of trust in which reporting falls is encouraged. There are many definitions of falls, and you should choose one appropriate for your situation.

You may also want to track the number of repeat falls on your unit. Sometimes a single repeat faller can skew the fall rate for the entire unit, so knowing about repeat falls can be helpful in understanding your data.

With each fall, you will need to define the level of injury that occurred, if any. Combining information about falls with the level of injury can give you an *injurious fall rate*. The injurious fall rate can be tracked just like the total fall rate. The advantage of the injurious fall rate is that it tracks the more clinically important falls and is less likely to be affected by the "borderline" falls problem noted above. The disadvantage is that if there are relatively few injurious falls compared with total falls, it will be hard to tell whether your fall prevention program is making a difference with respect to injuries. Thus, we recommend that both total and injurious fall rates be computed and tracked.

The National Database of Nursing Quality Indicators (NDNQI) Data Web site (https://www.nursingquality.org/data.aspx) has a link in the bottom right corner titled "ANA is the NQF measure steward." This link takes you to definitions of falls and patient days so that fall rates may be calculated. A paraphrase of the March 2012 NDNQI fall definition follows:

A patient fall is an unplanned descent to the floor with or without injury to the patient. Include falls when a patient lands on a surface where you wouldn't expect to find a patient. All unassisted and assisted falls are to be included whether they result from physiological reasons (fainting) or environmental reasons (slippery floor). Also report patients that roll off a low bed onto a mat as a fall.

A synopsis of the NDNQI definition for repeat fall follows:

More than one fall in a given month by the same patient after admission to this unit, may be classified as a repeat fall.

The NDNQI definitions for injury follow:

- "None—patient had no injuries (no signs or symptoms) resulting from the fall, if an x-ray, CT scan or other post fall evaluation results in a finding of no injury
- Minor—resulted in application of a dressing, ice, cleaning of a wound, limb elevation, topical medication, bruise or abrasion
- Moderate—resulted in suturing, application of steri-strips/skin glue, splinting or muscle/joint strain
- Major—resulted in surgery, casting, traction, required consultation for neurological (basilar skull fracture, small subdural hematoma) or internal injury (rib fracture, small liver laceration) or patients with coagulopathy who receive blood products as a result of the fall
- Death—the patient died as a result of injuries sustained from the fall (not from physiologic events causing the fall)"

Determine whether staff know the definition of falls and injuries that your hospital has selected.

5.1.3. What measures do you use for fall rates?

The best measure of falls is one that can be compared over time within a hospital unit to see if care is improving. Sometimes staff would like to simply track the number of falls that occur every month or every quarter on a given unit. The problem with only tracking falls is that this does not account for how full or empty the unit was at any given time. If the unit census is running low, there will be fewer falls, regardless of the care provided. Therefore, we recommend that you calculate falls as a rate, specifically, the rate of falls per 1,000 occupied bed days. Later,

we will show you how to make this calculation. You can similarly calculate the rate of injurious falls per 1,000 occupied bed days.

There is no single "right" approach to measuring fall rates. Every approach has advantages and disadvantages. While we make specific recommendations below, the most important point is to be **consistent**. Rates calculated by one approach cannot be compared with rates calculated another way.

- Assess whether unit staff understand the difference between number of falls versus a fall rate.
- Define the measurement approach that you will use, and use it consistently throughout the hospital.

5.1.4. What do you need to calculate fall and fall-related injury rates?

To calculate fall and fall-related injury rates, whether at the unit level or at the overall facility, you need to know **who** fell, **when** the fall occurred, and what the degree of injury was, if any. You also need to know the daily census on the unit where you would like to calculate the fall rate, or throughout the hospital if you are calculating a fall rate at the hospital level. To obtain this information, you must complete two tasks:

1. Generate an incident report for every fall that occurs. The incident report will need to contain, at a minimum:

   - The fact that the incident being reported was a fall.
   - The patient in whom the fall occurred.
   - The date the fall occurred.
   - The unit the patient was assigned to at the time of the fall.
   - The location of the fall.
   - A detailed report about the circumstances of the fall.
   - The level of injury, if any.

   The circumstances of the fall and level of injury will be important as well for analysis, discussed later. But for calculation of a fall rate, you need the date the fall occurred and the responsible unit (if you want to calculate a unit fall rate).

2. Determine whether your hospital information system can provide you with the average daily census on the unit of interest, or in the hospital, for the time period over which you want to calculate a fall rate. The average daily census is the number of beds, on average, that are occupied throughout the day. Because patients come and go quickly on many hospital units, if you have access to a computerized system to give you the daily census, this will simplify your life later. If not, you will need to choose a point in time each day that is convenient to check the number of occupied beds on your unit, and write down that number each day, to be tallied as explained below.

Learn more about your hospital's incident reporting system. Some hospitals have electronic incident reporting systems that will make it easier to count the number of falls that have occurred on your unit or in your hospital.

To learn how the National Database of Nursing Quality Indicators (NDNQI) recommends capturing data on falls and patient-days, refer to the link titled "ANA is the NQF measure steward" at the NDNQI Data Web site: (https://www.nursingquality.org/data.aspx). This will take you to the document *Guidelines for Data Collection on the American Nurses Association's National Quality Forum Endorsed Measures*.

If information technology personnel are developing an electronic incident reporting system, they may find the Pennsylvania Patient Safety Authority's standard structure for incident reporting useful: See section 2.8 (page 60) of http://patientsafetyauthority.org/PA-PSRS/Documents/part2-xmldocumentdefinition.pdf.

The AHRQ Common Formats Web site also links to a standard structure for collecting data for a fall-related incident report: https://www.psoppc.org/web/patientsafety/version-1.2_documents#Fall

5.1.5. How do you calculate fall rates?

We recommend fall rates be calculated monthly based on the information from incident reports and daily census discussed above, but quarterly may also be appropriate. The advantage of monthly data over quarterly is that you have more regular opportunities to feed data back to staff about their improvements. The disadvantage is that it requires more effort to review data monthly rather than quarterly.

Let's say, as an example, that you want to calculate the fall rate for the month of April on a 30-bed unit. Rates are calculated as follows:

- First, count the number of falls that occurred during the month of April from your incident reporting system. Let's say there were three falls during the month of April.
- Then figure out, for each day of the month at the same point in time, how many beds were occupied on the unit. For example, on April 1, there may have been 26 beds occupied; on April 2, there may have been 28 beds occupied, and so on. The hospital may have a way of reporting this information to you (for example, midnight census).
- Add up the total occupied beds each day, starting from April 1 through April 30. Let's say the total adds to 879 (out of a maximum of 900, since if all 30 beds were occupied on all 30 days, 30 x 30 would equal 900). If your hospital can calculate for you the total number of occupied bed days experienced on your unit during the month of April, then you can just use this number, skipping step number 2.
- Divide the number of falls by the number of occupied bed days for the month of April, which is 3/879= 0.0034.

Multiply the result you get in #4 by 1,000. So, 0.0034 x 1,000 = 3.4. Thus, your fall rate was 3.4 falls per 1,000 occupied bed days.

- Identify a person or team in the organization who will be responsible for these calculations.
- Identify the sources of data that this person or team will use. If current data are not available or are not accurate, develop a strategy for improving data quality.

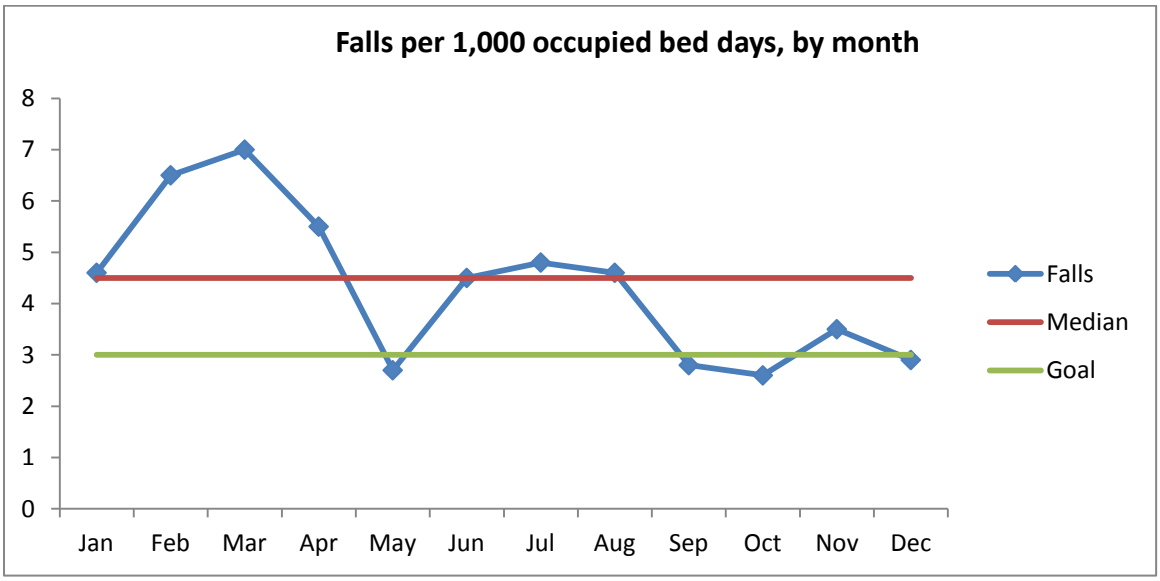
5.1.6. How should you use the monthly data on fall rates?

Use the information on fall rates that you collect in three ways.

First, **examine** your rates every month and look at the trend over time. How are they changing? Are they improving or getting worse? Can you relate changes in your fall rate to changes in practice? Think about what you have or have not been doing well over the past months and relate it to whether the fall rate is getting better or worse.

Remember that fall rates may change based on the season of the year and can be quite different from unit to unit (e.g., geriatric psychiatry unit versus intensive care unit). Don't overreact to any individual month's data as there can be fluctuations from month to month. Focus on the underlying trend of the data over time and whether fall rates are increasing or decreasing.

Graphing your data in a **run chart** is a good way to visually examine trends in the fall rate. A run chart looks like this:



In this case, the fall rate is plotted on the vertical axis and the month of the year is plotted from left to right.

A run chart like the one above can be created using a template available at no cost after free registration at the Institute for Healthcare Improvement Web site:www.ihi.org/knowledge/Pages/Tools/RunChart.aspx.

The template is a downloadable, easy-to-use spreadsheet that allows you to enter your data. The spreadsheet also includes a tab with tips for interpreting your run chart.

When you first implement a quality improvement program and begin tracking performance, increased fall rates are frequently seen. This is not necessarily related to worse care. Instead, unit staff members are becoming better at reporting falls that were previously missed. This is another reason it is equally important to track fall-related injuries at the same time.

One study, using data from the National Database of Nursing Quality Indicators, found that fall rates varied substantially across units:

- Intensive Care Unit: 1.30 falls/1,000 patient days
- Surgical: 2.79 falls/1,000 patient days
- Stepdown: 3.44 falls/1,000 patient days
- Medical-Surgical: 3.92 falls/1,000 patient days
- Medical: 4.54 falls/1,000 patient days
- Rehabilitation: 7.15 falls/1,000 patient days

For more information, see Lake ET, Shang J, Klaus S, et al. Patient falls: association with hospital magnet status and nursing unit staffing. Res Nurs Health 2010;33:413-25.

Further reading for those who want a more indepth look at how to collect and analyze data on fall rates:

For a general overview of how to collect and use data for quality improvement: Needham DM, Sinopoli DJ, Dinglas VD, et al. Improving data quality control in quality improvement projects. Int J Qual Health Care 2009;21(2):145-50.

To learn how to create a basic control chart for falls, see section titled “The u-chart” in Mohammed MA, Worthington P, Woodall WH. Plotting basic control charts: tutorial notes for health care practitioners. Qual Saf Health Care 2008;17:137-45.

To analyze data on rare events, such as injurious falls, learn about the g-type control chart in Benneyan JC. Number-between g-type statistical quality control charts for monitoring adverse events. Health Care Manage Sci 2001;4:305-18.

For an overview of how to calculate rates, identify trends, and present data: Quigley P, Neily J, Watson M, et al. Measuring fall program outcomes. Online J Issues Nurs 2007;12(2). Available at: www.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Volume122007/No2May07/ArticlePreviousTopic/MeasuringFallProgramOutcomes.aspx

The second way to use your data on falls is to **disseminate** the information to key stakeholders and to unit staff. Post monthly rates in places where all staff can see how the unit is doing. Send reports to leadership. Dissemination of information on performance is critical to your quality improvement effort.

The third way to use your data is to **study** in detail what led to the occurrence of each fall, particularly falls resulting in injury. Try to understand why the fall occurred and how such an incident might be prevented in the future. In particular, try to determine whether the falls are irregular events (e.g., a patient's first-ever seizure that resulted in a fall) or whether there is a regularity to the types of falls (e.g., related to toileting) that suggest a specific intervention is needed to improve care.

To get an idea of how incident report data can be used to better understand the circumstances of falls in a hospital, see this article:

Hitcho EB, Krauss MJ, Birge S, et al. Characteristics and circumstances of falls in a hospital setting: a prospective analysis. J Gen Intern Med 2004;19:732-9.

Root cause analysis is a useful technique for understanding reasons for a failure in the system. Root cause analysis is a systematic process during which all factors contributing to an adverse event are studied and ways to improve care are identified. If you are not familiar with root cause analysis, work with your quality improvement department to learn how to conduct this analysis.

There are two different kinds of root cause analyses: *aggregate* and *individual*. For an aggregate analysis, the Implementation Team would review all falls, or all falls with injury, that occurred over the previous month, quarter, or year, for example. Using incident report information that is collected in a standard fashion, the team would seek to determine the main causes of falls in the hospital or on specific units, and then implement changes to address these causes. Often someone within the hospital's Quality Management (or similar) department can help in creating reports that can be reviewed as part of an aggregate root cause analysis.

An individual-level root cause analysis can occur after any fall, particularly falls with injury. Individual-level root cause analyses are carried out by the Unit Team immediately after a fall. These analyses can take the form of a **postfall safety huddle**, which is an informal gathering of unit staff to discuss what caused the fall and how subsequent falls or injuries can be prevented (see section 3.4.4 for details).

Sample postfall huddle forms may be found at the Minnesota Hospital Association Web site:
www.mnhospitals.org/Portals/0/Documents/ptsafety/falls/post-fall-huddle-revised.pdf

www.mnhospitals.org/Portals/0/Documents/ptsafety/falls/post-fall-huddle-documentation.pdf

You can use these forms or create your own, based on your hospital's specific needs. You can also build a form based on the postfall assessment form for root cause analysis (Tool 3O) in this toolkit. The key is to do a thorough assessment, identify the causes contributing to the fall, and come to a decision about actions that need to be taken to prevent a fall or injury in the future. Data should be collected in a standardized fashion, which should include all the data needed to complete an incident report. Standard data structures for incident reports may be found in the resource box in section 5.1.4.

A primer on root cause analysis is available on the AHRQ Patient Safety Network Web site at: http://psnet.ahrq.gov/primer.aspx?primerID=10.

For additional information and tools about root cause analysis, see the Veterans Affairs National Center for Patient Safety Web site at: www.patientsafety.gov/vision.html#rca.

For tools, see: www.patientsafety.gov/CogAids/RCA/index.html#page=page-1.

For a step-by-step guide to aggregate root cause analysis: see Neily J, Ogrinc G, Mills P, et al. Using aggregate root cause analysis to improve patient safety. Jt Comm J Qual Patient Saf 2003;29(8):434-9.

- Identify audiences for the data at different levels of the organization and determine through which paths you will provide the data. For example, for senior managers, report the data in a leadership meeting or performance improvement committee meeting.
- Assess whether unit staff know the unit's fall and fall-related injury rate and whether it is improving over time.

5.1.7. Are there national benchmarks you can use for comparison with your fall rates?

The question of how well your hospital is performing relative to other hospitals often arises. Unfortunately, there are no national benchmarks with which you can compare your performance. In part this is due to the difficulties in making sure patients are similar across hospitals, since some patients are more likely to fall than others and hospitals care for different types of patients. Therefore, we encourage you to focus more on improvement over time within your units and your hospital overall, rather than focusing strictly on your hospital's performance compared with an external benchmark.

That having been said, there are a number of ongoing initiatives to determine fall rates using a standardized method across a large number of hospitals. These include the National Database of Nursing Quality Indicators, the Collaborative Alliance for Nursing Outcomes, and the Centers for Medicare & Medicaid Services (CMS) reporting on falls with trauma occurring in hospitals.

Learn more about ongoing data collection initiatives:

- National Database of Nursing Quality Indicators, Data: https://www.nursingquality.org/data.aspx.
- Collaborative Alliance for Nursing Outcomes, CALNOC Registry: www.calnoc.org/displaycommon.cfm?an=1&subarticlenbr=8.
- For more information on the public reporting of falls with trauma that occur in hospitals participating in the Medicare program, go to the U.S. Department of Health and Human Services Hospital Compare Web site (www.hospitalcompare.hhs.gov/Data/RCD/Hospital-Acquired-Conditions.aspx) and look for the link to the Hospital Acquired Conditions measures. The actual rates of falls with trauma occurring within the hospital may be found on the Medicare data Web site (use filter to restrict reported measures to "Falls and injuries"): https://data.medicare.gov/dataset/Hospital-Acquired-Condition-Measures/qd2y-qcgs.

5.1.8. How can you improve the quality of the data being collected for fall rates?

To improve data quality, you will need to improve staff reporting of falls, particularly the circumstances surrounding the fall (see Tool 3O, "Postfall assessment for root cause analysis"). Often, critical details are left out in the reporting of falls and there are only limited opportunities to learn what makes for a good incident report. Therefore, consider reviewing completed incident reports with staff on a monthly basis.

Check on the quality of the incident reports being filled out at your hospital or on your unit using Tool 5A, "Information To Include in Incident Reports".

5.2. How do you measure fall prevention practices?

5.2.1. Why measure fall prevention practices?

While measuring fall rates is the ultimate test of how your facility or unit is performing, fall rates are limited in that they do not tell you *how* to improve care. If your fall rate is high, on what specific areas should you focus? To know where to focus improvement efforts, it is important to measure whether key practices to reduce falls are actually happening.

Many important practices could be measured in assessing fall prevention. We recommend initially looking at no more than two, such as:

- Performance of fall risk factor assessment within 24 hours of admission.
- Performance of care planning that addresses each risk factor identified during fall risk factor assessment.

5.2.2. How do you review performance of a fall risk factor assessment within 24 hours of admission?

As the first step in prevention, it is essential to ensure that a fall risk factor assessment is performed within 24 hours of admission. The risk factor assessment could either be a standard scale such as the Morse Fall Scale (Tool 3H) or STRATIFY (Tool 3G), or it could be a checklist of risk factors for falls in the hospital.

The key question is not so much whether a scale was used, but rather whether the known risk factors for falls were assessed. In some cases, the risk factors will vary depending on the hospital unit, so the risk factor assessment may need to be tailored to the unit. Determine whether this fall risk factor assessment is being performed.

Sample Protocol for Assessing Performance of Fall Risk Factor Assessment

- Take a sample of records of patients newly admitted to your unit within the past month. For an informal audit, an arbitrary number such as 10 or 20 records may be sufficient for initial assessments of performance. A more formal audit might review 10 percent of all patients admitted to the unit.
- Identify medical and nursing notes from the first 24 hours of hospitalization. These should include the admission nursing assessment, physician's admission note, and subsequent nursing progress notes.
- Determine whether there is any documentation of a fall risk factor assessment. This might include mention of the patient's level of orientation and cognition, gait and balance, continence status, and number and types of prescribed medications, as well as number of diagnoses.
- Determine whether key findings from the fall risk factor assessment were further explored. For example, if a patient is noted to be disoriented, is there an assessment for delirium (see Tool 3L)?
- Calculate the percentage of patients having any documentation of a fall risk factor assessment as well as the percentage of cases in which key findings from the fall risk factor assessment were further explored.

5.2.3. How do you assess care planning to ensure that it addresses each deficit on the fall risk factor assessment?

For risk factor assessment to make a difference, all risk factors identified on the risk factor assessment need to be addressed in the care plans, and the care plans need to be acted on. This requires critical thinking on the part of staff and a tailored approach to each patient based on the individual patient's risk factors. Ensure that the care plans address all areas of risk.

Sample Assessment of Care Planning Performance

1. Take a sample of records of patients newly admitted to your unit within the past month who were found to have risk factors for falls. Ten or 20 records may be sufficient for initial assessments of performance.
2. For each patient, determine the patient's identified risk factors.
3. Identify the fall prevention components of care plans prepared shortly after admission.
4. Determine whether each patient's unique fall risk factors are addressed in the care plans.
5. Calculate the percentage of the assessment patient's known fall risk factors that are addressed in the care plan.
6. Repeat steps 1-5 for a sample of patients whose fall risk factors changed during the hospital stay. Determine whether the care plan was updated when risk factors changed.

Find detailed instructions on how to perform a review of medical records at the Duke University Medical Center Patient Safety/Quality Improvement Web site: http://patientsafetyed.duhs.duke.edu/module_b/module_overview.html.

5.2.4. What data sources should be used in measuring fall prevention practices?

In measuring key practices, data used in calculating performance rates can be obtained from a number of sources. These include direct observations of care, surveys of staff, and medical record reviews. Each approach has its strengths and limitations:

- Direct observation of care, where a trained observer determines, for example, whether a patient's call light is within reach, will be the most accurate approach for certain care processes but can be time consuming.
- Surveys may be helpful in certain circumstances but rely on staff members' recall of specific events, and these recollections might be inaccurate.
- Medical record reviews are the easiest approach to complete but rely on what is documented in the record, and much care for fall prevention may not be documented.

As a starting point, we recommend that you combine medical record review with direct observation using a manageable sample size (e.g., no more than 20 patients), as suggested in Tool 5B.

Use this tool adapted from the Royal College of Physicians FallSafe program for auditing key processes of care (Tool 5B, "Assessing Fall Prevention Care Processes").

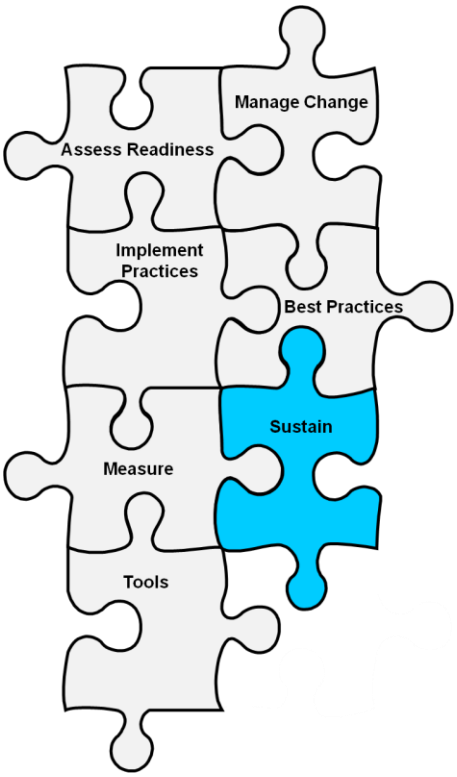
5.2.5. What should be done if you are not doing well on your measures of fall prevention practices?

Good performance on these key processes of care is critical to preventing falls. If you are not doing well, or as well as you would like, in one of these key areas, it provides an opportunity for improvement. Examine what the problem is and plan how to overcome this barrier. For example, are staff engaged in the program? Do they know what they need to do? Go back to section 2.2 for suggestions on how to make needed changes.

5.3. Checklist for measuring progress

The checklist for measuring progress can be found in Tools and Resources (Tool 5C, "Measuring Progress Checklist").

6. How do you sustain an effective fall prevention program?



The only step more difficult than implementing practice change is ensuring that those changes become woven into the day-to-day fabric of operations so that they are sustained beyond the initial formal improvement effort or special campaign. It is sometimes easy to adopt new practices in response to an immediate need, such as an impending Joint Commission visit, and considerably more difficult to maintain those practices over time. To sustain improvement, *changes need to become so integrated into existing organizational structures and routines that they are no longer noticed as separate from business as usual*.

While sustaining changes logically follows initial improvements, it is important to begin thinking early in the improvement process about what will be needed to make lasting change. Throughout the implementation process, you should consider questions such as:

- Who will be responsible for sustaining active fall prevention efforts on an ongoing basis?
- How will you continue to monitor fall rates and fall prevention care processes?
- What types of ongoing organizational support do you need to keep the new practices in place?
- How can you reinforce the desired results?

Sustaining Redesigned Prevention Practices: Locally Relevant Considerations

Your hospital may find sustaining redesigned practices challenging for reasons such as these:

- Fall prevention may be viewed as a time-limited initiative rather than an ongoing program.
- Change specific to fall prevention has not been incorporated into routine behavior.
- More unit-based champions are needed.
- Staff need to take ownership of fall prevention.
- Mechanisms are needed to provide feedback to staff on the effectiveness of fall prevention strategies and to celebrate success.

This section will provide suggestions to address these types of challenges.

6.1. Who will be responsible for sustaining active fall prevention efforts on an ongoing basis?

Sustaining efforts at fall prevention within your hospital requires responsibility for the hospital's fall prevention program to be clearly assigned (see section 2). A key decision for your organization will be in what form to keep the Implementation Team going. If you have a standing fall prevention committee and it functioned as the Implementation Team, the fall prevention committee can continue to oversee the program. If the Implementation Team was chartered on a time-limited basis and there is no fall prevention committee to hand off to, a subset of Implementation Team members could form the core of a new standing fall prevention committee. The key message is that a successful fall prevention program needs to be an ongoing effort, and oversight cannot end after initial implementation is complete.

For ease of presentation in the rest of this section, we will refer to the group responsible for fall prevention going forward as the **Sustainability Team,** whether it is the original Implementation Team or a different group. The Sustainability Team will serve as a key dissemination point for new information (e.g., team education sessions with invited speakers) and will take up new challenges (e.g., revise online documentation forms).

The Sustainability Team will ensure that data collection and regular reporting of fall rates occur and are fully integrated into routine work processes. Regular meetings will be important in discussing outcomes and updating materials and policies on an ongoing basis.

An important element for keeping the Sustainability Team going is to allow a variety of levels of participation in team activities. There may be a core group of individuals who meet on a monthly basis to review fall data and others who need only attend meetings on an "as needed" basis. This approach allows people to participate in a way that is respectful of their time and helps to maintain a positive dynamic at team meetings.

6.2. How will you continue to monitor fall rates and fall prevention care processes?

Continuing to monitor fall rates and fall prevention care processes is critical for the sustainability of a fall prevention program. (Details on how to measure fall rates and fall prevention care processes are provided in section 5. Information on the Plan, Do, Study, Act approach to continuous improvement is provided in section 2.2.1.) Measurement is necessary for improvement, particularly as a check to ensure the program is not veering off track. Measurement is also needed to show ongoing success of the program to leadership. Leaders will be more willing to invest in a program that has credible evidence of success.

To regularly measure fall rates requires setting up a routine workflow (a scheduled set of activities and tasks performed by designated people) for data collection. You will need to decide who will calculate fall rates from incident reports and who will audit fall-related care processes to ensure these occur as they should. You also will need to decide to whom these data will be reported and what will be done with the data. For example, how soon prior to each meeting of the Sustainability Team will the data need to be sent for review?

In addition, the Sustainability Team will need to discuss what change in fall rates represents a real success (or concern) for the hospital, versus fluctuations in the data that can be explained by other changes, to avoid inappropriately reacting to noise in the data. For example, more patients with fall risk factors might be admitted during the flu season, so the fall rate might go up during that time. Or the hospital may have migrated to a new incident reporting system, which improved staff adherence to reporting falls, thereby making the fall rate higher.

6.3. What types of ongoing organizational support do you need to keep the new practices in place?

While the frontline work to prevent falls depends on unit staff, the Sustainability Team will need support from other parts of the organization to be successful. Support for the Sustainability Team can include activities such as:

- Training for new employees and refresher training for current employees;
- Prompt filling of staff vacancies by human resources;
- Prompt provision of needed supplies and equipment by facility management; and
- Help from information technology staff to assist with regularly reporting data.

If your organization is using Unit Champions, the Sustainability Team will need to consider strategies to keep them engaged and a method to replace Unit Champions when the original champions change responsibilities or positions. Similarly, if you do not have Unit Champions but multiple staff who serve as fall prevention resource staff on the units, you will need processes for keeping them engaged and replacing them when needed.

Communication is essential to keep staff involved and up to date. The Sustainability Team therefore will need to consider how to engage and communicate with the staff at large as new practices become integrated into ongoing operations. Consider ongoing information briefs in your staff bulletin. Posters can also be used; rotating them every few weeks may be important in keeping staff engaged. Make fall prevention a standard part of yearly staff education fairs or other similar events.

Integrating the Sustainability Team into the existing hospital organization will help ensure it can continue its mission. To further solidify ongoing support, you should determine to which oversight committee the Sustainability Team will report in the larger organizational structure. The most appropriate committee will depend on the structure of your organization. In some places it may be the Patient Safety Committee, in others the Quality Council.

Communication with the oversight committee should include not only updates on patient outcomes (e.g., fall rates), but also the financial implications of maintaining the fall prevention program (e.g., in terms of hospitalwide cost savings due to fewer falls, after program costs are accounted for). Reviewing the business case (see Tool 1D) for fall prevention with leadership may be helpful, especially in cases of leadership turnover.

In addition to assessing changes in processes and outcomes of care, the Sustainability Team will need to examine the extent to which organizational structures and routines have changed in response to the fall prevention program. Without such change, it is possible that only short-term gains will be accomplished. Examples of items that might be assessed are described below.

Examples of assessment items for structures and routines that support fall prevention:

- Are unit staff very familiar with their role in preventing falls and how their role relates to other staff members?
- Are there unit experts who can be given extra training and work within units to maintain fall prevention awareness and knowledge?
- Are there systems and prompts in place to ensure that care is carried out appropriately? For example, does the electronic health record have a section on assessment and management of fall risk factors?
- Have barriers to obtaining needed supplies and equipment, such as assistive devices, been addressed?
- Is performance routinely tracked?
- Are performance data regularly reported to staff?
- Is there a committee that monitors fall rates and care processes and ensures that needed resources are available to prevent falls?
- Is hospital leadership engaged in the process of sustaining the fall prevention program (e.g., by being invited to visit units to view ongoing fall prevention activities or by meeting with the committee that oversees fall prevention)?

Key elements for a thriving Sustainability Team are summarized in Tools and Resources (Tool 6A, "Sustainability Tool").

6.4. How can you reinforce the desired results?

Generating and maintaining excitement about change is critical to success. Given the obstacles to implementation, improvements in performance measures may not initially be evident. Even with good implementation, fall rates may appear to trend upward initially due to better reporting. It is thus important to find small successes early on that can be rewarded.

Another barrier to sustainability is staff turnover. To address this barrier, ensure that orientation for new clinical staff is modified to include a focus on fall prevention and that new staff are appropriately integrated into their unit's fall prevention program. This will help to maintain a unit culture that is positively oriented toward fall prevention.

This article describes strategies to reinforce desired outcomes:

Weinberg J, Proske D, Szerszen A. An inpatient fall prevention initiative in a tertiary care hospital. Jt Comm J Qual Pat Saf 2011;37(7):317-25.

Key points from this article include:

- Importance of continued leadership support and staff dedication at all levels.
- Ongoing monitoring and measuring of fall rates.

Ongoing monthly fall meetings attended by the hospital fall committee cochairs, managers, and clinical staff to address root causes of falls.

To reinforce desired results, you also need to be aware of obstacles to sustaining your fall prevention program. For example:

- Old habits have a way of resurfacing. People may slowly go back to old approaches. This tendency supports the need for ongoing refresher training in the context of each unit's needs.
- Practices that had become accepted may suddenly be more difficult to perform or the availability of needed resources may change. Such unintended consequences of quality improvement are well recognized. *For example, budget cuts may limit the number of sitters/safety attendants available to monitor very high risk patients for falls.*

One Hospital's Mobility Program: An Application of Toolkit Concepts

To show how this toolkit can apply in real life, we have provided a real example of one hospital's attempt to improve its care. We chose an example of a mobility program, because mobility programs have been shown to decrease hospital length of stay and costs and to increase the likelihood that a patient is discharged home rather than to a nursing home or rehabilitation facility. The hospital (an academic medical center) was concerned about patients' decline in mobility during inpatient stays, a factor that puts patients at risk for falls, but did not have enough physical therapy staff to provide sufficient mobility training. We outline the hospital's change process below.

1. *Readiness for change:* Although senior leadership and medical staff had several discussions about the importance of maintaining patient mobility, the hospital lacked a strong promobility culture.

   One particular clinical event helped create urgency for implementing a mobility program. A transporter had difficulty transferring one patient into his car and the patient was concerned about how he would get out of the car when he got home. This was a wake-up call to staff because they realized the patient had not been out of bed since admission but needed to be able to get out of his car and into his home on his own after discharge. However, the mobility program did not begin until a newly hired individual within the Nursing Department was tasked with implementing the change. This new individual was committed to the program's goals and was able to pull together the right team to initiate the mobility program.

2. *Best practices and planned implementation:* The mobility program was based on the principle that bed rest should not be the default for patients and uses a nurse-driven plan of care. As long as a physician has not set the patient to restricted mobility, the nurse follows the default electronic order set and progressively moves the patient through a mobility scale from 1 (turn patient) to 6 (ambulation with assist as needed). Nurses and patient care technicians take primary responsibility for patient mobility, with physical therapy or medical staff directing the mobility plan if there is a skilled need and/or weight-bearing limitations.

3. *Implementation:* The implementation efforts were led by an interdisciplinary team that included physical therapy, nursing, and medical staff. The team implemented the program in two pilot units (medical intensive care and trauma/orthopedics), followed by a hospitalwide launch. Initial education included general computer training on the order set and a 2-hour nurse training on how to achieve each level of the mobility scale. Super-users on the pilot units helped train the other units.

   The units use a status board to present key patient information, including the mobility score, and physicians can quickly see and check where patients are on the scale. Physicians also use interactions with patients as a training opportunity. When at the bedside with residents and nurses, one physician often talks to patients about their mobility score and encourages them to progress. The implementation of the mobility program had positive benefits in creating more opportunities for discussion about patient mobility between physicians, nurses, and patients.

   The team experienced some barriers to implementation. It was difficult for some staff to change from assuming patients should be on bed rest to encouraging progressive increases in mobility. Nursing staff remembered previous experiences with patients falling and worried that fall rates would increase with increased ambulation. To reduce this fear, the team connected staff with nurses on successful units to share strategies for successful implementation.

4. *Monitoring change:* Measuring processes and outcomes is one of the implementation team's next steps. Although objective data have not been collected yet, the team reports that many units have successfully adopted a promobility culture and more patients are standing or sitting in a chair than before.

5. *Sustaining the program*: The implementation team recently faced some challenges in sustaining the program after moving to a new facility. The new facility has patient handling equipment to help staff move patients, which has introduced new questions about the mobility scale. The team has had to retrain staff to emphasize that moving a patient into a chair using a lift does not mean that the patient has progressed from "reclining in bed" (mobility 2) to "getting to chair on own" (mobility 5).

Strategies the implementation team could use to reinforce the desired results of the mobility program include:

- Demonstrating reductions in the risk of falls and improved independence at discharge.
- Having unit champions reinforce discussions about mobility as part of the care plan on each patient, at interdisciplinary rounds and case conferences.
- Providing continuing education sessions that emphasize mobility.
- Hosting an annual "mobility day" at the hospital.

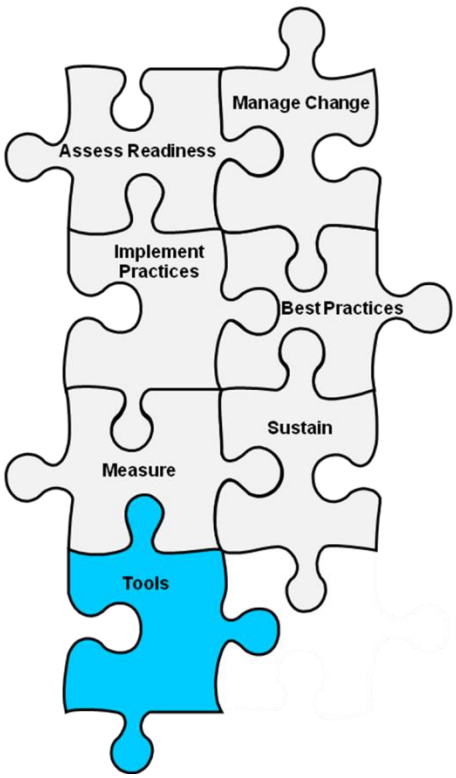
These efforts would highlight the priority of mobility at various levels of the organization and would help create a culture throughout the institution of maintaining mobility.

6.5. Summary

Significant time and effort have gone into getting your hospital to this point. By now, you have been successful at changing how things get done and in implementing best practices for fall prevention. You have systems in place to ensure that these best practices become the standard way care is now provided. Because of these changes, you can now demonstrate how your patients have better outcomes with fewer falls. These are major achievements for the Implementation Team and the hospital, and everyone should be congratulated for this collective effort.

Finally, always remember that no matter how well you are doing, sustained attention is still needed to keep improvements on track. Perfection in fall prevention is never achieved. There are always additional steps to get closer to the ideal of a fall-free hospital.

7. Tools and Resources



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ØA: Introduction and Overview for Stakeholders

Background: This template can serve as a letter to key players in the hospital to introduce them to the goals and purpose of a fall prevention program.

Reference: Developed by Falls Toolkit Research Team.

How to use this tool: Adapt this letter as needed and present it to senior leaders to enlist their support before mounting your fall prevention program. You may want to use Tool 1B, "Stakeholder Analysis," to identify individuals and departments who may have an interest in the program.

Dear <Name>:

We would like to introduce you to our fall prevention program. We hope that you will support this exciting new endeavor.

What is this program? <Hospital name> is embarking on an important new initiative focused on the prevention of falls among our acute care patients.

Why is this program important? Falls with serious injury occurring during acute care stays represent a significant threat to patient safety, and increase the length of inpatient stays by 6.9 days and hospital charges by$13,806.[i] In addition, falls with serious trauma have become a "never" event from the standpoint of Medicare reimbursement. Thus, falls represent both a patient safety priority and an economic priority for health care organizations. Fall rates are as high as <xxx falls per 1,000 bed days of care> on some of our units.

How might this program affect me/my area? In the past, fall prevention has sometimes been seen as solely a nursing unit responsibility. However, recent research makes it clear that successfully reducing fall incidence requires a coordinated interdisciplinary approach. Thus, the implementation of new prevention approaches may require, for example, the efforts of:

- Materials management: Do we have the most evidence-based products and equipment needed to prevent falls? Are new products, such as hospital beds, evaluated with this outcome in mind?
- Environmental services: Are environmental hazards in the hospital (e.g., spills, electrical cords) appropriately managed?
- Information technology: Is information about fall prevention interventions effectively integrated into the electronic health record?
- Pharmacy: Has the hospital formulary been reviewed to see if certain medicines (e.g., sleep aids) should be restricted in patients at risk for falls?
- Physicians: Are patients' medications checked for their risk of causing falls? Is the patient's mental status formally tested where appropriate?

[i] Wong CA, Recktenwald AJ, Jones ML, et al. The cost of serious fall-related injuries at three Midwestern hospitals. Jt Comm J Qual Patient Saf 2011;37(2):81-7.

- Rehabilitation services: Are protocols in place for ordering physical and occupational therapy? Are needed assistive devices (e.g., walkers, wheelchairs) available at the bedside? Are appropriate orders on file for patients' activity levels?
- Quality improvement: Are quality improvement specialists available to assist the team working on this effort?
- Transport: Are patients who are at high risk for falls supervised when taken off the unit for diagnostic or therapeutic activities?

What will happen? For this program, we will use the U.S. Agency for Healthcare Research and Quality's new toolkit. This comprehensive toolkit outlines steps in the improvement process and provides relevant tools. Using these tools, we will assess staff awareness and knowledge of fall prevention, analyze patient care processes to identify opportunities for improvement, and target interventions in those areas. Fall incidence while patients are under our care will be analyzed more closely so that progress can be assessed.

Everyone has a role: Most important in this effort is a shift of thinking and culture, from regarding falls as inevitable to seeing them as events that can be reduced through a comprehensive program. Your support in helping <hospital name> staff make this shift is essential to the success of this effort. Thank you.

1A: Hospital Survey on Patient Safety Culture

Background: The Hospital Survey on Patient Safety Culture is a staff survey designed to help hospitals assess the culture of safety in their institutions. Since 2004, hundreds of hospitals have implemented the survey.

There is a growing recognition that organizational change to improve patient safety, including fall prevention, requires a general culture of safety among its staff. Achieving a culture of safety requires an understanding of the values, beliefs, and norms about what is important in an organization and what patient safety attitudes and behaviors are expected and appropriate. This requires a culture that views errors as opportunities to improve the system, not the result of individual failure. For example, it may be difficult for your hospital to overcome chronic underreporting of falls if you have a culture where acknowledgment of error is not acceptable.

Reference: Available on the AHRQ Web site:
www.ahrq.gov/qual/patientsafetyculture/hospscanform.pdf

How to use this tool: Consider administering a survey to assess the culture of safety in your hospital. The AHRQ Hospital Survey on Patient Safety Culture examines patient safety culture from a hospital staff perspective. The survey can be completed by all interdisciplinary team members and staff on units preparing to implement the fall prevention program but is best suited for:

- Hospital staff who have direct contact or interaction with patients;
- Hospital staff who may not have direct contact or interaction with patients but whose work directly affects patient care;
- Hospital-employed physicians who spend most of their work hours in the hospital; and
- Hospital supervisors, managers, and administrators.

A user's guide that provides information on getting started, selecting a sample, determining data collection methods, establishing data collection procedures, conducting a Web-based survey, preparing and analyzing data, and producing reports may be found at www.ahrq.gov/qual/patientsafetyculture/hospcult.pdf.

The results of this survey can provide a hospital with an understanding of the safety-related perceptions and attitudes of its managers and staff. Results can be compared with those of other hospitals using the Hospital Survey on Patient Safety Culture Comparative Database available at: www.ahrq.gov/qual/patientsafetyculture/hospsurvindex.htm.

Hospital Survey on Patient Safety

Instructions

This survey asks for your opinions about patient safety issues, medical error, and event reporting in your hospital and will take about 10 to 15 minutes to complete.

If you do not wish to answer a question, or if a question does not apply to you, you may leave your answer blank.

> *An **"event"** is defined as any type of error, mistake, incident, accident, or deviation, regardless of whether or not it results in patient harm.*
>
> ***"Patient safety"** is defined as the avoidance and prevention of patient injuries or adverse events resulting from the processes of health care delivery.*

SECTION A: Your Work Area/Unit

In this survey, think of your "unit" as the work area, department, or clinical area of the hospital where you spend *most* of your work time or provide *most* of your clinical services.

What is your primary work area or unit in this hospital? Select ONE answer.

- ☐ a. Many different hospital units/No specific unit
- ☐ b. Medicine (non-surgical)
- ☐ c. Surgery
- ☐ d. Obstetrics
- ☐ e. Pediatrics
- ☐ f. Emergency department
- ☐ g. Intensive care unit (any type)
- ☐ h. Psychiatry/mental health
- ☐ i. Rehabilitation
- ☐ j. Pharmacy
- ☐ k. Laboratory
- ☐ l. Radiology
- ☐ m. Anesthesiology
- ☐ n. Other, please specify:

Please indicate your agreement or disagreement with the following statements about your work area/unit.

Think about your hospital work area/unit…	**Strongly Disagree** ▼	**Disagree** ▼	**Neither** ▼	**Agree** ▼	**Strongly Agree** ▼
1. People support one another in this unit	☐1	☐2	☐3	☐4	☐5
2. We have enough staff to handle the workload	☐1	☐2	☐3	☐4	☐5
3. When a lot of work needs to be done quickly, we work together as a team to get the work done	☐1	☐2	☐3	☐4	☐5
4. In this unit, people treat each other with respect	☐1	☐2	☐3	☐4	☐5
5. Staff in this unit work longer hours than is best for patient care	☐1	☐2	☐3	☐4	☐5

Think about your hospital work area/unit…	**Strongly Disagree** ▼	**Disagree** ▼	**Neither** ▼	**Agree** ▼	**Strongly Agree** ▼
6. We are actively doing things to improve patient safety	☐1	☐2	☐3	☐4	☐5
7. We use more agency/temporary staff than is best for patient care	☐1	☐2	☐3	☐4	☐5
8. Staff feel like their mistakes are held against them	☐1	☐2	☐3	☐4	☐5
9. Mistakes have led to positive changes here	☐1	☐2	☐3	☐4	☐5
10. It is just by chance that more serious mistakes don't happen around here	☐1	☐2	☐3	☐4	☐5
11. When one area in this unit gets really busy, others help out	☐1	☐2	☐3	☐4	☐5
12. When an event is reported, it feels like the person is being written up, not the problem	☐1	☐2	☐3	☐4	☐5
13. After we make changes to improve patient safety, we evaluate their effectiveness	☐1	☐2	☐3	☐4	☐5
14. We work in "crisis mode" trying to do too much, too quickly	☐1	☐2	☐3	☐4	☐5
15. Patient safety is never sacrificed to get more work done	☐1	☐2	☐3	☐4	☐5
16. Staff worry that mistakes they make are kept in their personnel file	☐1	☐2	☐3	☐4	☐5
17. We have patient safety problems in this unit	☐1	☐2	☐3	☐4	☐5
18. Our procedures and systems are good at preventing errors from happening	☐1	☐2	☐3	☐4	☐5

SECTION B: Your Supervisor/Manager

Please indicate your agreement or disagreement with the following statements about your immediate supervisor/manager or person to whom you directly report.

	Strongly Disagree ▼	**Disagree** ▼	**Neither** ▼	**Agree** ▼	**Strongly Agree** ▼
1. My supervisor/manager says a good word when he/she sees a job done according to established patient safety procedures	☐1	☐2	☐3	☐4	☐5
2. My supervisor/manager seriously considers staff suggestions for improving patient safety	☐1	☐2	☐3	☐4	☐5
3. Whenever pressure builds up, my supervisor/manager wants us to work faster, even if it means taking shortcuts	☐1	☐2	☐3	☐4	☐5
4. My supervisor/manager overlooks patient safety problems that happen over and over	☐1	☐2	☐3	☐4	☐5

SECTION C: Communications

How often do the following things happen in your work area/unit?

Think about your hospital work area/unit…	Never ▼	Rarely ▼	Some-times ▼	Most of the time ▼	Always ▼
1. We are given feedback about changes put into place based on event reports	☐1	☐2	☐3	☐4	☐5
2. Staff will freely speak up if they see something that may negatively affect patient care	☐1	☐2	☐3	☐4	☐5
3. We are informed about errors that happen in this unit	☐1	☐2	☐3	☐4	☐5
4. Staff feel free to question the decisions or actions of those with more authority	☐1	☐2	☐3	☐4	☐5
5. In this unit, we discuss ways to prevent errors from happening again	☐1	☐2	☐3	☐4	☐5
6. Staff are afraid to ask questions when something does not seem right	☐1	☐2	☐3	☐4	☐5

SECTION D: Frequency of Events Reported

In your hospital work area/unit, when the following mistakes happen, *how often are they reported?*

	Never ▼	Rarely ▼	Some-times ▼	Most of the time ▼	Always ▼
1. When a mistake is made, but is *caught and corrected before affecting the patient*, how often is this reported?	☐1	☐2	☐3	☐4	☐5
2. When a mistake is made, but has *no potential to harm the patient*, how often is this reported?	☐1	☐2	☐3	☐4	☐5
3. When a mistake is made that *could harm the patient*, but does not, how often is this reported?	☐1	☐2	☐3	☐4	☐5

SECTION E: Patient Safety Grade

Please give your work area/unit in this hospital an overall grade on patient safety.

☐	☐	☐	☐	☐
A Excellent	**B** Very Good	**C** Acceptable	**D** Poor	**E** Failing

SECTION F: Your Hospital

Please indicate your agreement or disagreement with the following statements about your hospital.

Think about your hospital…	Strongly Disagree ▼	Disagree ▼	Neither ▼	Agree ▼	Strongly Agree ▼
1. Hospital management provides a work climate that promotes patient safety	☐1	☐2	☐3	☐4	☐5
2. Hospital units do not coordinate well with each other	☐1	☐2	☐3	☐4	☐5
3. Things "fall between the cracks" when transferring patients from one unit to another	☐1	☐2	☐3	☐4	☐5
4. There is good cooperation among hospital units that need to work together	☐1	☐2	☐3	☐4	☐5

SECTION F: Your Hospital (continued)

Think about your hospital…	Strongly Disagree ▼	Disagree ▼	Neither ▼	Agree ▼	Strongly Agree ▼
5. Important patient care information is often lost during shift changes	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
6. It is often unpleasant to work with staff from other hospital units	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
7. Problems often occur in the exchange of information across hospital units	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
8. The actions of hospital management show that patient safety is a top priority	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
9. Hospital management seems interested in patient safety only after an adverse event happens	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
10. Hospital units work well together to provide the best care for patients	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
11. Shift changes are problematic for patients in this hospital	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

SECTION G: Number of Events Reported

In the past 12 months, how many event reports have you filled out and submitted?

- ☐ a. No event reports
- ☐ b. 1 to 2 event reports
- ☐ c. 3 to 5 event reports
- ☐ d. 6 to 10 event reports
- ☐ e. 11 to 20 event reports
- ☐ f. 21 event reports or more

SECTION H: Background Information

This information will help in the analysis of the survey results.

1. How long have you worked in this hospital?

- ☐ a. Less than 1 year
- ☐ b. 1 to 5 years
- ☐ c. 6 to 10 years
- ☐ d. 11 to 15 years
- ☐ e. 16 to 20 years
- ☐ f. 21 years or more

2. How long have you worked in your current hospital work area/unit?

- ☐ a. Less than 1 year
- ☐ b. 1 to 5 years
- ☐ c. 6 to 10 years
- ☐ d. 11 to 15 years
- ☐ e. 16 to 20 years
- ☐ f. 21 years or more

3. Typically, how many hours per week do you work in this hospital?

- ☐ a. Less than 20 hours per week
- ☐ b. 20 to 39 hours per week
- ☐ c. 40 to 59 hours per week
- ☐ d. 60 to 79 hours per week
- ☐ e. 80 to 99 hours per week
- ☐ f. 100 hours per week or more

SECTION H: Background Information (continued)

4. What is your staff position in this hospital? Select ONE answer that best describes your staff position.

- ☐ a. Registered Nurse
- ☐ b. Physician Assistant/Nurse Practitioner
- ☐ c. LVN/LPN
- ☐ d. Patient Care Asst/Hospital Aide/Care Partner
- ☐ e. Attending/Staff Physician
- ☐ f. Resident Physician/Physician in Training
- ☐ g. Pharmacist
- ☐ h. Dietician
- ☐ i. Unit Assistant/Clerk/Secretary
- ☐ j. Respiratory Therapist
- ☐ k. Physical, Occupational, or Speech Therapist
- ☐ l. Technician (e.g., EKG, Lab, Radiology)
- ☐ m. Administration/Management
- ☐ n. Other, please specify:

5. In your staff position, do you typically have direct interaction or contact with patients?

- ☐ a. YES, I typically have direct interaction or contact with patients.
- ☐ b. NO, I typically do NOT have direct interaction or contact with patients.

6. How long have you worked in your current specialty or profession?

- ☐ a. Less than 1 year
- ☐ b. 1 to 5 years
- ☐ c. 6 to 10 years
- ☐ d. 11 to 15 years
- ☐ e. 16 to 20 years
- ☐ f. 21 years or more

SECTION I: Your Comments

Please feel free to write any comments about patient safety, error, or event reporting in your hospital.

THANK YOU FOR COMPLETING THIS SURVEY.

1B: Stakeholder Analysis

Background: The purpose of stakeholder analysis is to help program initiators identify which departments and individuals will have an interest in the program, where barriers might exist, and what actions need to be taken to obtain the buy-in and participation of those departments and individuals.

Reference: This tool was adapted from a template developed by Project Agency, a company focused on effective project management, and is available at: http://projectagency.co.uk/documents/b316stakeholderform.pdf.

How to use this tool: Complete the form with information regarding all the individuals you consider key stakeholders. You may need to set up a meeting with them to obtain their answers. Examples: information technology officer, director of supply/materials, housekeeping director, quality improvement (QI) department, therapy departments, diagnostic departments, emergency department. This form should be completed by the individual interested in initiating or reinvigorating a fall prevention program.

Use the completed template to identify actions needed to involve all stakeholders in the program. Ensure that all identified needs have been met before proceeding with the QI initiative. For example, the program may need process assistance from the QI department. Since this program may be competing with other QI priorities, it may be important to determine who shapes the QI agenda and how to get this program prioritized at a higher level. An example is shown in the form below. A blank form follows.

Stakeholder	Interest or requirement in the program	What the program needs from stakeholder	Perceived attitudes and risks	Actions to take
Example: health information systems officer	Gatekeeper for making any changes to the electronic health record (EHR) system. Not necessarily interested in the program beyond his general mandate to keep the EHR tied to clinical documentation needs.	The program may need to add or make changes to any parts of the EHR that concern fall risk assessment, preventive measures, and postfall care.	May not want to make changes until other changes are also in process, or other changes may already be in process.	Seek information about the process for requesting/making these kinds of changes and how this person relates in the overall organizational structure to program leaders/advocates.

Stakeholder	Interest or requirement in the program	What the program needs from stakeholder	Perceived attitudes and risks	Actions to take

1C: Leadership Support Assessment

Background: This tool can be used to assess senior leadership support for implementing a fall prevention program. For more information on who is part of the senior leadership team, see the resource box in section 1.3 of the toolkit text.

Reference: Developed by Falls Toolkit Research Team based on the Ontario Agency for Health Protection and Promotion's Facility-Level Situation Assessment: www.oahpp.ca/services/documents/jcyh/jcyh-for-hosptials/tools-for-implementation/facility-level-situation-assessment.pdf.

How to use this tool: Complete the checklist. This assessment is best suited for hospital supervisors, managers, and administrators.

Review the responses to ascertain the level of leadership support. If the response to several of these items is "no," it could threaten the success of your improvement process. Analyze the areas where support is not evident and take steps to inform leadership about the urgency to change.

Leadership Support Assessment

	Yes	No
Patient safety is clearly articulated in the organization's strategic plan.		
Someone in senior management is in charge of patient safety.		
The hospital's board of trustees is committed to improving patient safety.		
Medical staff leaders are integrated into patient safety programs.		
There is a dedicated budget allocated for patient safety activities.		
The budget includes funding for education and training on patient safety issues such as fall prevention.		
Improved fall prevention is a priority within the facility.		
The facility has implemented a fall prevention policy.		
Current fall prevention goals are being addressed.		
There are visible role models/champions for fall prevention.		

1D: Business Case Form

Background: This tool can be used to create a high-level overview of the case for implementing a fall prevention program. The information gathered in this tool may be presented to the senior leader who will decide whether to support your program. For more information on who is part of the senior leadership team, see the resource box in section 1.3 of the toolkit text.

Reference: The form was adapted from a template developed by Project Agency to help write a business case. Available at: www.businessballs.com/project%20management%20templates.pdf.

How to use this tool: Complete the form with all the required information. In some cases, to complete an element of the form (e.g., section on initial estimates of cost and time), additional work will be required. This form is best suited for a hospital administrator.

Present the completed form to the senior leader who would support your program, and discuss the potential benefits of the fall prevention initiative. This leader may also find it valuable for the finance department to calculate the return on investment (ROI).

ROI = Net returns from improvement actions / Investment in improvement actions. Additional information on ROI estimation is available in a companion AHRQ toolkit for hospitals at: www.ahrq.gov/qual/qitoolkit/f1_returnoninvestment.pdf.

Business Case

Program Background (keep this brief)
General Aims
Initial Risks
Expected Outcomes
Benefits of Implementing This Program
Initial Estimates of Cost and Time $: Time:
Outcome of the Business Case
Decision From (Program Sponsor)
Date

1E: Resource Needs Assessment

Background: The purpose of this tool is to identify resources that are available for a fall prevention program.

Reference: Developed by Falls Toolkit Research Team.

How to use this tool: Complete this checklist to assess the resources that are available and the resources that are still needed. This assessment is best suited for hospital supervisors, managers, and administrators.

Use this tool to ensure that all resources needed for launching a fall prevention program are available.

Resource	Needed: Yes/No	Notes on what is needed
Staff education programs		
Quality improvement experts		
Physical/occupational therapy consultation on work practices		
Information technology support		
Specific products/tools (e.g., low beds, floormats, assistive devices, safe patient handling equipment)		
Facilities and supplies (e.g., meeting rooms)		
Printing/copying		
Graphics/design		
Nonclinical time for team meetings and activities		
Other		
Funds		

1F: Organizational Readiness Checklist

Background: This tool can be used to monitor your progress on completing the organizational readiness activities.

Reference: Developed by Falls Toolkit Research Team.

How to use this tool: Complete the checklist. This assessment is best suited for hospital supervisors, managers, and administrators.

Use this tool to ensure you have not skipped any essential steps in your fall prevention efforts.

Organizational Readiness Checklist

Readiness Question	Assessment in Your Organization	Yes	No
Does the organization promote a culture of safety?	Hospital culture focuses on a systems approach to error reduction.		
Why is change needed?	Hospital-specific reasons for change have been identified.		
Do organizational members understand why change is needed?	Staff attitudes about falls have been assessed.		
	Assessment results have been analyzed to suggest awareness-building needs.		
Is there a sense of urgency about the change?	Supporters who have a sense of urgency have been identified.		
	Efforts are underway to generate a sense of urgency if lacking.		
Is there leadership support for this effort?	Leadership support has been assessed.		
	If necessary, efforts are underway to generate this support.		
	Senior leader champion or sponsor has been identified.		
Who will take ownership of this effort?	A leader has been identified for the fall prevention effort.		
	This leader is now involved in the subsequent planning steps.		
What kinds of resources are needed?	A preliminary list of needed human and material resources has been developed.		
	Commitments to provide those resources have been obtained or are forthcoming.		

2A: Interdisciplinary Team

Background: Crucial to a fall prevention initiative is the creation of an interdisciplinary Implementation Team that will oversee the improvement effort. This tool can be used to identify people from different disciplines to take part on the Implementation Team.

Reference: Developed by Falls Toolkit Research Team.

How to use this tool: This tool contains three parts:

1. Use the first list provided to form your Implementation Team. This tool should be filled out by the Implementation Team leader. List the names of possible team members from each department or discipline and their area of expertise.

The second list provides all the tools and resources included in the toolkit and which team roles and disciplines may be responsible for the tool. The team leader or team members can refer to this list to access the tools and ensure that appropriate people are selected for inclusion on the team.

The last part, a matrix, provides the team roles and disciplines that may be included on the Implementation Team tools and the related tools and resources. Potential team members can review the tools most relevant to them to gain a better sense of their roles and responsibilities in fall prevention.

The core Implementation Team should be a reasonable size (e.g., 6-12 people) in order to be effective. Additional staff may be included on an "as needed" basis. When you create a new team or invite new members to a team, make sure to set aside time for introductions at the beginning of your team meeting.

Interdisciplinary Team Tool – Part 1: List of Potential Team Members

Position/Discipline	Names of Possible Implementation Team Members From Each Area	Area of Expertise
Nursing		
Staff nurses		
Nursing assistants		
Rehabilitation		
Physical therapists		
Occupational therapists		
Prescribing Clinicians		
Physicians (e.g., hospitalist)		
Other providers (e.g., nurse practitioner or physician assistant)		
Pharmacy		
Pharmacists		
Facilities and Environment		
Materials manager		
Environmental services staff		
Facilities engineer		
Managers		
Senior manager		
Quality improvement/safety/risk manager		
Other		
Information systems staff		
Administrative assistant		
Educator		
Registered dietitian		
Patient representative		
Volunteer		

Interdisciplinary Team Tool – Part 2: List of Tools and Roles of Individuals Who Should Use the Tool

This list provides all the tools and resources included in the toolkit and which team roles and disciplines should use the tool. The team leader or team members can refer to this list to access the tools and ensure that appropriate people are selected for inclusion on the team.

Notes: For some of the tools listed below, the Implementation Team leader may wish to designate an individual to complete the tool on the team's behalf.

Items marked with an asterisk (*) can be integrated into your hospital's electronic health record with the help of information systems staff.

Tools and Resources	**Who Should Use the Tool**
ØA – Introductory Executive Summary for Stakeholders	Senior manager (e.g., Chief Executive Officer or Chief Medical/Nursing/Operating Officer)
1A – Hospital Survey on Patient Safety Culture	All interdisciplinary team members and staff on units preparing to implement the fall prevention program
1B – Stakeholder Analysis	Implementation Team leader (e.g., senior manager or quality improvement/safety/risk manager)
1C – Leadership Support Assessment	Implementation Team leader
1D – Business Case Form	Implementation Team leader
1E – Resource Needs Assessment	Implementation Team leader
1F – Organizational Readiness Checklist	Implementation Team leader
2A – Interdisciplinary Team	Implementation Team leader
2B – Quality Improvement Process	Implementation Team leader
2C – Current Process Analysis	Individuals designated by the Implementation Team leader
2D – Assessing Current Fall Prevention Policies and Practices	Individuals designated by the Implementation Team leader
2E – Falls Knowledge Test	Staff nurses and nursing assistants
2F – Action Plan	Implementation Team leader with quality improvement/safety/risk manager
2G - Managing Change Checklist	Implementation Team leader
3A – Master Clinical Pathway for Inpatient Falls	Quality improvement/safety/risk manager, staff nurses, and nursing assistants
3B – Scheduled Rounding Protocol	Unit manager, staff nurses, and nursing assistants
3C – Tool Covering Environmental Safety at the Bedside	Unit manager and facility engineer
3D – Hazard Report Form	Any hospital employee who enters patient rooms

Tools and Resources	Who Should Use the Tool
3E – Clinical Pathway for Safe Patient Handling	Nurse manager, staff nurses, and nursing assistants
3H – Morse Fall Scale for Identifying Fall Risk Factors*	Staff nurses
3G – STRATIFY Scale for Identifying Fall Risk Factors*	Staff nurses
3I – Medication Fall Risk Scale and Evaluation Tools*	Pharmacist and staff nurses
3F – Orthostatic Vital Sign Measurement	Staff nurses and nursing assistants
3J – Delirium Evaluation Bundle: Digit Span, Short Portable Mental Status Questionnaire, and Confusion Assessment Method*	Physicians, nurse practitioners, physician assistants
3K – Algorithm for Mobilizing Patients*	Nursing assistants
3L – Patient and Family Education	Educators, staff nurses
3M – Sample Care Plan*	Staff nurses with input from other disciplines (e.g., physician, pharmacist, physical and/or occupational therapists)
3N – Postfall assessment, clinical review*	Staff nurses and physicians
3O – Postfall assessment for root cause analysis	Staff nurses
3P – Best Practices Checklist	Implementation Team leader
4A – Assigning Responsibilities for Using Best Practices	Implementation Team leader
4B – Staff Roles	Unit manager
4C – Assessing Staff Education and Training	Implementation Team leader
4D – Implementing Best Practices Checklist	Implementation Team leader
5A – Information To Include in Incident Reports	Quality improvement/safety/risk manager, information systems staff
5B – Assessing Fall Prevention Care Processes	Unit manager and unit champions
5C – Measuring Progress Checklist	Implementation Team leader
6A – Sustainability Tool	Implementation Team leader

Interdisciplinary Team Tool – Part 3: Matrix of Applicable Tools, by Role

This matrix lists the disciplines that may be included on the Implementation Team and shows tools and resources they may be responsible for. The team leader or team members can use this list to access the tools and ensure that appropriate people are selected for the team.

	Tools and Resources																			
Position/Discipline	**1**	**2**	**3A**	**3B**	**3C**	**3D**	**3E**	**3F**	**3G**	**3H**	**3I**	**3J**	**3K**	**3L**	**3M**	**3N**	**3O**	**3P**	**4**	**5**	**6**
Nursing																					
Staff nurses			X	X			X	X	X	X	X			X	X	X	X				
Nursing assistants			X	X			X	X					X								
Nurse manager							X														
Rehabilitation																					
Occupational therapists															X						
Physical therapists															X						
Prescribing Clinicians																					
Nurse practitioners												X									
Physicians												X			X	X					
Physician assistants												X									
Pharmacy																					
Pharmacist											X				X						
Facilities and Environment																					
Facility engineer					X																
Managers																					
Quality improvement manager		X	X																	X	
Risk manager		X	X																	X	
Safety manager		X	X																	X	
Other																					
Educators														X							
Hospital employees who enter patient rooms						X															
Unit champion																				X	
Unit manager				X	X															X	
Implementation Team leader	X	X																X	X		X

	Tools and Resources																			
Position/Discipline	**1**	**2**	**3A**	**3B**	**3C**	**3D**	**3E**	**3F**	**3G**	**3H**	**3I**	**3J**	**3K**	**3L**	**3M**	**3N**	**3O**	**3P**	**4**	**5**	**6**
Individuals designated by the Implementation Team leader	X	X																X	X		X

2B: Quality Improvement Process

Background: This tool will help you and your team identify the extent to which you have the resources for quality improvement (QI) in your organization. The form was developed by the Turning Point Initiative to assess if an organization has the needed systems in place to improve quality and performance.

Reference: Turning Point Performance Management National Excellence Collaborative. Performance Management Self-Assessment Tool. Available at: www.turningpointprogram.org/toolkit/pdf/PM_Self_Assess_Tool.pdf.

How to use this tool: This tool should be filled out by the Implementation Team leader (or individual designated by the leader) in consultation with the QI department. The "you" refers to your organization as a whole. Check the box that most accurately describes your organization's current resources. If you find that your organization has fully operationalized QI processes, connect the fall prevention initiative with these existing processes. If some processes are missing, advocate for them to be put into place in the context of the fall prevention program.

Quality Improvement Process

Assessment Question	No	Somewhat	Yes (fully operational)
Do you have a process(es) to improve quality or performance?			
Is an entity or person responsible for decisionmaking based on performance reports (e.g., top management team, governing or advisory board)			
Is there a regular timetable for your QI process?			
Are the steps in the process communicated?			
Are managers and employees evaluated for their performance improvement efforts (i.e., is performance improvement in their job descriptions)?			
Are performance reports used regularly for decisionmaking?			
Is performance information used to do the following? (check all that apply)			
Determine areas for more analysis or evaluation.			
Set priorities and allocate/redirect resources.			
Inform policymakers of the observed or potential impact of decisions under their consideration.			
Do you have the capacity to take action to improve performance when needed?			
Do you have processes to manage changes in policies, programs, or infrastructure?			
Do managers have the authority to make certain changes to improve performance?			
Do staff have the authority to make certain changes to improve performance?			
Does the organization regularly develop performance improvement or QI plans that specify timelines, actions, and responsible parties?			
Is there a process or mechanism to coordinate QI efforts among programs, divisions, or organizations that share the same performance targets?			
Is QI training available to managers and staff?			
Are personnel and financial resources allocated to your QI process?			

2C: Current Process Analysis

Background: Before beginning a quality improvement initiative, you need to understand your current methods. This tool can be used to describe key processes in your organization where fall prevention activities could or should happen.

Reference: Adapted from: Quality Partners of Rhode Island. QI Worksheet E, Current Process Analysis. Available at: http://nhqi.hsag.com/Resource_documents/Worksheet_E_Current_Process_Analysis.pdf.

How to use this tool:

- Identify who will conduct the mapping and who will be on the mapping team. The mapping team should include at least two frontline staff on the Implementation Team and at least one person who has experience with process maps. Try to use the same team members if more than one process is mapped.
- Have the Implementation Team identify and define every step in the current process for fall prevention.
- Define a beginning, an end, and a methodology for all of the processes to be mapped. For example, some processes are mapped through the method of direct observation of the process taking place, while others can be mapped by knowledgeable stakeholders talking through and documenting each step in the process.
- When defining a process, think about staff roles in the process, the tools or materials staff use, and the flow of activities.
- Everything is a process, whether it is admitting a patient, serving meals, assessing pain, or managing a nursing unit. Identify key processes involving fall prevention. The goal of defining a process is to hone in on patient safety vulnerabilities and potential failures in the current process.
- Examples of processes might include initial fall risk factor assessments (e.g., when does it occur, who does it, what happens if a patient is found to have risk factors) or postfall management.

Determine if there are any gaps and problems in your current processes, and use the results of this analysis to systematically change these processes.

Process Analysis Procedures

- Take time to brainstorm and listen to every team member.
- Make sure the process is understood and documented.
- Make each step in the process very specific.
- Use one post-it note, index card, or scrap piece of paper for each step in the process.
- Lay out each step, move steps, and add and remove steps until the team agrees on the final process.
- If a process does not exist (for example, there is no process to assess fall risk factors upon admission and readmission), identify the related processes (for example, the process for admission and readmission).
- If the process is different for different shifts, identify each individual process.

Example: Process for Making Buttered Toast

Step Definition

1. Check to see if there is bread, butter, knife, and toaster.
2. If supplies are missing, go to the store and purchase them.
3. Check to see if the toaster is plugged in. If not, plug in the toaster.
4. Check setting on toaster. Adjust to darker or lighter as preferred.
5. Put a slice of bread in toaster.
6. Turn toaster on.
7. Wait for bread to toast.
8. When toast is ready, remove from toaster and put on plate.
9. Use knife to cut pat of butter.
10. Use knife to spread butter on toast.

Identify the steps of your defined process:

- Press people for details.
- At the end of the gap analysis, compile the results in a document that displays each step so that team members have the map of the current process in front of them during the team discussion (Step 2).

Hold team discussion.

Evaluate your current process as you define it:

- What policies and procedures do we have in place for this process?
- What forms do we use?
- How does our physical environment support or hinder this process?
- Which staff are involved in this process?
- Which parts of this process do not work?
- Do we duplicate any work unnecessarily? Where?
- Are there any delays in the process? Why?

Continue asking questions that are important in learning more about this process.

2D: Assessing Current Fall Prevention Policies and Practices

Background: The purpose of this self-assessment tool is to identify what processes of care your hospital has in place and what areas need improvement.

Reference: Adapted from AHRQ publication on the Falls Management Program for nursing homes. www.ahrq.gov/research/ltc/fallspx/fallspxmanual.htm.

How to use this tool: This tool should be filled out by the Implementation Team leader. Use your hospital's policies, procedures, and general practices to answer the questions.

The results from this self-assessment can help you identify which areas need improvement and develop a plan.

Current Fall Prevention Policies and Practices

A. Culture, Organizational Commitment, and Team Skills		Yes	No	Comments
1. Updated policies and procedures for a comprehensive fall prevention program?				
2. Appointed falls team leader and resource person for staff?				
3. Selection of staff members for interdisciplinary falls team?				
4. Monthly falls team meeting using ground rules, leader, timekeeper, and recorder?				
5. High-level managers attend team meetings periodically and monitor falls data at least quarterly?				
6. No blame/no shame environment with honest investigation and reporting by staff?				
7. Celebration of success stories and rewards for caregivers who reduce falls?				
8. Adequate staffing for team leader to spend 8 hours/week and team to meet for 60 minutes/month?				
9. Funds for adaptive equipment and environmental modifications?				
10. Employee orientation materials emphasize importance of and hospital commitment to patient safety?				
B. Data Collection and Analysis		Yes	No	Comments
1. Accurate completion of fall incident report form by all staff?				
2. Monthly falls analysis by:	location and time of fall			
	shift and day of week			
	type of injury			
3. Monthly falls analysis computed as falls/1,000 patient-days?				
4. Falls data reported to hospital management every quarter?				
5. Feedback about falls data given to direct care staff each month?				
6. Falls data trended over 6 months or more?				

C. Staff Training and Information for Patients and Families	Yes	No	Comments
1. Education on fall prevention during new employee orientation and training?			
2. Annual inservice training on fall prevention for all staff?			
3. Staff education materials, including: Hospital policies and procedures Fall risk factors and consequences of falls High-risk medications, sleep hygiene measures for management of anxiety Low blood pressure precautions Low vision precautions Safety during transfer, ambulation, and wheelchair use Unsafe behaviors, monitoring devices, and management strategies Environment and equipment safety hazards and methods for improvement Foot care and footwear			
4. All nurses trained in a fall response system that includes: Immediate evaluation and increased monitoring of patient Investigation of fall circumstances Documentation of fall Immediate intervention within first 8 hours			
5. Information for families and patients on fall risk reduction?			
6. Medical staff given information about the program and their role?			
D. Environment and Equipment Safety	Yes	No	Comments
1. Regular inspection of all resident rooms and bathrooms for safety problems, including: Clutter Poor or insufficient lighting Unstable furniture Hard-to-reach personal items Unsafe flooring Foot care and footwear			
2. All staff trained to inspect and report environmental and equipment safety problems?			
3. Repair of reported safety problems in a timely manner by maintenance staff?			
4. Inspection and repair of all wheelchairs, canes, and walkers every 6 months?			
5. Communications and inspections documented for ongoing monitoring and accountability?			

2E: Fall Knowledge Test

Background: The purpose of this tool is to assess general staff knowledge on fall prevention.

Reference: Adapted from Singapore Ministry of Health Nursing Clinical Practice Guidelines on Prevention of Falls in Hospitals and Long Term Care Institutions and subsequent version by Dr. Serena Koh. Previously used in Koh SLS. Singapore Med J 2009;50(4):425. Original may be found at www.moh.gov.sg/content/dam/moh_web/HPP/Nurses/cpg_nursing/2005/prevention_of_falls_in_hosp_ltc_institutiions.pdf.

How to use this tool: Administer the questionnaire to staff nurses and nursing assistants. The survey may need to be modified if certain questions are not consistent with your policies and procedures, or for the needs of specific hospital units.

Use the findings to assess gaps in knowledge. Work with your education department to tailor specific education programs to the needs of your staff.

Fall Knowledge Test

Each question may have more than one option as the correct answer.

Please circle the letters that correspond to the correct answers.

1. Which of the following statements is *correct*?

    a. Falls have multifactorial etiology, so fall prevention programs should comprise multifaceted interventions.
    b. Regular review of medication can help to prevent patient falls.
    c. The risk of falling will be lessened when a patient's toileting needs are met.
    d. The use of antipsychotic medications is associated with an increased risk of falls in older adults.

2. A multifaceted intervention program should include:

    a. Individually-tailored fall prevention strategies
    b. Education to patient/family and health care workers
    c. Environmental safety
    d. Safe patient handling

3. Risk factors for falls in the acute hospital include all of the following *except*:

    a. Dizziness/vertigo
    b. Previous fall history
    c. Antibiotic usage
    d. Impaired mobility from stroke disease

4. Which of the following statements is *true*?

    a. The cause of a fall is often an interaction between patient's risk, the environment, and patient risk behavior.
    b. Increase in hazardous environments increases the risk of falls.
    c. The use of a patient identifier (e.g., identification bracelet) helps to highlight to staff those patients at risk for falls.
    d. A fall risk assessment should include review of history of falls, mobility problems, medications, mental status, continence, and other patient risks.

5. Patients with impaired mobility should be:

    a. Confined to bed
    b. Encouraged to mobilize with assistance
    c. Assisted with transfers
    d. Referred for exercise program or prescription of walking aids as appropriate

6. The management of the acutely confused patient should include all of the following *except*:

    a. Moving patients away from the nursing station
    b. Involving family members to sit with the patient
    c. Orienting patients to the hospital environment
    d. Reinforcing activity limits to patients and their families

7. Which of the following statements is *false*?

    a. Fall prevention efforts are solely the nurses' responsibility.
    b. A patient who is taking four or more oral medications is at risk for falling.
    c. A patient who is taking psychotropic medication is at higher risk for falling.
    d. Testing or treatment for osteoporosis should be considered in patients who are at high risk for falls and fractures.

8. In hospital settings, intervention programs should include:

    a. Staff education on fall precautions
    b. Provision and maintenance of mobility aids
    c. Postfall analysis and problem-solving strategy
    d. Bed alarms for all patients, regardless of risk

9. When assessing patients, which of the following statements is *false*?

    a. All patients should be assessed for fall risk factors at admission, at a change in status, after a fall, and at regular intervals.
    b. Medication review should be included in the assessment.
    c. All patients should have their activities of daily living and mobility assessed.
    d. Environmental assessment is not important in the hospital as it is all standardized.

10. Risk factors for falls include:

    a. Parkinson's disease
    b. Incontinence
    c. Previous history of falls
    d. Delirium

11. Exercise programs for ambulatory older adults should:

    a. Be very aggressive
    b. Be unsupervised
    c. Be ongoing
    d. Include individualized strength and balance training

12. Which of the following statements on education in fall prevention is *false*?

    a. Education programs should target primarily health care providers, patients, and caregivers.
    b. Education programs for staff should include the importance of fall prevention, risk factors for falls, strategies to reduce falls, and transfer techniques.
    c. Instruction on safe mobility, with emphasis on high-risk patients, should be provided to both patients and families.
    d. Education should only be given at the start of the fall prevention program.

13. Which of the following is recommended to improve patient safety?

    a. Locking wheeled furniture when it is stationary.
    b. Having nonslip flooring.
    c. Placing frequently used items (including call bell, telephone, and remote control) within reach of the patient
    d. Rounding hourly to address patient needs

Answer Key:

1. A, B, C, D
2. A, B, C, D
3. C
4. A, B, C, D
5. B, C, D
6. A
7. A
8. A, B, C
9. D
10. A, B, C, D
11. C, D
12. D
13. A, B, C, D

2F: Action Plan

Background: The purpose of this tool is to provide a framework for outlining steps that will be needed to design and implement the fall prevention initiative.

Reference: Adapted from material produced by MassPro, a participant in the Centers for Medicare & Medicaid Services Quality Improvement Organization Program.

How to use this tool:

This tool should be filled out by the Implementation Team leader in consultation with the quality improvement manager.

1. Note the date and the objective. A sample objective is provided.
2. The form lists six key tasks. For each, list in the second column the steps that will be taken to address the task, including tools to be used.
3. In developing the plan, it is not expected that you will provide results, only that you will lay out what needs to be done.
4. In the last two columns, determine who will have lead responsibility for completing each task, and estimate an appropriate timeframe for completing the activities.
5. Use the plan as a working document that can be revised. As you begin to carry out the plan, you may need to make adjustments and add details to the later tasks.

Use the completed sheet to plan, manage, and carry out the identified tasks. The plan should guide the implementation process and can be continually amended and updated.

A sample completed form is shown below, followed by a blank form.

Fall Prevention Action Plan Date: November 16, 2011

Improvement Objective: Implement standard fall prevention practices within 6 months.

Key Interventions/Tasks	Steps To Complete Task and Tools To Use	Team Members Responsible for Task Completion	Target Date for Task Completion
	Examples	Examples	Examples
Analyze current state of fall prevention practices in this organization.	Identify strengths and weaknesses using process mapping and gap analysis. Tool 2C and Tool 2D.	Team leader, RNs	Within 6 weeks from initiative start
	Assess the current state of staff knowledge about fall prevention. Tool 2E.	Education department	Within 6 weeks from initiative start
	Set target goals for improvement.	QI department	Within 8 weeks from initiative start
Identify the set of prevention practices to be used in redesigned system.	Determine how comprehensive universal fall precautions should be performed.	Implementation Team	Within 12 weeks from initiative start
	Decide which scale or questions will be used for performing fall risk factor assessment.	Implementation Team	Within 12 weeks from initiative start
	Decide which fall prevention activities should be in your program.	Clinical staff members	Within 12 weeks from initiative start
Assign roles and responsibilities for implementing the redesigned fall prevention practices.	Determine who will complete the fall risk factor assessment on admission. Tool 4A.	Implementation Team	Within 16 weeks from initiative start
	Identify unit champions.	Team leader	Within 16 weeks from initiative start
	Determine how prevention work will be organized at the unit level, such as paths of communication and lines of oversight.	QI team	Within 16 weeks from initiative start
Put the redesigned set into practice.	Engage staff and get them excited about the changes needed.	Team leader, unit staff	Within 12 weeks from initiative start
	Pilot test the new practices.	QI department	Within 20 weeks from initiative start

Key Interventions/Tasks	Steps To Complete Task and Tools To Use	Team Members Responsible for Task Completion	Target Date for Task Completion
	Examples	Examples	Examples
Monitor fall rates and practices.	Determine how incidence data on fall rates and fall prevention care processes will be collected. Tools 5A and 5B.	QI department	Within 6 weeks from initiative start
	Organize quarterly reviews of data.	QI department	Within 6 weeks from initiative start, ongoing
Sustain the redesigned prevention practices.	Ensure continued leadership support.	Team leader	Within 4 weeks from initiative start, ongoing
	Ensure ongoing support from other units such as facilities management and IT.	IT, facilities management, PT, dietitians	Within 40 weeks from initiative start
	Designate responsibility and accountability for fall prevention oversight and continuous quality improvement.	Team leader and Implementation Team	Within 40 weeks from initiative start

Fall Prevention Action Plan Date:

Improvement Objective:

Key Interventions/Tasks	Steps To Complete Task and Tools To Use	Team Members Responsible for Task Completion	Target Date for Task Completion
Analyze current state of fall prevention practices in this organization.			
Identify the set of prevention practices to be used in redesigned system.			
Assign roles and responsibilities for implementing the redesigned fall prevention practices.			
Put the redesigned care processes into practice.			
Monitor fall rates and practices.			
Sustain the redesigned prevention practices.			

2G: Managing Change Checklist

Background: This tool can be used to monitor your progress on completing the managing change activities.

Reference: Developed by Falls Toolkit Research Team.

How to use this tool: The Implementation Team leader (or individual designated by the leader) should complete the checklist upon starting his/her role as leader and review the checklist quarterly thereafter.

Use this tool to ensure you have not skipped any essential steps in your fall prevention efforts.

Managing Change Checklist

Implementation Team composition	
Team leader identified and in place	
Members with necessary expertise/role identified and invited	
Linkage to senior leadership defined and established	
Team startup	
Team agenda and charge clearly stated	
Necessary training and resources in place for team to get started	
Assessment	
Current state of fall prevention practice and knowledge assessed	
Current practice and policies systematically examined	
Challenges to good practice identified at organization and unit levels	
Staff knowledge assessed	
Starting the work of redesign	
Approaches to redesign explored and chosen	
Gap analysis conducted between current practice and recommended practice	
Setting goals and plans for change	
Specific goals set	
Plan initiated for making changes to meet those goals	
Preliminary plan in place for sustaining the changes	

3A: Master Clinical Pathway for Inpatient Falls

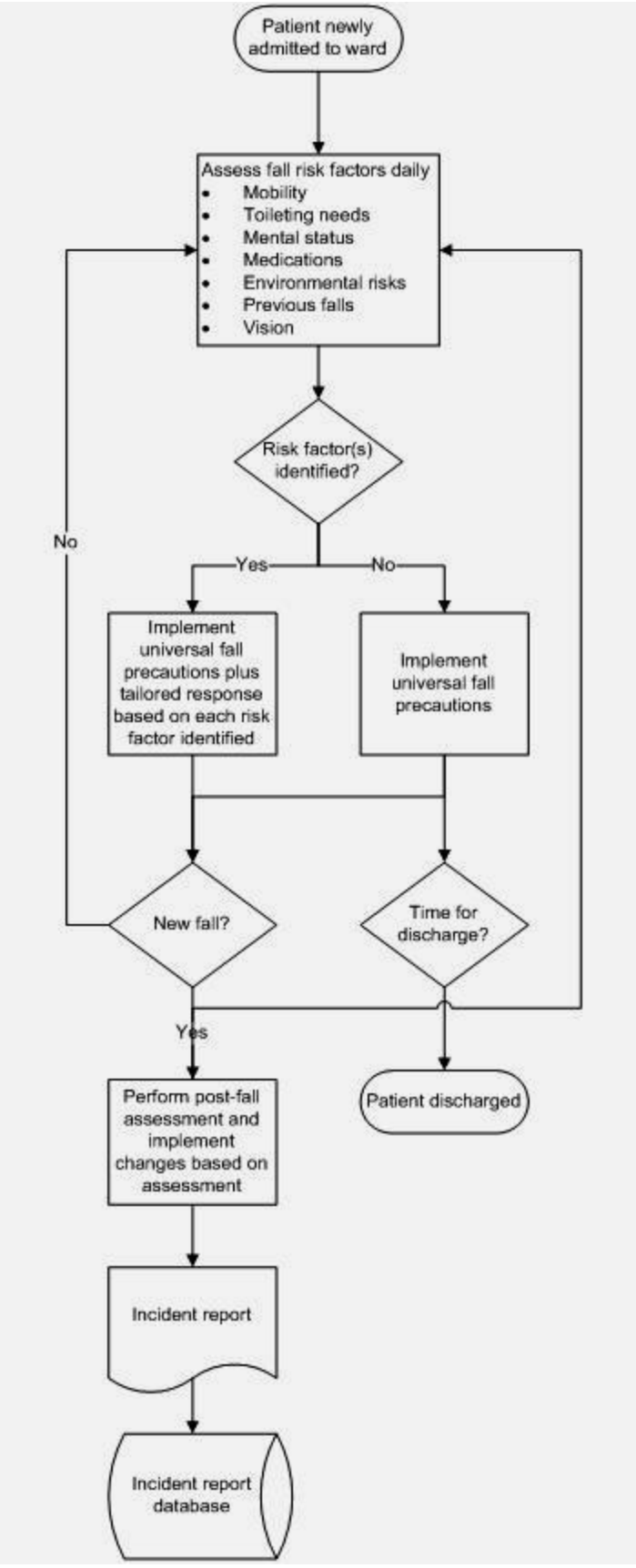
Background: The purpose of this tool is to provide an overview of how fall prevention care processes could occur at your hospital or hospital unit.

Reference: Developed by Falls Toolkit Research Team.

How to use this tool: Compare the master clinical pathway to your current activities and adapt your activities or the master clinical pathway as needed to suit your specific circumstances.

This tool can be used by the quality improvement manager, staff nurses, and nursing assistants as an aid in designing a new system, as a training tool, or as an ongoing clinical reference tool. This tool can be modified or a new one created to meet the needs of your particular setting. If you prepared a process map describing your current practices, you can compare that with desired practices outlined on the clinical pathway.

Inpatient Falls Clinical Pathway



3B: Scheduled Rounding Protocol

Background: Hourly rounds are an opportunity to ensure that universal fall precautions are implemented and that patients' needs are being met. These rounds integrate fall prevention activities with the rest of a patient's care.

Reference: Adapted from Meade CM, Bursell AL, Ketelsen L. Effects of nursing rounds: on patients' call light use, satisfaction, and safety. Am J Nurs 2006;106(9):58-70 with permission. Items that have been modified or added are marked with an asterisk.

How to use this tool: Review the hourly rounding protocol and adapt it to your specific circumstances. For example, components of the fall risk factor assessment can be added, such as a brief mental status screen.

This protocol can be used by staff nurses, nursing assistants, and the unit manager to ensure that universal fall precautions are in place.

The following items should be checked and performed for each patient. Upon entering the room, tell the patient you are there to do your rounds.

1	Assess patient pain levels using a pain-assessment scale (if staff other than RNs are doing the rounding and the patient is in pain, contact an RN immediately so the patient does not have to use the call light for pain medication).
2	Put medication as needed on RN's scheduled list of things to do for patients and offer the dose when due.
3	Offer toileting assistance.
4	Check that patient is using correct footwear (e.g., specific shoes/slippers, nonskid socks).*
5	Check that the bed is in locked position.*
6	Place hospital bed in low position when patient is resting; ask if patient needs to be repositioned and is comfortable.*
7	Make sure the call light/call bell button is within the patient's reach and patient can demonstrate use.*
8	Put the telephone within the patient's reach.
9	Put the TV remote control and bed light switch within the patient's reach.
10	Put the bedside table next to the bed or across bed.*
11	Put the tissue box and water within the patient's reach.
12	Put the garbage can next to the bed.
13	Prior to leaving the room, ask, "Is there anything I can do for you before I leave? I have time while I am here in the room."
14	Tell the patient that a member of the nursing staff (use names on white board) will be back in the room in an hour to round again.

3C: Tool Covering Environmental Safety at the Bedside

Background: Facility safety is key to preventing falls in the hospital.

Reference: Adapted from AHRQ publication on the Falls Management Program for nursing homes. Available at: www.ahrq.gov/research/ltc/fallspx/fallspxmanual.htm.

How to use this tool: This tool contains an inspection checklist to be completed jointly by the unit manager and facility engineer to identify and resolve environmental safety issues in hospital rooms. The inspection is designed to be performed room by room and bed by bed within each room (if rooms are not private).

Use the results from the inspection process to determine which items require attention by the nursing staff or maintenance or replacement by the facility engineers. Additional guidance for engineers about maintenance and repairs may be found at: www.ahrq.gov/research/ltc/fallspx/fallspxmanapd.htm.

Inspection List

Write the unit name, date, and room numbers across the top line. Put the bed number or letter across the second line and sign it. Put an "X" under the room number and bed beside all the tasks that need to be done (leave blank if no safety issue is identified or problem can be fixed immediately). Indicate whether this task should be completed by the nursing staff or facilities staff in the Assigned column. Tasks that are typically completed by the facility engineers are denoted with an "(f)." Write notes about special problems or add details in the Notes column.

Unit	Date:	Room Number:														Assigned to	Notes
Signature:	Bed:																
1. Paths	Remove unused equipment (canes/walkers).																
	Remove bedside commode, if unused.																
	With patient's permission, rearrange room to clear paths.																
	Put the bedside table next to the bed or across bed.																
	Remove unused items from bathroom and store elsewhere.																
	Make tiebacks for divider curtains.															(f)	
	Tie electrical cords out of path (TV, phone).															(f)	
2. Furniture	Adjust bed into locked position.																
	Replace unstable bed with a stable one.																
	Push bed to wall (check local and state fire codes).																
	Remove all lightweight or unstable furniture.																
	Clean, repair, or replace broken bed wheel locks.															(f)	
	Fix unstable furniture.															(f)	
	Secure loose bathroom handrails.															(f)	
	Replace missing rubber tips on bedside commode.															(f)	
	Replace missing rubber tips on handrails that rest on floor.															(f)	
	Secure raised toilet seat to commode.															(f)	
3. Easy Access	Arrange room so that items are within patient's reach (e.g., walking aids are within safe reach).															(f)	
4. Floor	Repair or replace floor covering.															(f)	
	Replace high, broken, or missing thresholds.															(f)	
	Add grading to thresholds between room and bathroom.															(f)	

5. Lighting	Replace burned out or flickering bulbs. Use max wattage.															(f)	
	Repair broken room lights or call lights.															(f)	
	Replace broken call light cords or lengthen cords.															(f)	
6. Equipment	Inspect wheelchair (for all wheelchairs found).															(f)	
	Repair cane.															(f)	
	Repair walker.															(f)	

3D: Hazard Report Form

Background: This tool contains a form for reporting environmental hazards when they are detected. Whereas the inspection checklist (Tool 3C, "Tool Covering Environmental Safety at the Bedside") is for regular, systematic review for fall hazards, this form is for hazards detected incidentally during usual care.

Reference: Falls prevention strategies in health care settings. Plymouth Meeting, PA: ECRI Institute; 2006. Hazard Report Form 13: 248. Reprinted with permission.

How to use this tool: Use this form whenever an environmental hazard is detected. You may need to change the people to whom the hazard is reported based on your local organizational setup. Any hospital employee who enters patient rooms can use this form.

Hazard Report Form

To: Nurse Manager
Equipment or Condition Presenting Hazard:
Location of Hazard:
Date Hazard Reported:
Hazard Reported by (your name):

Corrective Action Taken (describe what you did to eliminate the hazard):

Work Order Initiated (describe what still needs to be done to eliminate the hazard):

Work Order Completed on:

Work Order Completed by:

Action Taken to Eliminate Future Occurrences:

Hazard Reported at:
Staff Meeting (date):
Shift Reports (date):
Posting on Bulletin Boards (date):

Copies of this form must be forwarded to the Risk Manager.

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3E: Clinical Pathway for Safe Patient Handling

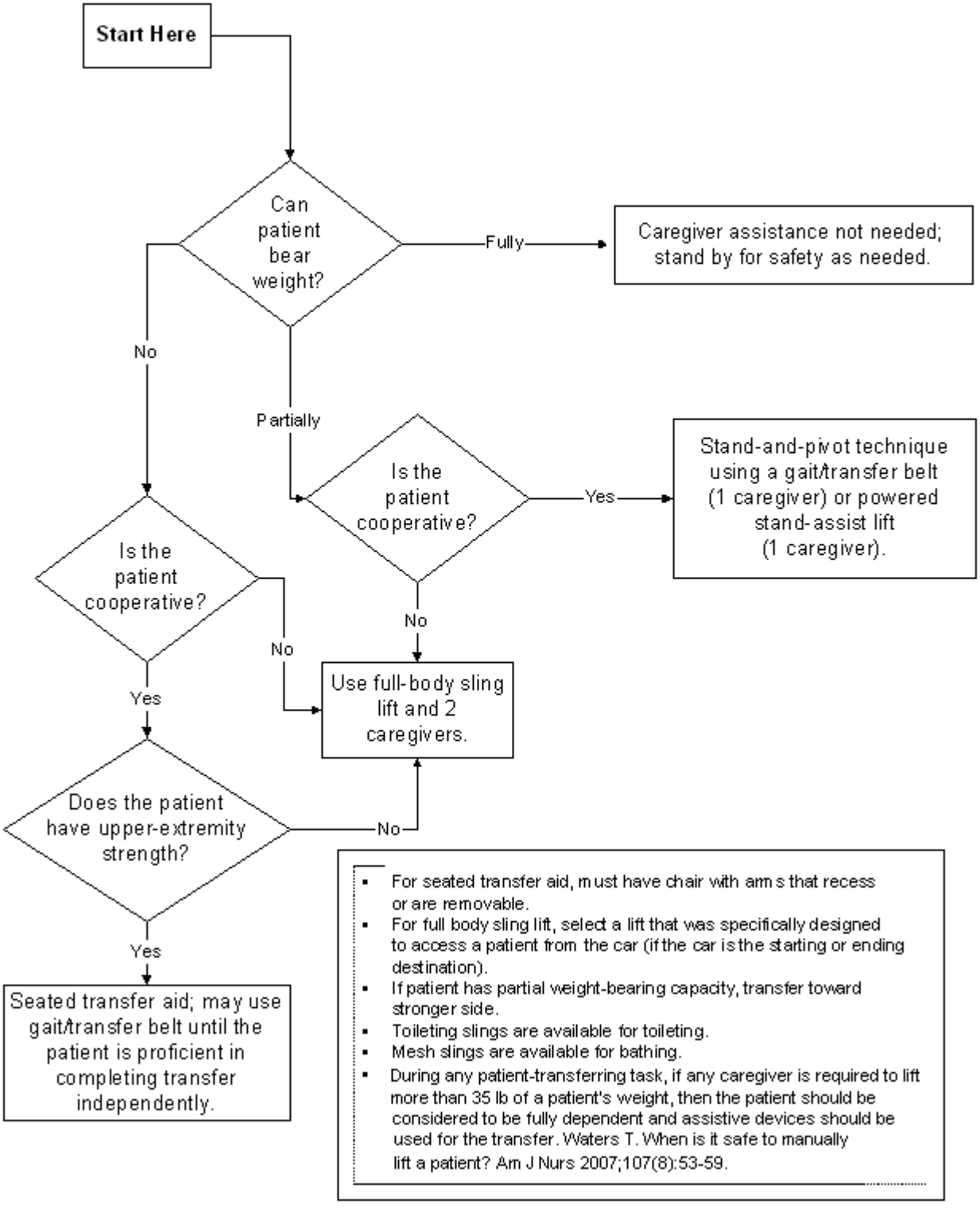
Background: This tool is a clinical pathway that illustrates appropriate application of safe patient handling principles, which are part of universal fall precautions (described in more detail in section 3).

Reference: Developed by VA Sunshine Healthcare Network (VISN 8) Patient Safety Center of Inquiry, Tampa, Florida.

How to use this tool: Use this and other safe patient handling pathways available at: www.visn8.va.gov/VISN8/PatientSafetyCenter/safePtHandling/SafePatientHandlingAssessment_Algorithms_031209.doc as a guideline to compare against your current care processes for safe patient handling. Additional training on safe patient handling for frontline staff is available from the Centers for Disease Control and Prevention at www.cdc.gov/niosh/docs/2009-127/default.html.

This tool can be used by the nurse manager, staff nurses, and nursing assistants as an aid in designing a new system, as a training tool, or as an ongoing clinical reference tool. This tool can be modified or a new one created to meet the needs of your particular setting.

Algorithm 1: Transfer to and From: Bed to Chair, Chair to Toilet, Chair to Chair, or Car to Chair
Last rev. 10/012008



3F: Orthostatic Vital Sign Measurement

Background: This tool can be used to identify orthostatic hypotension, a risk factor for falls in hospitalized patients.

Reference: Adapted from: John Dempsey Hospital Department of Nursing Clinical Manual/Nursing Practice Manual (available at: http://nursing.uchc.edu/nursing_standards/docs/Orthostatic%20(Postural)%20Vital%20Sign%20Measurement.pdf) with information from MaineHealth Cardiovascular Health (available at: www.mainehealth.org/workfiles/mh_healthinformation/Measuring_Orthostatic_Vital_Signs.pdf) .

How to use this tool: Staff nurses and nursing assistants typically complete this protocol. All findings should be reported to the treating medical provider. The decision whether to use this protocol on all patients (e.g., on admission), or as needed, will depend on the specific unit. However, consider checking orthostatic vital signs:

- After a fall.
- When a patient complains of a symptom that may be due to orthostasis (e.g., lightheadedness).
- As part of a routine admission assessment on units where patients frequently take medications that cause orthostasis (e.g., geriatric psychiatry).
- When a patient is on a medication that may cause orthostasis and has other risk factors for falls.

Use this tool in conjunction with clinical assessment and a standard assessment of fall risk factors (e.g., Tool 3H, "Morse Fall Scale for Identifying Fall Risk Factors, or Tool 3G, 'STRATIFY Scale for Identifying Fall Risk Factors") to determine a patient's risk factors for falls, and then plan care accordingly.

Protocol for Orthostatic (Postural) Vital Sign Measurement

Policy

1. Orthostatic vital signs may be indicated to evaluate patients who are at risk for hypovolemia (vomiting, diarrhea, bleeding), have had syncope or near syncope (dizziness, fainting), or are at risk for falls. A significant change in vital signs with a change in position also signals increased risk for falls.

   Orthostatic vital signs are not indicated in patients who:

   e. Have supine hypotension.
   f. Have a sitting blood pressure ≤90/60.
   g. Have acute deep vein thrombosis.
   h. Exhibit the clinical syndrome of shock.
   i. Have severely altered mental status.
   j. Have possible spinal injuries.
   k. Have lower extremity or pelvic fractures.
   l. Are not mobile enough to get out of bed.

   Orthostatic vital signs (blood pressure, pulse, and symptoms) will be obtained and recorded while the patient is in the supine position as well as in the standing position. If the patient is unable to stand, orthostatics may be taken while the patient is sitting with feet dangling.

Equipment

- Noninvasive blood pressure measurement device.
- Blood pressure cuff of correct size for the patient.

Procedure

1. Instruct the patient on the process of orthostatic blood pressure measurement and its rationale.
2. Assess by verbal report and observation the patient's ability to stand.
3. Have patient lie in bed with the head flat for a minimum of 3 minutes, and preferably 5 minutes.
4. Measure the blood pressure and the pulse while the patient is supine.
5. Instruct patient to sit for 1 minute.

   a. Ask patient about dizziness, weakness, or visual changes associated with position change. Note diaphoresis or pallor.
   b. Check sitting blood pressure and pulse.
   c. If the patient has symptoms associated with position change or sitting blood pressure ≤90/60, put patient back to bed.

6. Instruct patient to stand.

    a. Ask patient about dizziness, weakness, or visual changes associated with position change. Note diaphoresis or pallor.
    b. If patient is unable to stand, sit patient upright with legs dangling over the edge of the bed.
    c. The patient should be permitted to resume a supine position immediately if syncope or near syncope develops.

7. Measure the blood pressure and pulse immediately after patient has stood up, and then repeat the measurements 3 minutes after patient stands. Support the forearm at heart level when taking the blood pressures to prevent inaccurate measurement.
8. Assist patient back to bed in a position of comfort.
9. Document vital signs and other pertinent observations on the nursing flowsheet or in the medical record. Note all measurements taken and the position of the patient during each reading.

Evaluation

1. Subtract values 3 minutes after standing (or if patient cannot stand, then sitting) from lying values.

    A decline of $\geq$20mm Hg in systolic or $\geq$10 mm Hg in diastolic blood pressure after 3 minutes of standing = orthostatic hypotension.

    A heart rate increase of at least 30 beats per minute after 3 minutes of standing may suggest hypovolemia, independent of whether the patient meets criteria for orthostatic hypotension.

    A blood pressure drop immediately after standing that resolves at 3 minutes does not indicate orthostatic hypotension. However, this finding may be useful to confirm a patient's complaint of feeling dizzy upon standing and may lead to patient education about using caution when arising from a lying or sitting position.

    Report all findings to the treating medical provider, including all sets of blood pressure and pulse results, and whether the patient experienced pallor, diaphoresis, or faintness when upright.

Sometimes it may be difficult to determine if the resident/patient has orthostatic hypotension when checking only at one point in time. If the resident/patient does not show evidence of orthostatic hypotension during the assessment but has complained of lightheadedness or dizziness, perform the measurements when the resident/patient complains or within 2 hours of the start of a meal.

3G: STRATIFY Scale for Identifying Fall Risk Factors

Background: This tool can be used to identify risk factors for falls in hospitalized patients. The total score may be used to predict future falls, but it is more important to identify risk factors using the scale and then plan care to address those risk factors.

Reference: Adapted from Oliver D, Britton M, Seed P, et al. Development and evaluation of evidence based risk assessment tool (STRATIFY) to predict which elderly inpatients will fall: case-control and cohort studies. BMJ 1997;315(7115):1049-53. Reprinted with permission from BMJ Group.

How to use this tool: Please fill out the scale as instructed below. This tool can be used by staff nurses.

Use this tool in conjunction with clinical assessment and a review of medications (see Tool 3I) to determine if a patient is at risk for falls and plan care accordingly. Note that this scale may not capture the risk factors that are most important on your hospital ward, so consider your local circumstances.

If your hospital uses an electronic health record, consult your hospital's information systems staff about integrating this tool into the electronic health record.

STRATIFY Risk Assessment Tool

Answer all five questions below and count the number of "Yes" answers.

1	Did the patient present to hospital with a fall or has he or she fallen on the ward since admission (**recent history of fall**)?	Yes = 1	No = 0
2	Is the patient **agitated**?	Yes = 1	No = 0
3	Is the patient **visually impaired** to the extent that everyday function is affected?	Yes = 1	No = 0
4	Is the patient in need of especially **frequent toileting**?	Yes = 1	No = 0
5	Does the patient have a combined **transfer and mobility** score of 3 or 4? (calculate below)	Yes = 1	No = 0
	Transfer score: Choose **one** of the following options which best describes the patient's level of capability when transferring from a bed to a chair: 0 = Unable 1 = Needs major help 2 = Needs minor help 3 = Independent		
	Mobility score: Choose **one** of the following options which best describes the patient's level of mobility: 0 = Immobile 1 = Independent with the aid of a wheelchair 2 = Uses walking aid or help of one person 3 = Independent		
	Combined score (**transfer + mobility**): _____		

Total score from questions 1-5: _____

0 = Low risk
1 = Moderate risk
2 or above = High risk

3H: Morse Fall Scale for Identifying Fall Risk Factors

Background: This tool can be used to identify risk factors for falls in hospitalized patients. The total score may be used to predict future falls, but it is more important to identify risk factors using the scale and then plan care to address those risk factors.

Reference: Adapted from Morse JM, Morse RM, Tylko SJ. Development of a scale to identify the fall-prone patient. Can J Aging 1989;8:366-7. Reprinted with the permission of Cambridge University Press.

How to use this tool: A training module on proper use of the Morse Fall Scale developed by the Partners HealthCare Fall Prevention Task Force may be found at www.brighamandwomens.org/Patients_Visitors/pcs/nursing/nursinged/Medical/FALLS/Fall_TIPS_Toolkit_MFS%20Training%20Module.pdf. In addition to completion of the module, training should include real cases where the provider conducts an assessment. Mental status and gait parameters require actual assessment of a real patient (as opposed to solely a chart review).

This tool can be used by staff nurses. Use this tool in conjunction with clinical assessment and a review of medications (see Tool 3I) to determine if a patient is at risk for falls and plan care accordingly. Note that this scale may not capture the risk factors that are most important on your hospital ward, so consider your local circumstances.

Register through Partners HealthCare at www.brighamandwomens.org/Patients_Visitors/pcs/nursing/nursinged/Medical/FALLS/Permissions/PHS%20MFS%20Competency.pdf prior to use.

If your hospital uses an electronic health record, consult your hospital's information systems staff about integrating this tool into the electronic health record.

Morse Fall Scale

Item	Item Score	Patient Score
1. History of falling (immediate or previous)	No 0 Yes 25	_____
2. Secondary diagnosis (≥ 2 medical diagnoses in chart)	No 0 Yes 15	_____
3. Ambulatory aid None/bedrest/nurse assist Crutches/cane/walker Furniture	 0 15 30	_____
4. Intravenous therapy/heparin lock	No 0 Yes 20	_____
5. Gait Normal/bedrest/wheelchair Weak* Impaired†	 0 10 20	_____
6. Mental status Oriented to own ability Overestimates/forgets limitations	 0 15	_____
Total Score‡: Tally the patient score and record. <25: Low risk 25-45: Moderate risk >45: High risk		_____

* Weak gait: Short steps (may shuffle), stooped but able to lift head while walking, may seek support from furniture while walking, but with light touch (for reassurance).

† Impaired gait: Short steps with shuffle; may have difficulty arising from chair; head down; significantly impaired balance, requiring furniture, support person, or walking aid to walk.

‡ Suggested scoring based on Morse JM, Black C, Oberle K, et al. A prospective study to identify the fall-prone patient. Soc Sci Med 1989; 28(1):81-6. However, note that Morse herself said that the appropriate cut-points to distinguish risk should be determined by each institution based on the risk profile of its patients. For details, see Morse JM, , Morse RM, Tylko SJ. Development of a scale to identify the fall-prone patient. Can J Aging 1989;8;366-7.

3I: Medication Fall Risk Score and Evaluation Tools

Background: This tool can be used to identify medication-related risk factors for falls in hospitalized patients. A pharmacist would perform this assessment.

Reference: Used with permission: Beasley B, Patatanian E. Development and implementation of a pharmacy fall prevention program. Hosp Pharm 2009;44(12):1095-1102. © 2009, Thomas Land Publishers, www.hosp-pharmacy.com.

How to use this tool: Evaluate medication-related fall risk on admission and at regular intervals thereafter. Add up the point value (risk level) for every medication the patient is taking. If the patient is taking more than one medication in a particular risk category, the score should be calculated by (risk level score) x (number of medications in that risk level category). For a patient at risk, a pharmacist should use the evaluation tools to determine if medications may be tapered, discontinued, or changed to a safer alternative.

Use this tool in conjunction with clinical assessment and a nursing risk scale (e.g., Tool 3H, "Morse Fall Scale for Identifying Fall Risk Factors," or 3G, "STRATIFY Scale for Identifying Fall Risk Factors") to determine if a patient is at risk for falls and plan care accordingly. Note that this scale may not capture the medication risk factors that are most important on your hospital ward, so consider your local circumstances.* A hybrid approach is to have the nurse use a scale such as the one below and alert the pharmacist if the total score is 6 or greater.

If your hospital uses an electronic health record, consult your hospital's information systems staff about integrating this tool into the electronic health record.

* Formularies may differ. Consult the hospital pharmacy and therapeutics committee or pharmacy department for formulary drugs within the American Hospital Formulary Service drug class identified in the table. The hospital can decide how to specify the drugs that fall within these risk classes. Also consider the dose and timing of medications (e.g., avoiding diuretic use close to bedtime).

Medication Fall Risk Score

Point Value (Risk Level)	American Hospital Formulary Service Class	Comments
3 (High)	Analgesics,* antipsychotics, anticonvulsants, benzodiazepines†	Sedation, dizziness, postural disturbances, altered gait and balance, impaired cognition
2 (Medium)	Antihypertensives, cardiac drugs, antiarrhythmics, antidepressants	Induced orthostasis, impaired cerebral perfusion, poor health status
1 (Low)	Diuretics	Increased ambulation, induced orthostasis
Score ≥ 6		Higher risk for fall; evaluate patient

* Includes opiates.
† Although not included in the original scoring system, the falls toolkit team recommends that you include non-benzodiazepine sedative-hypnotic drugs (e.g., zolpidem) in this category.

Medication Fall Risk Evaluation Tools

Use the tools below when evaluating patients found to have high medication-related risk for falls. The comments section provides information on how to evaluate the indicators.

Indicator	Comments
Medications	Beers criteria,* dose adjustment for renal function or disease state, overuse of medications, IV access
Laboratory	Therapeutic drug levels (digoxin, phenytoin), international normalized ratio, electrolytes, hemoglobin/hematocrit
Disease states	Comorbidities, hypertension, congestive heart failure, diabetes, orthopedic surgery, prior fall, dementia, other†
Education	Patient's ability/willingness to learn, patient's mental status

* Beers criteria are available at: American Geriatrics Society updated Beers criteria for potentially inappropriate medication use in older adults. J Am Geriatr Soc 2012;60(4):616-31.
† Age 65 years or older.

3J: Delirium Evaluation Bundle: Digit Span, Short Portable Mental Status Questionnaire, and Confusion Assessment Method

Background: Patients found to have impaired mental activity as a risk factor for falls require further evaluation. The Delirium Evaluation Bundle is designed to help determine if the patient has delirium.

Reference*:*

Digit Span: Scoring guidelines from Montreal Cognitive Assessment are available at the Veterans Affairs (VA) Web page for the National Parkinson's Disease Research, Education, and Clinical Center & VA PD Consortium, www.parkinsons.va.gov/consortium/moca.asp.

Short Portable Mental Status Questionnaire: Adapted from (1) Hospital Elder Life Program and (2) Pfeiffer E. A short portable mental status questionnaire for the assessment of organic brain deficit in elderly patients. J Am Geriatr Soc 1975;23:433-41.

Confusion Assessment Method: Adapted from Inouye SK, van Dyck CH, Alessi CA, et al. Clarifying confusion. Ann Intern Med 1990;113(12):941-8.

How to use this tool*:* A proper evaluation for delirium requires both standardized testing and direct observation of the patient's behavior. Performing the Digit Span Test and the Short Portable Mental Status Questionnaire will provide information that can be used in the Confusion Assessment Method (CAM). Instructions for each test are explained below. Use the provided link to access the CAM training manual.

This tool should be used in any patient whose mental status is unclear on admission or transfer to a unit, or whose mental status has acutely declined. The tool will allow you to determine if a patient is delirious and therefore requires further medical evaluation for delirium. Physicians, nurse practitioners, and physician assistants can carry out this assessment, but training is required (use links provided below to access material). The training is particularly important to distinguish delirium from behavioral symptoms of dementia.

Consider having clinical champions for delirium assessment who can be called in to evaluate a patient if needed. If your hospital uses an electronic health record, consult your hospital's information systems staff about integrating this tool into the electronic health record.

Digit Span

Now I am going to say some numbers. Please repeat them back to me.

[SAY DIGITS AT RATE OF ONE PER SECOND]

DIGITS FORWARD (DF)	Response
2 - 9 - 1	____ - ____ - ____
3 - 5 - 7 - 4	____ - ____ - ____ - ____
6 - 1 - 9 - 2 - 7	____ - ____ - ____ - ____ - ____

Now I am going to read some more numbers, but I want you to repeat them in backward order from the way I read them to you. So, for example, if I said 6-4, you would say 4-6.

[SAY DIGITS AT RATE OF ONE PER SECOND]

DIGITS BACKWARD (DB)	Response
7 - 4 – 2	____ - ____ - ____
5 - 3 - 8 - 4	____ - ____ - ____ - ____

SCORING: Patients should be able to repeat 5 digits forward and 3 digits backward under normal conditions. Inability to do so represents an abnormal test result.

Short Portable Mental Status Questionnaire

Question	Response			Error?
What are the date, month, and year?*	Date	Month	Year	
What is the day of the week?				
What is the name of this place?				
What is your phone number?				
How old are you?				
When were you born?				
Who is the current president?				
Who was the president before him?				
What was your mother's maiden name?				
Can you count backward from 20 by 3s?				

*A mistake on ANY part of this question should be scored as an error.

Total Errors: _____

SCORING*:

0-2 errors: normal mental functioning

3-4 errors: mild cognitive impairment

5-7 errors: moderate cognitive impairment

8 or more errors: severe cognitive impairment

*One more error is allowed in the scoring if a patient has had a grade school education or less. One less error is allowed if the patient has had education beyond the high school level.

The Short Portable Mental Status Questionnaire was originally published as Pfeiffer E. A short portable mental status questionnaire for the assessment of organic brain deficit in elderly patients. J Am Geriatr Soc 1975;23:433-41. The version shown here is adapted from the Hospital Elder Life Program (www.hospitalelderlifeprogram.org). Used with permission. © E. Pfeiffer, 1994.

Confusion Assessment Method

After checking the patient's orientation and performing the Digit Span Test and Short Portable Mental Status Questionnaire, rate the patient using the Confusion Assessment Method. This is best done after going through a training process, available at www.hospitalelderlifeprogram.org. After agreement to conditions of use, download the Confusion Assessment Method Training Manual at www.hospitalelderlifeprogram.org/pdf/TheConfusionAssessmentMethodTrainingManual.pdf.

A brief summary of the Confusion Assessment Method for nurses is also available through the Hartford Institute for Geriatric Nursing at: http://consultgerirn.org/uploads/File/trythis/try_this_13.pdf.

A 50-minute training video for nurses is available through the Hartford Institute for Geriatric Nursing at: http://consultgerirn.org/resources/media/?vid_id=4361983#player_container.

To rate the patient with the Confusion Assessment Method, use the worksheet on the next page.

Confusion Assessment Method Shortened Version Worksheet

EVALUATOR: DATE:

I. ACUTE ONSET AND FLUCTUATING COURSE BOX 1

a. Is there evidence of an acute change in mental status from the patient's baseline? No ___ Yes ___

b. Did the (abnormal) behavior fluctuate during the day, that is, tend to come and go or increase and decrease in severity? No ___ Yes ___

II. INATTENTION

Did the patient have difficulty focusing attention, for example, being easily distractible or having difficulty keeping track of what was being said? No ___ Yes ___

III. DISORGANIZED THINKING

Was the patient's thinking disorganized or incoherent, such as rambling or irrelevant conversation, unclear or illogical flow of ideas, or unpredictable switching from subject to subject? BOX 2 No ___ Yes ___

IV. ALTERED LEVEL OF CONSCIOUSNESS

Overall, how would you rate the patient's level of consciousness?

_____ Alert (normal)

_____ Vigilant (hyperalert)
_____ Lethargic (drowsy, easily aroused)
_____ Stupor (difficult to arouse)
_____ Coma (unarousable)

Do any checks appear in this box? No ___ Yes ___

If all items in Box 1 are checked and at least one item in Box 2 is checked, a diagnosis of delirium is suggested.

© 2003, Hospital Elder Life Program. Adapted from Inouye SK, van Dyck CH, Alessi CA, et al, Clarifying confusion: the confusion assessment method. A new method for detection of delirium. Ann Intern Med 1990;113(12):941-8.

3K: Algorithm for Mobilizing Patients

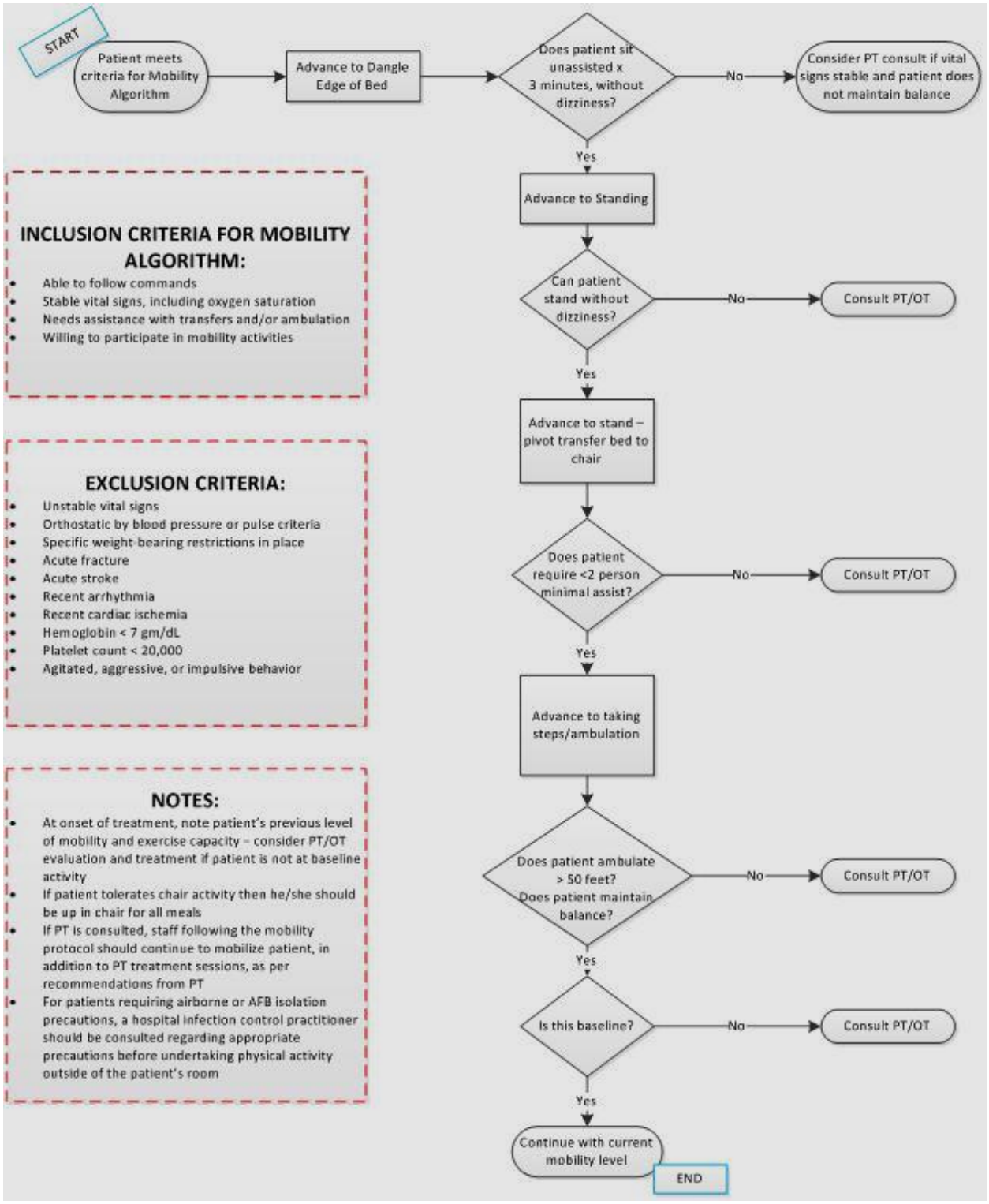
Background: The purpose of this tool is to provide a sample algorithm for mobilization of patients. The mobility algorithm is meant for patients who have experienced deconditioning or are at risk for deconditioning. The algorithm is NOT intended for patients whose primary reason for admission is mobility related; such patients should be offered physical and occupational therapy, as appropriate.

Reference: Adapted from tools created by Central DuPage Hospital in Winfield, Illinois, and subsequently published in Drolet A. Dejuilio P, Harkless S, et al. Move to Improve: the feasibility of using an early mobility protocol to increase ambulation in the intensive and intermediate care settings. Phys Ther 2012 Sep 13. [Epub ahead of print]. Tool adapted with permission of the American Physical Therapy Association. This material is copyrighted, and any further reproduction or distribution requires written permission from APTA. This is not the final edited version that appeared in the journal article.

How to use this tool: Nursing assistants or other appropriate hospital staff can follow the mobility algorithm to initiate mobilization after the treating medical provider orders mobilization and the patient's nurse determines that the patient meets all inclusion criteria and does not have any exclusion criteria (see below).

This tool can be used in designing a new system, as a training tool for staff, and as an ongoing reference tool on hospital units. This tool can be modified or a new one created to meet the needs of your particular setting. If your hospital uses an electronic health record, consult your hospital's information systems staff about integrating this tool into the electronic health record.

Mobility Algorithm



Adapted from tools created by Central DuPage Hospital in Winfield, Illinois, and published in Drolet A, et al. Phys Ther 2012 Sep 13. [Epub ahead of print]. Tool adapted with permission of the American Physical Therapy Association. This material is copyrighted, and any further reproduction or distribution requires written permission from APTA. This is not the final edited version that appeared in the journal article.

3L: Patient and Family Education

Background: Below are examples of key educational points about fall prevention that can be handed out to patients and their families.

Reference: Available as a patient education brochure at the Minnesota Hospital Association Web site: www.mnhospitals.org/Portals/0/Documents/ptsafety/falls/English_Patient_Education_Brochure.pdf.

How to use this tool: The information below can be customized for use within your hospital. When printing your educational brochure, make sure that text is at least 14 points, and make it 16 points if possible; use Times New Roman font or another font that has serifs. We recommend against printing text over photographs or colors in the background (e.g., black text on a dark green background) and suggest using sharper contrasting colors to make the text easier to read. The language should be at no more than a 6th grade reading level to ensure that all patients can understand the message.

Educators and staff nurses can distribute educational information to patients, but verbal counseling on fall risk should be performed by someone trained for this task. Consider handing out educational information to patients and their families when the patient is admitted to your unit.

Preventing Falls in the Hospital

Know when to ask for help

You will do more and more walking as your health improves. To avoid falling and hurting yourself, please follow these guidelines.

- Wear shoes or nonskid slippers every time you get out of bed.
- Call your nurse if you feel dizzy, weak, or lightheaded. Don't get up by yourself.
- Ask for help to go to the bathroom. Make sure the path to the bathroom is clear.
- Use only unmoving objects to help steady yourself. Don't use your IV pole, tray table, wheelchair, or other objects that can move.
- Use the handrails in the bathroom and hallway.
- If you wear glasses or hearing aids, use them.
- Keep important items within reach. This includes your call button or call bell.

Source: Minnesota Hospital Association.

3M: Sample Care Plan

Background: Developing a care plan specific to the needs of each individual patient is critical. This tool is a sample care plan that gives specific examples of actions that should be performed to address a patient's needs.

Reference: Adapted from National Health Service document Slips, trips, and falls in the hospital, available at www.nrls.npsa.nhs.uk/resources/?EntryId45=59821. This report is based on Healey F, Monro A, Cockram A, et al. Using targeted risk factor reduction to prevent falls in older in-patients: a randomised controlled trial. Age Ageing 2004;33(4):390-5.

How to use this tool: This tool includes examples of interventions that may be considered for specific fall risk factors. These should be tailored to meet the needs of your patient. The original care plan was completed for patients with any of the following:

- Fall since admission.
- Attempt to walk alone unsteady/unsafe.
- Patient or relatives anxious about falls.

Your hospital unit may use these factors alone or in combination with additional factors to trigger use of the care plan. This tool should be used collaboratively by staff nurses with input from other disciplines (e.g., physician, pharmacist, physical or occupational therapists). If your hospital uses an electronic health record, consult your hospital's information systems staff about integrating this tool into the electronic health record.

Individualize the care plan to address the needs of at-risk patients.

Care Plan

GOAL: To reduce likelihood of falls while maintaining dignity and independence	State action taken below (sample provided):
Call. Ensure call bell explained and in reach. Consider alternatives for patients unable to recall use of call bell, e.g., use brass bell, move bed in sight of nurses' station.	Call bell in reach but may forget, will probably call her daughter's name instead; moved within earshot of nurses' station.
Eyesight. Ensure eyesight is checked and patient is wearing glasses if needed. Can the patient identify pen/key from bed length away? If eyesight is too poor to identify objects, ask the treating medical provider to review. Ensure glasses/hearing aid are worn or within reach.	Glasses broken in fall at home; family has ordered replacement and hopes to provide it tomorrow. Has fair distance vision without them. Have suggested that the family order a spare pair too.
Bed and bedrails. Assess the need for bedrails (refer to policy). If patient is likely to fall from bed, ensure bed is at the lowest possible height unless this would reduce mobility or independence. Consider use of special low bed.	Bedrails not appropriate as this patient can mobilize on her own, even though unsteady, and might be confused enough to climb over. Bed set at right height for safe move from sitting to standing.
Medication. Check for medication associated with fall risk, such as antidepressants, sleeping tablets, sedatives, and antipsychotics. Ask the pharmacist to review and make recommendations to treating medical provider (do not stop abruptly).	On temazepam 15 mg qhs for some years; will discuss with pharmacist.
Mobility. Determine the patient's level of mobility and whether actions should be taken to improve or maintain mobility.	Participating in supervised mobility protocol with nursing assistant. Currently able to ambulate 50 feet with front wheeled walker daily.
Interdisciplinary team. Ensure medical staff, physical therapist, occupational therapist, social worker, and others on the team are aware of the patient's risk, frequency, nature, and seriousness of falls (local protocol or pathway would cover expected actions by team members, e.g., cognitive evaluation, osteoporosis check, mobility aid review).	Treating physician aware of patient's fall risk. Physical and occupational therapy referral sent on 11/14/11. Fall risk noted on discharge plan.
Footwear. Check footwear for secure fit, nonslip sole, no trailing laces. Ask relatives to supply safer replacement or supply new slippers from ward stock. Consider slipper socks in bed for patients at risk of falling at night.	Patient does not have footwear. Provided with new slippers from ward stock.

GOAL: To reduce likelihood of falls while maintaining dignity and independence	State action taken below (sample provided):
Place. Place patient in most appropriate place on the ward for his or her needs, e.g., close to nurses' station, close to toilet, in quietest area (considering other patients' needs as well).	Located nearest toilet and within earshot of nurses' station.
Lighting. Consider lighting best for patient, e.g., bedside lamp left on overnight, night light in bathroom.	Will have overhead lamp on low overnight.
Toilet. Does the risk of falls appear to be associated with patient's need to use toilet? If so, a routine of frequent toilet visits may help prevent falls.	Currently the patient has frequency/urgency; being treated for urinary tract infection. Will offer toilet every hour while patient is awake.
Inform. Provide falls education brochure to patient/family, engage them in care plan, find out contact wishes in event of fall.	Patient and daughter have falls education brochure, and care plan has been explained. Contact wishes entered into chart.

3N: Postfall Assessment, Clinical Review

Background: This protocol explains how to assess and follow injury risk in a patient who has fallen.

Reference: Adapted from the South Australia Health Fall Prevention Toolkit. Available at: www.sahealth.sa.gov.au/wps/wcm/connect/5a7adb80464f6640a604fe2e504170d4/Post+fall+management+protocol-SaQ-20110330.pdf?MOD=AJPERES&CACHEID=5a7adb80464f6640a604fe2e504170d4

How to use this tool: Staff nurses and physicians should follow this protocol, in combination with clinical judgment, with patients who have just fallen. Training on the Glasgow Coma Scale is available at: www.nursingtimes.net/Binaries/0-4-1/4-1735373.pdf. (Full citation: Jevon P. Neurological assessment part 4 - Glasgow Coma Scale 2. Nurs Times 2008;104(30):24-5.) This training includes graphics demonstrating various aspects of the scale.

Postfall Assessment, Clinical Review

Note: There is increased risk of intracranial hemorrhage in patients with advanced age; on anticoagulant and/or antiplatelet therapy; and known coagulopathy, including those with alcoholism. In addition, there may be late manifestations of head injury after 24 hours.

Does not hit head	Hits head or has unwitnessed fall
• Assess immediate danger to all involved. Assess circulation, airway, and breathing according to your hospital's protocol. • Call for assistance. Activate appropriate emergency response team if required. • Do not move the patient until he/she has been assessed for safety to be moved. Examine cervical spine and if there is any indication of injury do not move the patient; instead, immobilize cervical spine, and call treating medical provider. • Identify all visible injuries and initiate first aid; for example, cover wounds. • Assist patient to move using safe handling practices.	• Assess immediate danger to all involved. Assess circulation, airway, and breathing according to your hospital's protocol. • Call for assistance. Activate appropriate emergency response team if required. • Do not move the patient until he/she has been assessed for safety to be moved. Examine cervical spine and if there is any indication of injury do not move the patient; instead, immobilize cervical spine, and call treating medical provider. • Assess Glasgow Coma Scale (next page). • Identify all visible injuries and initiate first aid; for example, cover wounds. • Assist patient to move using safe handling practices.
Proceed to: • Check vital signs (blood pressure, heart rate, respiratory rate, oxygen saturation, and hydration). • Clean and dress any wounds. • Inform treating medical provider. • Provide analgesia if required and not contraindicated. • Arrange further tests as indicated, such as blood sugar levels and x rays. • Review current care plan and implement additional fall prevention strategies. • Provide fall prevention information (Tool 3J).	**Proceed to:** • Record neurologic observations, including Glasgow Coma Scale. Observe for signs indicating stroke, change in consciousness, headache, amnesia, or vomiting. • Get baseline vital signs (blood pressure, heart rate, respiratory rate, oxygen saturation, temperature, and hydration). • Clean and dress any wounds. • Arrange medical review. • Provide analgesia if required and not contraindicated. • Arrange further tests as indicated, such as blood sugar levels, x rays, ECG, and CT scan. • Review current care plan and implement additional fall prevention strategies. • Provide fall prevention information (Tool 3J).
Observations: • Continue observations at least every 4 hours for 24 hours or as required.	**Observations:** • Record vital signs and neurologic observations at least hourly for 4 hours and then review. • Continue observations at least every 4 hours for 24 hours, then as required. • Notify treating medical provider immediately if any change in observations.

Important Communications

- In the medical record, document the incident, outcome, and initial and ongoing observations, and update fall risk assessment and care plan.
- Notify the treating medical provider at the time of the incident, and schedule an interdisciplinary review of the patient's care.
- At handover, inform all clinical team members about the incident, any changes to the care plan, and possible investigation process.
- Notify family in accordance with your hospital's policy.

Glasgow Coma Scale

The Glasgow Coma Scale provides a score in the range 3-15; patients with scores of 3-8 are usually said to be in a coma. The total score is the sum of the scores in three categories. For adults, the scores follow:

Activity Score

Eye opening

None	1 = Even to supraorbital pressure
To pain	2 = Pain from sternum/limb/supraorbital pressure
To speech	3 = Nonspecific response, not necessarily to command
Spontaneous	4 = Eyes open, not necessarily aware

Motor response

None	1 = To any pain; limbs remain flaccid
Extension	2 = Shoulder adducted and shoulder and forearm rotated internally
Flexor response	3 = Withdrawal response or assumption of hemiplegic posture
Withdrawal	4 = Arm withdraws to pain, shoulder abducts
Localizes pain	5 = Arm attempts to remove supraorbital/chest pressure
Obeys commands	6 = Follows simple commands

Verbal response

None	1 = No verbalization of any type
Incomprehensible	2 = Moans/groans, no speech
Inappropriate	3 = Intelligible, no sustained sentences
Confused	4 = Converses but confused, disoriented
Oriented	5 = Converses and oriented

TOTAL (3–15): _____

Reference

Teasdale G, Jennett B. Assessment of coma and impaired consciousness. A practical scale. Lancet 1974;2(7872):81-4.

3O: Postfall Assessment for Root Cause Analysis

Background: A standardized approach to postfall evaluation is key to maintaining the patient's safety and for organizational learning about how to prevent future falls.

Reference: This tool is adapted from a tool developed by Ronald I. Shorr, M.D., M.S. See Shorr RI, Mion LC, Chandler AM, et al. Improving the capture of fall events in hospitals: combining a service for evaluating inpatient falls with an incident report system. J Am Geriatr Soc 2008;56(4):701-4.) The Confusion Assessment Method within this tool is adapted from a tool by Sharon K. Inouye, M.D., M.P.H. (See Inouye SK, van Dyck CH, Alessi CA, et al. Clarifying confusion. Ann Intern Med 1990;113(12):941-8.)

How to use this tool: The information below can be customized for use within your hospital. Note that the tool was originally used as part of a dedicated fall evaluation service that was called to investigate each fall. For details, see the Shorr reference. This tool can be used by staff nurses and information systems staff.

The tool may be used for the purpose of root cause analysis to prevent future falls in this patient and in future patients. This assessment should be performed in conjunction with a medical provider's or pharmacist's assessment of medications contributing to fall risk (see Tool 3I, "Medication Fall Risk Scale and Evaluation Tools") and a medical provider's assessment of laboratory test results, if appropriate. The Orthostatic Vital Sign Measurement tool (Tool 3F) and the Delirium Evaluation Bundle (Tool 3J) may be helpful in completing this tool. A separate tool (Tool 3N, 'Postfall Assessment, Clinical Review) covers how to assess and follow injury risk immediately after a patient has fallen.

Postfall Assessment

1. PATIENT/WITNESS DESCRIPTION OF FALL:

1.1. Can you remember anything about your fall?

__Yes __No The patient can't answer reliably

1.2. Did anyone witness the fall?

__Yes, by:
__No or don't know (if no good quality patient or witness description, go to part 2)

1.3. Where did you fall?

__Bathroom __Hall __Room __Other, describe:

1.4. What were you doing at the time of the fall?

__Don't remember
__ "Rolled out of bed"
__Trying to reach/pick-up something
__Trying to get in/out of bed to go to toilet/commode
__Trying to get in/out of bed for other reason
__Trying to get in/out of chair
__Trying to get on/off bedside commode/toilet
__Trying to use sink, shower, chair, or toilet/commode
__Trying to dress/undress
__Other, describe:

1.5. Why do you think you fell?

__Don't know, remember
__I had a recent lower extremity amputation
__Slipped, tripped
__Got lightheaded, dizzy, or "blacked out"
__Arms or legs got weak
__Tried to sit, but missed
__I lost my balance
__"Got tangled up" with IV, tubing, clothes, etc.
__Bed or chair not locked
__Other, describe:

2. BRIEF MENTAL AND PHYSICAL ASSESSMENT

2.1. Short Portable Mental Status Questionnaire

Question	Response			Error?
What are the date, month, and year?*	Date	Month	Year	
What is the day of the week?				
What is the name of this place?				
What is your phone number?				
How old are you?				
When were you born?				
Who is the current president?				
Who was the president before him?				
What was your mother's maiden name?				
Can you count backward from 20 by 3s?				

* A mistake on ANY part of this question should be scored as an error.

Total Errors: _____

SCORING*:

0-2 errors: normal mental functioning

3-4 errors: mild cognitive impairment

5-7 errors: moderate cognitive impairment

8 or more errors: severe cognitive impairment

* One more error is allowed in the scoring if a patient has had a grade school education or less. One less error is allowed if the patient has had education beyond the high school level.

Section 2.1 adapted with permission from Pfeiffer E. A short portable mental status questionnaire for the assessment of organic brain deficit in elderly patients. J Am Geriatr. Soc 1975;23(10):433-41. © E. Pfeiffer, 1994.

2.2. Confusion Assessment Method

In the 24 hours prior to the fall did this patient:	Yes	No
CAM 1a. Have an acute change of mental status from baseline?		
CAM 1b. Exhibit behavioral fluctuations (come and go)?		
CAM 2. Have difficulty focusing attention or appear easily distractible (for example, have difficulty keeping track of what was said)?		
CAM 3. Exhibit disorganized or incoherent thinking such as irrelevant conversation, unclear or illogical flow of ideas, or unpredictable switching from subject to subject?		
CAM 4. Are any of the following abnormal levels of consciousness observed (or reported) in the 24 hours prior to the fall? • Vigilant (hyperalert) • Lethargic (drowsy, easily aroused) • Stupor (difficult to arouse) • Coma (unarousable)		
If yes to CAM 1a and 1b and CAM 2 AND either CAM 3 or CAM 4, then delirium is likely to be present in this patient.		

Section 2.2 adapted from Inouye SK, van Dyck CH, Alessi CA, et al. Clarifying confusion. Ann Intern Med 1990;113(12):941-8. Used with permission, Sharon K. Inouye, M.D., M.P.H. ©2000, Hospital Elder Life Program. All rights reserved.

2.3. Severity of injury (check the most severe)

__None (skip to question 2.5)
__Minor (complaint of pain; requires ice, dressing, cleaning of wound, elevating of limb, or medication)
__Moderate (requires suturing, steri-strips, or splinting)
__Major (requires surgery, casting, traction, neurologic consultation for change in level of consciousness)
__*Possible,* at time of this evaluation major injury is suspected but not yet confirmed by tests
__*Definite,* at time of this evaluation major injury has been confirmed
__Death

2.4. Describe injuries; check all that apply

Injury	Yes	No	Site of Injury
Abrasion/bruise/laceration/hematoma			
Bleeding			
Pain/difficulty moving extremity			
Other:			

2.5. Orthostatic blood pressure

Blood Pressure (mm Hg)		Heart Rate (beats per minute)	
Systolic blood pressure (supine)		Heart rate (supine)	Can't obtain Refused
Diastolic blood pressure (supine)			
Systolic blood pressure (standing)	Need for orthostatic	Heart rate (standing)	Can't obtain Refused
Diastolic blood pressure (standing)	Need for orthostatic		
Systolic blood pressure (sitting)*		Heart rate (sitting)*	Can't obtain Refused
Diastolic blood pressure (sitting)*			

* Sitting measurements are only necessary if standing cannot be obtained.

3. NURSE INTERVIEW (NURSE ASSIGNED TO PATIENT)

3.1. How did you find out that this patient fell?

__I saw the patient fall
__Alarm went off
__Patient/witness called
__Heard noise/found patient on floor

3.2. What was the patient doing at time of fall?

__Don't know
__"Rolled out of bed"
__Trying to get in/out of chair
__Trying to get in/out of bed to go to the bathroom/commode
__Trying to reach/pick up something
__Trying to get in/out of bed for another reason
__Trying to get on/off toilet/bedside commode (BSC)
__Trying to use the bedside sink, shower, toilet/BSC chair
__Trying to dress/undress
__Other, describe:

3.3. Why do you think the patient fell/lost their balance?

__Don't know
__Catastrophic event (e.g., stroke, arrhythmia NOT orthostatic hypotension)
__Arms or legs got weak
__Got lightheaded, dizzy, or "blacked out"
__Tried to sit, but missed
__Secondary gain (e.g., seeking attention)
__Related to recent amputation
__"Got tangled up" in equipment
__Low blood sugar
__Slipped or tripped
__Lost balance
__Medications
__Bed, chair not locked
__Other, describe:

3.4. Prior to the patient's fall, what was his/her activity level (ask nurse this question)?

__Up ad lib
__Ambulate with assistance
__Bedrest
__Up in chair with assistance
__Other, describe:

3.5. <u>Prior to fall</u>, identify the ancillary walking aids patient had <u>available in room</u> (check all that apply):

__None
__Cane
__Walker
__Wheelchair
__Leg prosthesis
__Other

3.6. <u>Prior to fall</u>, were fall prevention measures in place?

	Yes	No
Falls precautions		
Fall alert identifier (door sticker)		
Bed alarm: if yes, check those that apply: Alarm sounded properly Alarm did not sound properly Alarm was disconnected		
Call light/bell in reach		no n/a
Other:		

3.7. What <u>CONNECTED</u> IVs/tubes were present at the time of the fall?

	Yes	No
IV (central line, peripheral)		
Bladder catheter		
Gastrostomy or other feeding tube		
Pneumatic compression stockings		
Other:		

4. OTHER IMPORTANT INFORMATION NOT COVERED ON THIS FORM

Please record orthostatic blood pressure readings in the patient's chart and return this form to the designated place in the staffing office.

3P: Best Practices Checklist

Background: This tool can be used to monitor your progress on identifying best practices in fall prevention for your hospital or hospital units.

Reference: Developed by Falls Toolkit Research Team.

How to use this tool: Complete the checklist. This tool should be filled out by the Implementation Team leader (or individual designated by the leader).

Use this tool to ensure you have not skipped any essential steps in your fall prevention efforts.

Best Practices Checklist

Practice	Date Completed
Identify a set of best practices	
Create a clinical pathway	
Identify key elements of a fall risk factor assessment	
Choose a tool for assessing risk factors	
Explore approaches to documenting and reporting results of fall risk factor assessment	
Develop fall prevention care plan based on identified risk factors	
Identify approaches to documenting and communicating care plan	
Develop system linking changes in fall risk factors to changes in care plan	
Ensure all levels of staff are aware of care plan	
Develop system linking care planning to actual interventions	
Choose or develop postfall assessment protocol	
Customize the set of practices for specific work units	

4A: Assigning Responsibilities for Using Best Practices

Background: This tool can be used to determine who will be responsible for each task identified in your set of best practices for preventing falls. One way to generate interest and buy-in from the staff is to ask them to self-assign their responsibilities from a prioritized list of tasks that need to be accomplished.

Reference: Developed by Falls Toolkit Research Team.

How to use this tool: Complete the table by entering the different best practices and the specific individuals who will be responsible for completing each task. This tool should be filled out by the Implementation Team leader in collaboration with the other team members.

Use this tool to assign and clarify the roles and responsibilities of each staff member. Types of staff and the types of responsibilities they might take on are summarized in Tool 4B, "Staff Roles."

What practices will we use?	Who will be responsible?
Example: Perform comprehensive fall risk assessment on admission, daily, or if condition deteriorates.	Example: RN

4B: Staff Roles

Background: This table gives an example of how responsibilities may be assigned among different staff members on the Unit Team and hospital personnel whose work brings them to the unit or includes interactions with the unit.

Reference: Developed by Falls Toolkit Research Team.

How to use this tool: The unit manager can use this tool to help assign specific individuals or groups to each task in Tool 4A, "Assigning Responsibilities for Using Best Practices."

Staff	Roles

RN	• Conducts or supervises accurate assessment and documentation of assessment of fall risk factors on admission, daily, and if condition deteriorates (or according to facility policy).
	• Documents care plan tied to identified risk:
	  ○ Mental status.
	  ○ Continence.
	  ○ Mobility level.
	  ○ Environmental risks (e.g., hooked up to IV).
	• Performs or supervises performance of care plan procedures or treatments:
	  ○ Close observation of delirious patients.
	  ○ Toileting schedule.
	  ○ Use of assistive devices.
	  ○ Maintenance of clutter-free environment.
	• Files incident report for new falls and carries out postfall assessment.
	• Educates patient/family about fall risk factors.

LPN	• Conducts accurate assessment and documents assessment of fall risk factors on admission, daily, and if condition deteriorates (or according to facility policy).
	• Documents care plan tied to identified risk:
	  ○ Mental status.
	  ○ Continence.
	  ○ Mobility level.
	  ○ Environmental risks (e.g., hooked up to IV).
	• Performs or supervises performance of care plan procedures or treatments:
	  ○ Close observation of delirious patients.
	  ○ Toileting schedule.
	  ○ Use of assistive devices.
	  ○ Maintenance of clutter-free environment.
	• Collaborates with other staff to ensure timely and accurate reporting of any falls and completion of postfall assessment.

Staff	Roles
CNA	• Reports any new fall risks to nurse. • Keeps environment around bed clutter free. • Offers assistance with toileting for patients with frequent toileting needs. • Keeps assistive devices within easy reach of patient.
Treating medical provider (e.g., physician, nurse practitioner, physician assistant)	• Reviews needs for specific types of rehabilitation therapy and orders such therapy, if appropriate. • Writes orders for activity level. • Reviews medications for fall risk.
Physical and/or occupational therapist	• Assesses patient's function and mobility levels according to scheduled protocol (e.g., after orthopedic procedures) or upon consultation. • Determines need for assistive devices and exercise program according to scheduled protocol (e.g., in rehabilitation unit) or upon consultation. • Educates patient and family on safety with transfers and ambulation.
Pharmacist	• Reviews medication lists of patients at high risk based on medication profile. • Discusses medications that may increase fall risk with physician using standardized approach (e.g., note in chart, rounds with hospitalist).
Environmental services staff	• Responds to reports of fall hazards (e.g., spills). • Keeps rooms and hallways free of clutter.
Dietitian	• Monitors patient's weight and nutritional status to avoid unintentional weight loss and loss of muscle mass. • Provides tube feed regimens that maximize mobility (e.g., choosing bolus rather than continuous tube feeding where appropriate).
Patient educator	• Works with nurse to provide appropriate educational materials and teaching to patients at risk for falls and their families.
Facilities engineer	• Participates in regularly scheduled environmental rounds to identify equipment in need of repair. • Responds to repair requests submitted by unit staff.
Information technology support personnel	For units with electronic health records: • Develops or refines documentation systems for fall risk assessment and care planning. • Develops or refines computerized order sets (e.g., mobility protocol). • Implements computerized alerts for medications that present high risk for falls, where appropriate.

4C: Assessing Staff Education and Training

Background: The purpose of this tool is to assess current staff education practices and to facilitate the integration of new knowledge on fall prevention into existing or new practices.

Reference: Adapted from Facility Assessment Checklist developed by Quality Partners of Rhode Island. Available at: www.healthinsight.org/Internal/assets/Nursing%20Home/PRU%20-%20Facility%20Assessment%20Checklist.pdf.

How to use this tool: Complete the form by checking the response that best describes your hospital. This tool should be filled out by the Implementation Team leader or designee in collaboration with the other team members.

This tool can be used to identify areas for improvement and develop educational programs where they are missing.

Facility Assessment

Date:

A. Does your hospital have initial and ongoing education on fall prevention and management for both nursing and nonnursing staff?

__ **No**. If no, this is an area for improvement.

__ This is an area we are working on.

__ **Yes**.

B. Does your facility's education program for fall prevention and management include the following components?

	Yes	No	Person Responsible	Comments
Are new staff assessed for their need for education on fall prevention and management?				
Are current staff provided with ongoing education on the principles of fall prevention and management?				
Does education of staff provide discipline-specific education for fall prevention and management?				
Is there a designated clinical expert available at the facility to answer questions from all staff about fall prevention and management?				
Is the education provided at the appropriate level for the learner (e.g., CNA vs. RN?)				
Does the education provided address risk factor assessment tools and procedures?				
Does the education include staff training on documentation methods related to falls (e.g., circumstances of fall if applicable, risk factors for falls, how those risk factors have been addressed)?				

C. In which areas of knowledge does the assessment suggest staff need more education?

4D: Implementing Best Practices Checklist

Background: This tool can be used to monitor your progress on implementing best practices.

Reference: Developed by Falls Toolkit Research Team.

How to use this tool: The Implementation Team leader (or individual designated by the leader) should complete the checklist.

Use this tool to ensure you have not skipped any essential steps in your fall prevention efforts.

Implementing best practices checklist

Task	Date Completed
Roles and Responsibilities of Staff	
Assign specific roles and responsibilities to:	
Members of the Unit Team	
Unit Champion	
Organizing the Prevention Work	
Identify paths of ongoing communication and reporting	
Develop mechanisms to address accountability	
Identify strategies for building new practices into daily routine	
Refine preliminary implementation plan	
Ensure support from key stakeholders	
Initiate plan to pilot test new practices	
Establish strategy for engaging staff	
Create education plans to help staff learn new practices	

5A: Information To Include in Incident Reports

Background: The purpose of this tool is to audit incident reports of falls to see if the reports provide adequate information for root cause analysis. Alternatively, the information below may be used in conjunction with Tool 3O, "Postfall Assessment for Root Cause Analysis" to develop a template to be filled out when reporting a fall.

Reference: Adapted from National Health Service publication Slips, Trips, and Falls in the Hospital, available at www.nrls.npsa.nhs.uk/resources/?EntryId45=59821.

How to use this tool: Review your last 10 incident reports for falls and see whether the information below is captured in the report. This tool should be used by the quality improvement manager. Information systems staff may also use this tool to develop or update electronic templates for submitting incident reports.

Use this tool to identify areas for improvement and develop educational programs where there are gaps.

Information To Include in Incident Reports

Examples of Information		Reason To Collect This Information
Reporting factors	Witnessed/not witnessed	Make a clear distinction between what was seen or heard and the patient's account of what happened.
	Outcome of investigations recorded	When patients are reported as having x rays or other investigations after a fall, the results of the x ray or other investigation should be included in the report.
	Type of injury	Be specific, e.g., "fractured tibia," not "broken leg."
Environmental factors	Buzzer/bell available within reach before fall	Highlight whether there is an issue about accessing call bells.
	If a fall from bed, whether bedrails were in use	Help assess how bedrail use is affecting falls or injury.
	Floor wet/dry/talcum powder	Reflect on cleaning regimen and need for nonslip surfaces.
	Footwear	If problems with missing or unsuitable footwear are highlighted, organizations could develop systems for providing alternatives.
	Walking aid in use/in reach	It may highlight bedside storage issues or access to walking aids for patients admitted in the evenings or on the weekend.
Patient factors	Mental state	Identify those patients most vulnerable to falls because of sedation, dementia, or delirium.
	First fall this admission or repeat fall	Balance resources between preventing initial falls and secondary prevention.
	Days since admission	Ensure timescales for assessing and preventing falls are tailored to when falls are most likely to occur.
	Medication affecting risk of falls	Sedative and psychotropic medication, or medication with drowsiness as a side effect, may contribute to falls.

5B: Assessing Fall Prevention Care Processes

Background: This sample protocol illustrates how to evaluate whether fall prevention care processes are occurring as they should be.

Reference: Adapted with permission from: Royal College of Physicians *Implementing FallSafe: Care bundles to reduce patient falls.* London, UK: Royal College of Physicians; 2012. Available at: www.rcplondon.ac.uk/resources/falls-prevention-resources.

How to use this tool: Use this form to observe the patient at bedside and check the notes of 20 patients on your unit every month (ideally the same date each month). To select patients:

> If you are a small unit, collect it from the first 20 patients who come first in handoffs.
> If your unit has two teams, take the first 10 patients from each team.
> And so on if you have three teams, etc.

The assessment requires different types of information. Depending on your hospital's record system and workflow, the information may be found in multiple locations. Make sure the people completing the form know where to find the information, which may require modifying the form to include explicit directions or cues.

Observations at the bedside should occur at the time of day when most patients who are well enough would be out of bed. If your hospital uses hourly rounding logs, these can also be checked for completeness during the observations. For the chart review, check the medication administration record (MAR) and any notes easily accessible on the unit, including nursing notes, medical notes, physical therapy notes, and occupational therapy notes. The bedside observations and the chart review can be completed separately but should be done on the same day.

This form should be completed by the unit manager or unit champions. This tool should be used to determine whether your hospital unit is carrying out its fall prevention care processes according to plan. It can be modified according to the needs of your specific hospital or unit by adding/deleting rows to customize the processes you want to monitor. Your hospital or unit might use this as an initial screen for assessing progress and then use the results to identify specific components for additional evaluation.

	Sample of 20 patients (or all patients if ward has fewer than 20 patients)																				
Example	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Use to track patient names/initials/bed number/room number if you need to	FH	AB	ST	YH	LT	YT	TY	UP	KL	MJ	NM	HK	LT	FR	GT	HY	DE	ES	FR	TT	**Totals** (yes out of total plus N/A)
All 20 patients:	If small ward with fewer than 20 patients, write total here:																				
Observe: call bell in sight & reach?	Y	N	n/a	Y	Y	Y	Y	Y	n/a	Y	Y	Y	Y	N	Y	Y	n/a	N	Y	Y	14/17 + 3 n/a
Observe: safe footwear on feet?	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y	Y	n/a	n/a	N	N	14/18 +2 n/a
Observe: room free of clutter?	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	N	N	Y	Y	Y	Y	16/20
Medication administration record: given night sedation last night?	N	N	N	N	N	N	N	N	N	N	Y	N	N	N	N	N	N	N	Y	N	2/20
Chart: asked about history of falls?	Y	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	18/20
For any of the 20 pts age 70+:	Number of patients AGE 70+:																				13
Chart: cognitive screen?	Y	N	-	-	-	-	-	Y	n/a	Y	Y	Y	Y	N	Y	-	-	N	Y	Y	9/12 + 1 n/a
For any of the 20 patients who are "higher risk"*:	Number of higher risk patients:																				8
Chart: full medication review requested?	Y	Y	-	-	-	-	-	-	-	Y	Y	N	Y	Y	-	-	-	-	Y	-	7/8

***** In some wards all patients are counted as high risk, for other wards only some. Follow your local policy.

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*** Sample of 20 patients (or all patients if ward has fewer than 20 patients). Remember "*not documented=not done*" ***

Filled out by:						WARD:														**TOTALS** (YES out of total plus N/A)
DATE:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Use to track patient names/initials/bed number/room number if you need to																					
All 20 patients:	If small ward with fewer than 20 patients, write total here:																				
Observe: call bell in sight & reach?																					
Observe: safe footwear on feet?																					
Observe: room free of clutter?																					
Medication administration record: given night sedation last night?																					
Chart: asked about history of falls?																					
For any of the 20 pts age 70+:	Number of patients AGE 70+:																				
Chart: cognitive screen?																					
For any of the 20 patients who are "higher risk"*:	Number of higher risk patients:																				
Chart: full medication review requested?																					

***** In some wards all patients are counted as high risk, for other wards only some. Follow your local policy.

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5C: Measuring Progress Checklist

Background: This tool can be used to monitor progress on your fall prevention efforts.

Reference: Developed by Falls Toolkit Research Team.

How to use this tool: The Implementation Team leader (or individual designated by the leader) should complete the checklist.

Use this tool to ensure you have not skipped any essential steps in your fall prevention efforts.

Measuring Progress

Measuring fall rates	
Staff know definition of fall and definition of injurious fall	
Management culture rewards full reporting of falls	
Fall rates (e.g., falls per 1,000 occupied bed days) are calculated	
Fall rates are monitored at least quarterly, preferably monthly	
Information on rates is disseminated to key stakeholders and staff	
Root cause analysis is conducted for each fall with at least moderate level of injury	
Measuring key processes of care	
Fall risk factor assessment is performed within 24 hours of admission	
Care plan addressing every deficit on fall risk factor assessment has been developed and is being implemented	

6A: Sustainability Tool

Background: This tool can be used to identify sustainability issues in planning and implementing your fall prevention efforts.

Reference: Adapted with permission from: Edwards JC, Feldman PH, Sangl J, et al.Sustainability of partnership projects: a conceptual framework and checklist. Jt Comm J Qual Patient Saf 2007;33(12 Suppl):37-47.

How to use this tool: The Implementation Team leader (or individual designated by the leader) should complete this checklist.

Use this tool to ensure you have appropriate resources and strategies in place to sustain fall prevention efforts.

Elements of Sustainability	Notes
Identity (Goals)	
Is guiding vision clearly specified?	
Is change goal focused (not too encompassing) and actionable?	
Is "sustainability goal" clarified (i.e., what will be sustained?) and at what level is this goal? • Specific process or outcome • General capacity to improve on more than one outcome or process • Partnership itself	
Problem solving: If vision and goals are not clearly specified, focused, and actionable, what strategies will be adopted to address this issue?	
Infrastructure	
Human resources	
• Are the internal/external human resources in place to sustain the effort going forward (describe—e.g., team, senior leadership, champion, opinion leader)?	
• Are external supports in place to sustain the effort going forward (describe—e.g., mentors, advisory group, professional associations, community advocates)?	
Technical resources	
• Are materials developed and accessible if sought?	
• Are there listservs, meetings, and other mechanisms to promote ongoing communication?	
• Are training and technical support available to develop and maintain necessary skills?	
• Are information systems in place to support the effort going forward?	
Financial resources	
• Is funding adequate for the time period required to achieve the change goal?	
• Is funding source stable for the time period needed to accomplish guiding vision?	
Problem solving: If key elements are lacking, has a strategy been developed to address this issue?	
Incentives	
Is project perceived to add "value" within the organization (i.e., people can see something in it for them)?	
Can value be measured quantitatively (i.e., decrease in injurious fall rate or maintenance of low injurious fall rate)?	
Are other intangible values/incentives perceived (e.g., improved reputation, pride, sense of accomplishment)? Describe.	

Elements of Sustainability	Notes
Is the project perceived as having disincentives? Describe.	
Problem solving: If positive incentives are inadequate or disincentives are identified, have strategies been proposed to address this issue?	
Incremental Opportunities for Participation	
Can the project goals be best achieved with varied levels and types of participation? If **yes**, then continue to next two questions.	
Are there opportunities for varied geographic participation (e.g., among units within a hospital; among hospitals within a consortium; participation in regional vs. national initiative)?	
• If yes, what types of varied geographic participation opportunities are available?	
• Is the geographic scale workable?	
Are varied roles for participation in the project provided? If **yes**, what varied roles for participation are provided?	
• Observer role	
• Technical assistance role	
• Data collection role (e.g., review charts or incident reports)	
• Advisor or consultant role	
• Implementer role	
• Changing role throughout the project	
• Can pick and choose among offered activities	
• Can opt out and then opt back in later	
• Other	
Problem solving: If goals can be achieved with varied levels and types of participation but no provision has been made for participation in different ways, what strategies can be used to address this issue?	
Integration	
Are change goals aligned with strategic goals of participating entities (macro level)?	
Are change goals integrated with other performance measures and reward systems of participating entities (macro level)?	
Are change goals integrated with existing programs, policies/procedures, and information systems of participating entities (micro level)?	
Problem solving: If change goals are not aligned and integrated with the strategic goals, performance measures, reward systems, programs, policies/ procedures, and information systems of participating entities, what strategies can be used to address this issue?	

Appendix: Bibliography of Studies Implementing Fall Prevention Practices

The recommendations presented in this toolkit are based on a review of the evidence in the scientific literature, consensus recommendations, and expert input. To provide additional guidance for your fall prevention program, we have included references to programs that implemented many of the strategies presented in the toolkit within U.S. acute care hospitals.

For a full evidence review of the literature, see Hempel S, Newberry S, Wang Z, et. al. Review of the evidence on falls prevention in hospitals. RAND Working Paper WR-907-AHRQ. Santa Monica, CA: RAND Corporation; 2012. Available at: www.rand.org/pubs/working_papers/WR907.html.

Toolkit Section	Studies Implementing Fall Prevention Practices
1. Are you ready for this change?	• Nine programs implemented strategies to gain leadership support.[1-9] • One program addressed culture change.[9] • One program incorporated fall prevention into the organizational strategic plan.[7]
2.1. How can you set up the implementation team for success?	• Sixteen programs formed interdisciplinary teams.[5,7-21] Two additional programs formed other implementation teams.[3,22] • One program addressed other strategies to help set up the Implementation Team for success.[18]
2.2. What needs to change and how do you need to redesign it?	• Seven programs followed systematic approaches to analysis and implementation such as a Continuous Quality Improvement model,[5,9] Plan-Do-Program-Act,[18,23] Plan-Do-Check-Act,[13,19] or Rapid Improvement Event.[24] • One program assessed current staff knowledge of fall prevention.[25]
2.3. How should goals and plans for change be developed?	• One program developed an implementation plan.[13]
3.2. What are universal fall precautions and how should they be implemented?	• Ten programs implemented scheduled rounding to address patient needs.[7,10,25-32] • Nine programs conducted regular environmental safety inspections or other strategies to make the environment safer.[7,10,21,28,33-37] • Fourteen programs implemented other universal fall precaution strategies.[6,10,12,13,19,22,24,27,35,36,38-41]

Toolkit Section	Studies Implementing Fall Prevention Practices
3.3. What is a standardized assessment of risk factors for falls, and how should this assessment be conducted?	• Based on the evidence review, the Morse Falls Scale and STRATIFY are the most thoroughly studied fall risk assessment tools. Both scales have established reliability and validity, but research has shown that the scores from these tools may not predict falls any better than a clinician's judgment. • Fall risk assessments were implemented in 38 programs.[1,3,6-9,11-22,24 28,30,32,33,35-46] Five programs used the Morse Fall Scale.[13,26,28,42,45] One program used a medication fall risk assessment.[28]
3.4. How should identified risk factors be used for fall prevention care planning?	• Thirty-five programs implemented structured care plans for fall prevention.[1-3,5-15,20-22,25,27,30,32,33,35-42,46-50] • Five programs addressed medication review,[4,16,18,26,46] four programs included physical therapy review or mobility,[4,10,16,51] and two programs implemented strategies to address patients with altered mental status or delirium prevention.[4,10] • One program used specially configured rooms equipped with safety equipment.[34] • Twenty-four programs addressed patient and family education through handouts or posters in patient rooms.[6,7,9,12,14-20,22,24,25,27,28,31,32,35,37-40,42] • Programs also discussed strategies for documentation and communication of care planning. Nineteen programs addressed fall risk documentation and communication.[1,7,10,11,13-15,17-19,22,24,25,35,38,39,46-48] • Eight programs had care plans disseminated at change of shift reports.[3,11,19-21,32,47] Twenty-six programs used other strategies to communicate the care plan.[1,5-8,10-12,14,15,17,20-23,25,27,30,32,33,39-42,47,48] • One program implemented postfall safety huddles to improve communication between staff, patients, and families.[32]
3.5. How should you assess and manage patients after a fall?	• Thirteen programs conducted postfall reviews.[2,9,11,18-22,24,27,32,33,52]

Toolkit Section	Studies Implementing Fall Prevention Practices
4.1. What roles and responsibilities will staff have in preventing falls?	• Three programs implemented strategies to optimize roles and responsibilities to provide the best care possible.[3,23,53] • Two programs used Unit Champions during the implementation process.[11,18] • One program discussed enhancing communication and responding to patients' needs in a timely fashion.[53] • Six programs implemented strategies to integrate fall prevention into ongoing work processes.[10,11,13,36,48,54] • Six programs built documentation of fall risk and/or care planning into their electronic documentation systems.[10,18,32,35,48,54] Three additional programs implemented strategies to streamline documentation.[3,13,36]
4.3. How do you put the new practices into operation?	• Seven programs implemented strategies to promote unit-level buy-in.[7,11,13,18,22,32,42] • Six programs implemented strategies for ongoing monitoring of implementation progress or assessed barriers to implementation.[7,13-15,26,27] • Thirteen programs piloted the program, tested new strategies in select areas of the hospital, or phased in interventions.[6-8,12,15,17-19,22,24,32,35,45] • One program used the development of a policy and procedures to facilitate implementation.[46] • Two programs implemented strategies to get staff engaged and excited about fall prevention.[11,39] • Forty-one programs used staff education or other strategies to help staff learn new practices.[1-7,9-15,18-25,27-32,35,37,38,40,41,43,45-49,52,55]
5.1. How do you measure fall rates?	• Thirteen programs monitored and disseminated data on falls.[2,5,7-9,13,19,20,25,28,39,41,47] • One program documented falls in incident reports.[41] • Five programs conducted root cause analysis of falls to help identify ways to improve care.[2,9,11,12,24]
5.2. How do you measure fall prevention practices?	• Eighteen programs measured and monitored adherence to key processes of care.[1,2,9,13,15,18,24,25,28,29,31,38,39,41,42,45,47,51] • One program assessed care planning to ensure that it addressed each deficit on the fall risk factor assessment.[27] • One program conducted medical record audits to determine compliance with recommended interventions and postfall documentation.[24]

Toolkit Section	Studies Implementing Fall Prevention Practices
6. How do you sustain an effective fall prevention program?	• One program evaluated policy twice yearly to see if modifications were needed.[46] • Seven programs implemented ongoing awareness efforts and project updates to keep staff engaged.[8,9,14,25,30,37,41] • Five programs incorporated fall prevention training into staff orientation.[4,7,25,35,39]

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