

Preventing Pressure Ulcers in Hospitals



A Toolkit for
Improving
Quality of Care



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Overview

The Problem of Pressure Ulcers

Each year, more than 2.5 million people in the United States develop pressure ulcers. These skin lesions bring pain, associated risk for serious infection, and increased health care utilization. Moreover, the Centers for Medicare & Medicaid (CMS) no longer provides additional reimbursement to hospitals to care for a patient who has acquired a pressure ulcer while under the hospital's care. Thus, pressure ulcer prevention presents an important challenge in acute care hospitals. A number of best practices have been shown to be effective in reducing the occurrence of pressure ulcers, but these practices are not used systematically in all hospitals.

The Challenges of Pressure Ulcer Prevention

Pressure ulcer prevention requires an interdisciplinary approach to care. Some parts of pressure ulcer prevention care are highly routinized, but care must also be tailored to the specific risk profile of each patient. No individual clinician working alone, regardless of how talented, can prevent all pressure ulcers from developing. Rather, pressure ulcer prevention requires activities among many individuals, including the multiple disciplines and multiple teams involved in developing and implementing the care plan. To accomplish this coordination, high-quality prevention requires an organizational culture and operational practices that promote teamwork and communication, as well as individual expertise. Therefore, improvement in pressure ulcer prevention calls for a system focus to make needed changes.

Toolkit Designed for Multiple Audiences

The aim of this toolkit is to assist hospital staff in implementing effective pressure ulcer prevention practices. The toolkit was developed under a contract with the Agency for Healthcare Research and Quality through the ACTION program (Accelerating Change and Transformation in Organizations and Networks), with additional support from the Health Services Research and Development Service of the Department of Veterans Affairs. It was created by a core team with expertise in pressure ulcers and organizational change at the Boston University School of Public Health. An expert advisory panel and quality improvement teams at six participating medical centers provided input.

The toolkit's content draws on literature on best practices in pressure ulcer prevention and includes both validated and newly developed tools. The toolkit was tested in the six participating medical centers. Their feedback influenced this final version and their experiences are reflected in many of the examples provided.

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 plan and put the new prevention strategies into practice. Because the guide is too long to be read by everyone, the toolkit includes one-page *pressure ulcer prevention implementation highlights* to introduce the project to other key players, such as hospital senior management and unit nurse managers. This highlights tool can be found at the beginning of section 7 ([Tool OA 'Introductory Executive Summary for Stakeholders'](#)). The full guide 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.

Implementation Guide Organized To Direct Hospitals Through the Change Process

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

- Are we ready for this change?
- How will we manage change?
- What are the best practices in pressure ulcer prevention that we want to use?
- How should those practices be organized in our hospital?
- How do we measure our pressure ulcer rates and practices?
- How do we sustain the redesigned prevention practices?

Sections of the Guide

These questions make up the major sections of the implementation guide. Each of these major questions is in turn organized by a series of more detailed questions to guide the Implementation Team through the improvement process, as summarized below in “What To Find in Each Section.” Each section begins with a brief explanation of why the question is relevant and important to the change process or to pressure ulcer prevention. Each section concludes with action steps and specific resources to support the actions needed to address the questions.

Printer-friendly versions of all these 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 routine basis. Sections also include references or links to more detailed resources for those who want to explore an issue in more detail.

Tailoring 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 plan your processes to change. Section 2 includes a tool to help you develop an action plan that will reflect the steps you need to take and a preliminary timeline for accomplishing them.

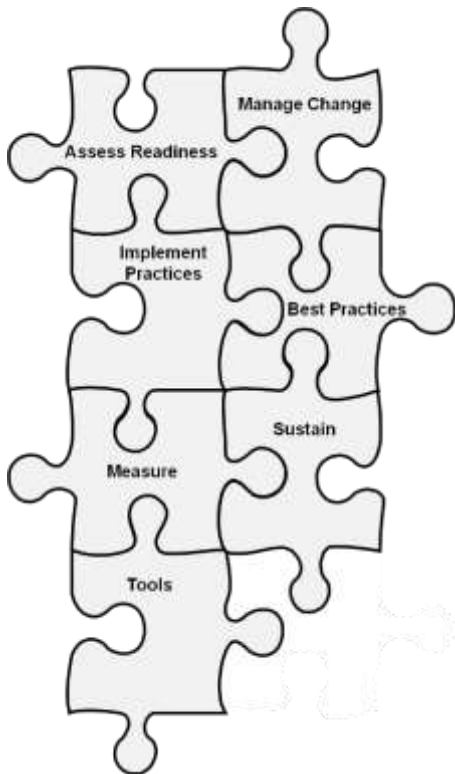
All the steps outlined here are important, but hospitals may have their own approaches in tailoring the toolkit to their needs. The guide can be used as a reference document with sections consulted selectively as needed. To aid you in finding the pieces you need, the questions that guide the full process are listed in “What To Find in Each Section” and the location of subjects can be found in the Key Subject Index.

Because the changes needed are usually complex, most organizations take at least a year to develop and incorporate the new pressure ulcer 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






It is important to recognize that 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. 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. Just as people approach puzzles differently, with some starting with the outside border and others starting in the center, both strategies can end with a completed puzzle.

We represent this view of the guide as a puzzle with the image below. To orient readers as you move through 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, additional helpful materials are identified as follows:

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 Examples were drawn from experiences at the participating medical centers, as well as from other organizations that the study team had knowledge of.
	Denotes additional background material for those interested in pursuing this area in more detail

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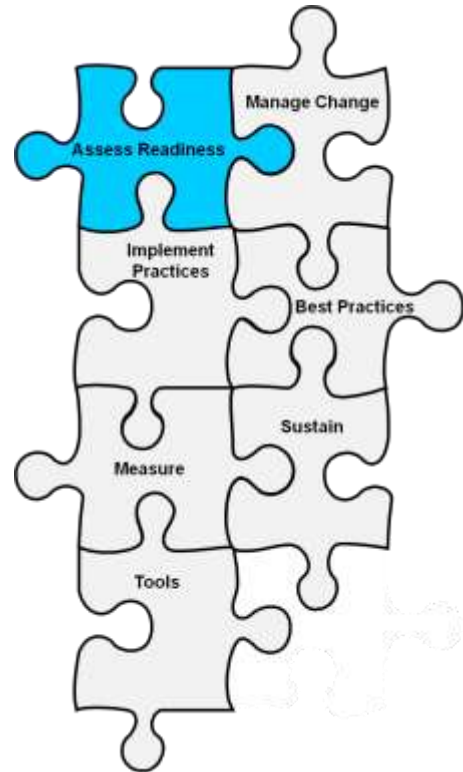
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1. Are we ready for this change?

Because pressure ulcer care is complex, efforts to improve pressure ulcer prevention require a system approach that will involve organizational change. Bringing about organizational change of any type is difficult. It is even more difficult when it involves multiple, simultaneous modifications to workflow, communication, and decisionmaking as are needed in a pressure ulcer prevention initiative. Failure to assess your organization's readiness for the change at multiple levels can lead to unanticipated difficulties in implementation, or even the complete failure of the effort. Each of the questions below will help you and your organization explore readiness and identify action steps to improve it, if necessary.

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



1.1 Do organizational members understand why change is needed?

Readiness requires both the capability to make changes (e.g., knowing what the new prevention protocol is and how to use it) and the motivation to make the change. That motivation may be helped along by external factors, such as Federal or State mandates. But it 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.

There are many potential reasons to implement a pressure ulcer 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 or spike in pressure ulcer rates?
- Is your facility responding to changes in CMS reimbursement policy?
- Have there been any notable adverse events that were pressure-ulcer related?
- Has your facility been the target of a legal action related to a pressure ulcer?
- Do staff members have personal experience of a family member affected by a pressure ulcer?

Did you know?

Number affected: 2.5 million patients per year.

Cost: Pressure ulcers cost \$9.1 billion to \$11.6 billion per year in the United States. Cost of individual patient care ranges from \$20,900 to \$151,700 per pressure ulcer. Medicare estimated in 2007 that each pressure ulcer added \$43,180 in costs to a hospital stay.

Lawsuits: More than 17,000 lawsuits are related to pressure ulcers annually. It is the second most common claim after wrongful death and greater than falls or emotional distress.

Pain: Pressure ulcers may be associated with severe pain.

Death: About 60,000 patients die as a direct result of a pressure ulcer each year.

Links to the source of these facts are included in the resources section on the next page.

While those who have initiated a focus on pressure ulcer prevention may clearly understand the needed changes and the reasons for them, there may be great variation across the organization in levels of knowledge and motivation in this area. Others in your hospital may have different reasons, so it is important to define the issues and reasons for change. This process will help make the case for why a pressure ulcer prevention initiative is needed now.

Updating knowledge and changing attitudes requires not only sharing new information but also assessing and addressing existing knowledge and attitudes that may undermine change efforts if left unaddressed. Past surveys of both medical and nursing staff have shown that both groups have a poor understanding of the costs and importance of pressure ulcers. Be sure to survey all types of staff members involved in clinical care, since awareness of the importance of pressure ulcer prevention is an interdisciplinary responsibility.



- Identify the reasons serving as the impetus for a pressure ulcer prevention program in your health care organization. If they are general and not specific to your hospital, you may want to find cases or examples that will 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 pressure ulcer program. This group may include as many as 10 or 20 people who have a stake in this issue.
- Gather their input and begin to clarify the reasons for needed change.
- Develop consensus on reasons this program needs to go forward.
- Assess the extent to which organizational members beyond potential supporters understand the reasons that a comprehensive pressure ulcer 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 pressure ulcer problem is worst or where staff are most enthusiastic about pressure ulcer reduction. These staff are most likely to understand why change is needed, so find out what they think.



Consider administering a survey to assess clinical staff attitudes about pressure ulcers. An 11-item survey adapted from a larger survey by Moore & Price provides a sample tool. The survey instrument and scoring information can be found in Tools and Resources ([Tool 1A 'Clinical Staff Attitudes Toward Pressure Ulcer Prevention'](#)).

→ Several hospitals that recently used this tool to assess staff attitudes discovered some surprises that had immediate implications for staff education in this area



If you want to create your own survey, sites such as Survey Monkey (www.surveymonkey.com) are free for simple surveys. Consider using this to field an anonymous survey assessing awareness of the clinical and cost impact of pressure ulcers, and of the perceived importance of this area.



Facts and other important data can be found in Statistical Brief # 64: Hospitalizations Related to Pressure Ulcers Among Adults 18 Years and Older, 2006. This resource can be accessed through the Healthcare Cost and Utilization Project: www.hcup-us.ahrq.gov/reports/statbriefs/sb64.pdf.

More information about the Moore & Price attitude survey can be found in their article: Moore Z, Price P. Nurses' attitudes, behaviors, and perceived barriers towards pressure ulcer prevention. *J Clin Nurs* 2004;13(8):942-52.

1.2 Is there urgency to change?

Beyond understanding why the change is needed to improve the prevention of pressure ulcers, 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?

In considering your arguments, you will want to take into account current organizational attention to pressure ulcers. For example, does the organization have a certified wound care nurse? If not, who has lead responsibility for wound care? Are pressure ulcer rates regularly documented and reported? If so, who receives the reports and acts on them? Answers to these questions will influence the way you make your case for improving pressure ulcer prevention.

To the extent that the building blocks for improving prevention are not present, your task of increasing urgency will be more difficult. And mounting an effective improvement effort will likely require leadership support of greater investment, as discussed in section 1.3, and more resources, as described in section 1.5.

Based on your assessment of the current understanding of the situation, begin to explore topics or themes that can be used to increase awareness and urgency.



- Reach out beyond those already supportive of efforts to strengthen pressure ulcer prevention to begin talking with your colleagues about pressure ulcer 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. (The responses to the survey questions suggested above may be helpful here).
- Conduct a stakeholder analysis in order to identify key people and departments that may have a stake in the success of this project.



A template for stakeholder analysis can be found in Tools and Resources ([Tool 1B 'Stakeholder Analysis'](#))



Consider the introductory slide presentation and other resources available through the Institute for Healthcare Improvement:
www.ihl.org/IHI/Programs/Campaign/PressureUlcers.htm.

The template for stakeholder analysis in Tools and Resources was adapted from a set of project management templates available at:
www.businessballs.com/project%20management%20templates.pdf.



Creating Urgency

Urgency can be created in a variety of ways. At one hospital, nurses in the surgical intensive care unit (SICU) felt they were delivering exceptional care. Unfortunately, due to a high incidence of pressure ulcers (33%) patients were not being accepted to the “good” rehabilitation hospital in town and their recovery slowed. A meeting with the rehabilitation hospital helped nurses learn best practices to prevent pressure ulcers. Now incidence of pressure ulcers is down to 2 percent. At this hospital, understanding how a high incidence of pressure ulcers was affecting patient outcomes helped create urgency among the staff nurses.

At another hospital, a new pressure ulcer monitoring system and an external review by the Department of Public Health motivated nurses to work on decreasing pressure ulcer rates. The hospital implemented a new automated mechanism to identify patients at risk for developing pressure ulcers, along with a referral system for patients who were at risk on the Braden Scale. This new way of identifying and monitoring pressure ulcers increased awareness among the staff and helped them better target their efforts. Around the same time, the State Department of Public Health came to the hospital for a site visit in response to a serious reportable event. The external review of clinical practices created additional urgency to keep rates low.

1.3 Does senior administrative leadership support this initiative?

It is crucial to make sure that your organization’s leadership team shares the urgency to change pressure ulcer practices and is willing and able to provide complete and ongoing support for this change effort. Lessons learned from key pressure ulcer prevention initiatives provide us with the evidence that support is needed from both the top-level administration as well as those at the bedside. Facilities that have already transitioned to a shared leadership model may be able to take a different approach through the channels that already exist for bottom-up input and leadership.

In a shared leadership model, the interdependence and expertise of staff at all levels is appreciated and staff are involved in key committees, developing the ability to analyze decisions from multiple perspectives. For other facilities that have a more traditional leadership structure

and approach, the assessment and cultivation of senior leadership support will be a more crucial process.

Consider how support for this effort fits with other institutional values and commitments in order to frame it most effectively to obtain and maintain leadership attention. While you may not know at the outset **all** the kinds of support that will be needed, it is clear that the 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 support the effort to strengthen prevention of pressure ulcers, you will need to build the case for change. Building the case for some stakeholders, such as your chief financial officer, may be a business case. You may discuss how much pressure ulcers cost the hospital each year in terms, for example, of longer lengths of stay, additional staff time, and, as reimbursements change, increased readmissions. For other stakeholders, such as the clinical chiefs and nurse executive, it may be a clinical case around increased pain, morbidity, and mortality.

Many hospitals have a strong emphasis on quality improvement and an improvement infrastructure to support it. Consider contacting quality improvement (QI) 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.

In order to assess leadership support and other questions raised here, consider using a facility-level assessment similar to this one.

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 facility has implemented a shared leadership model		
There is a dedicated budget allocated for patient safety activities		
The budget includes funding for education and training on patient safety issues such as pressure ulcer prevention		
Improved pressure ulcer prevention is a priority within the facility		
The facility has implemented a pressure ulcer prevention policy		
Current pressure ulcer prevention goals are being addressed		
There are visible role models/champions for pressure ulcer prevention		



The tool for assessing leadership support can also 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 there is no senior management responsibility for patient safety, earmarked funds for patient safety, patient safety education, or champions for pressure ulcer prevention, launching a pressure ulcer prevention project is likely to be extremely difficult, if not impossible. Ideally, they will share the urgency to improve and 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 pressure ulcer 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.
- Develop the case for pressure ulcer prevention targeted to the priority concerns of the key leaders using templates linked below as examples.



A template for developing a business case for pressure ulcer prevention can be found in Tools and Resources ([Tool 1D 'Business Case Form'](#)).



Consider adapting the approach recommended by the Canadian Association of Wound Care to make a quantitative case for improving pressure ulcer prevention: www.preventpressureulcers.ca/decision-maker/decision-maker.html.



The leadership support assessment above is based on one developed for hand hygiene improvement work; other aspects of the original project may also be of interest to you:

www.health.gov.on.ca/en/ms/handhygiene/docs/9_8_Facility-Level_Assessment_15Feb08.pdf.

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. These individuals would be from various disciplines and may include physicians, unit managers, wound care nurses, nutritionists, or staff members with a particular interest in this area. 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 pressure ulcer prevention are likely to be. Some may be obvious, such as the Wound, Ostomy, and Continence Nurse (WOCN), 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?
- Are there individuals in that part of the organization who would be willing to take ownership?



In identifying potential owners or champions for the effort, consider the tips here: teamstepps.ahrq.gov/abouttips.htm.

1.5 What kinds of resources are needed?


In addition to the Implementation Team, improvement projects require resources of various kinds, depending on the size and scope of the project. Launching an effort without first ensuring adequate resources can derail your project at almost every step. Resources needed 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.

Are funds available for the program? Any new initiative will cost money indirectly in staff time and resources or directly for printing and materials. It is important to meet with senior administrators to determine what budget may be available.


Consider creating a checklist to identify resource needs, such as funds, staff education programs, and information technology support.

Resource Needs Assessment	Needed: Yes/no	Notes on what needed
Funds		
Other resources:		
Staff education programs		
Quality improvement experts		
PT/OT consultation on work practices		
Information Technology support		
Specific products/tools (e.g. bed and chair surfaces)		
Facilities and supplies (e.g. meeting rooms)		
Printing/copying		
Graphics/design		
Nonclinical time for team meetings and activities		
Other		

At the beginning of the project, 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 wound care nurses, data system for reporting pressure ulcer 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 also 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 pressure ulcer prevention project.
- Ask for what you will need to accomplish some significant changes.

1.6 What if we are not ready?

You should not move ahead 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 take steps 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, it is essential to build support and readiness before launching a full-scale change effort.

Some ways to build support and readiness may include:

1. Trying the changes in a single receptive unit to demonstrate success to the rest of the organization and build the case for change;
2. 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;
3. Collecting and sharing data on magnitude of pressure ulcer incidence in your facility to establish project relevance;
4. Identifying and recruiting project allies who can help spread the word; and
5. Conducting a general staff awareness campaign.

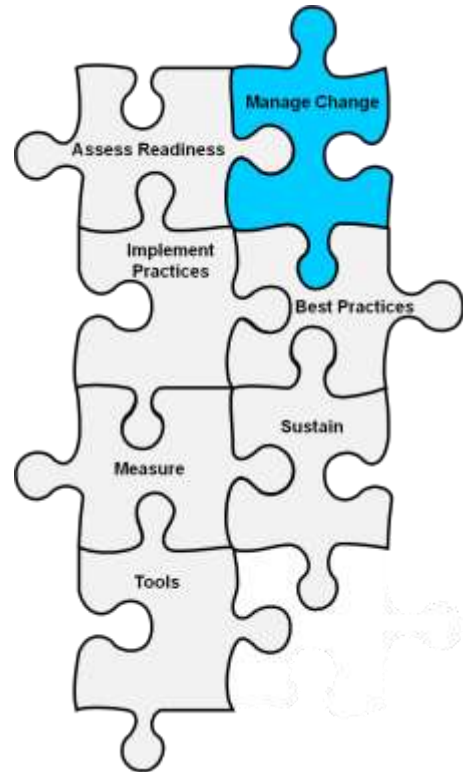
1.7 Checklist for assessing readiness for change

This 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 pressure ulcer prevention efforts.

1. Organizational Readiness Checklist	
Why is change needed?	
Hospital-specific reasons for change have been identified	
Do organizational members understand why change is needed?	
Staff attitudes about pressure ulcers 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, sponsor, or linkage has been identified	
Who will take ownership of this effort?	
A leader has been identified for the pressure ulcer prevention effort	
This leader is now involved in the subsequent planning steps	
What kinds of resources are needed?	
The basic building blocks for pressure ulcer treatment are in place	
A preliminary list of needed human and material resources has been developed	
Commitments to provide those resources have been obtained or are forthcoming	

2. How will we manage change?

Being ready for change is a necessary, but not sufficient, prerequisite to changing your organization's approach to pressure ulcer 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 can still go awry. For example, the Implementation Team may not include members with critical knowledge of care processes or may meet too infrequently to attain any momentum. Or, changes may be planned and announced without any relation to existing procedures and practices. The work of redesign depends on the assessment of the current state of practice and knowledge, so that the plan for change is based on the needs identified specific to your organization. The timing of the change process should balance the need to act systematically and thoughtfully with the need to move quickly enough to maintain momentum by demonstrating progress.



In section 1.5, 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 be appointed to an Implementation Team to oversee the improvement effort and manage the changes required. This section is designed to help you manage change at the organizational level. To maximize the possibility of successful implementation of the pressure ulcer prevention initiative, you need to consider the following questions:

- How can we set up the Implementation Team for success?
 - How do we determine whom to put on the Implementation Team?
 - How can we help the Implementation Team get started on its work?
 - How does the Implementation Team work with other teams involved in pressure ulcer prevention?
- What needs to change and how do we need to redesign it?
 - How do we start the work of redesign?
 - What is the current state of pressure ulcer prevention practice?
 - What is the current state of staff knowledge about pressure ulcer prevention?
- How should goals and plans for change be developed?
 - What goals should we set?
 - How do we develop our plan for change?

- How do we bring staff into the process?
 - How do we get staff engaged and excited about pressure ulcer prevention?
 - How can we help staff learn new practices?

We return to the question of managing change at the unit level in section 4.1.5 and take up the question of sustaining change in section 6.

2.1 How can we set up the Implementation Team for success?

The success and speed of adoption of evidence-based clinical practices are related to an infrastructure dedicated to the redesign of a particular process of care. The center of this infrastructure tends to be an **interdisciplinary Implementation Team that has a strong link to hospital leadership, members with the necessary expertise, a clearly defined task** (e.g., develop a program to reduce pressure ulcer incidence by 75% in our hospital in the next year), **and access to the resources needed to complete that task.**

Trying to find one person who can do all these things, instead of a team, is both difficult and risky. Pressure ulcer 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 must step down or attend to other responsibilities. 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.

Successful teams have capable leaders who help define roles and responsibilities and keep the team accountable for achieving its objectives. 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, such as physicians, actively engage in high-priority problem solving, such as redesigning processes of care.

This interdisciplinary team will have responsibility for initiating the pressure ulcer prevention project in your organization, making key decisions about the design, commissioning other teams at the unit level to carry out the improvement activities, and monitoring progress. Thus, while this team may not be involved in hands-on care, it is essential that it include some members with clinical expertise and experience who can bring that experience to bear in the team's deliberations.

You will face a number of decisions in setting up the team to lead the pressure ulcer prevention project. In section 1, we /discussed the process of choosing someone to spearhead your pressure ulcer prevention project, 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 whom to put on the Implementation Team?
- How can we help the Implementation Team get started on its work?

2.1.1 How do we determine whom to put on the Implementation Team?

As suggested above, the most effective teams for initiating and 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. Including wound care nurses and bedside staff as members will be key to bringing their practical knowledge and engaging them in the change process. Other members needed may not be immediately clear. We suggest using the chart below as a way to begin identifying the areas and people who need to be part of this team:

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 pressure ulcer prevention project. 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 have influence over the areas that will need to be involved. Keep in mind that sometimes it is not possible to anticipate in advance every area that needs to be involved. It is always possible to add to the team later, but members added later will need to be oriented to the team's history and process.

You may find a chart useful in considering potential team membership. The chart can list the department, possible team members, and area of expertise.

Department	Names of possible Implementation Team members from each area	Area of expertise
Senior manager		
QI/Safety/Risk Manager		
Wound staff Wound nurse Wound physician		
Staff nurse		
Nursing assistants		
Registered dietitian		
Hospitalist physicians		
PT/OT		
Medical/Surgical staff		
Other providers		
Patient representative		
Educator		
Materials manager		
Information systems staff		
Clerical staff		



This checklist can also be found in Tools and Resources ([Tool 2A](#) ‘Multidisciplinary Team’).



This Web site has ideas on how to decide who should be on the Implementation Team:
www.ihl.org/IHI/Topics/Improvement/ImprovementMethods/HowToImprove/formingtheteam.htm.

This Web site, a product of the Institute for Healthcare Improvement, provides both general principles for team composition and several examples of different clinical improvement teams and their membership.



Implementation Team Composition

Hospitals often found it very important that their team was truly interdisciplinary. This composition ensured that as a group, they could understand pressure ulcer prevention from multiple perspectives and integrate the hands-on knowledge and expertise into their prevention efforts.

2.1.2 How can we help the Implementation Team get started on its work?

Changing routine processes and procedures to alter the ways people conduct their everyday work is a major challenge. Successful implementation teams that achieve their goals and sustain improved performance pay attention to the **development of systems of care that make the new practices for pressure ulcer prevention better than existing practices. The new practices are obvious, easier, more reliable (not reliant on memory), and more efficient than old practices.**

However, the Implementation Team itself needs structure in order to achieve its objectives. The team will need to determine how often to meet. The team should also consider ground rules or guidelines for how to manage meeting time and for how to communicate, both internally and externally. The team will also need to set a timeline for its 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 for working. How will the team keep track of issues raised, explored, and addressed? How will the team assess current knowledge and practice? How will the team use that information to redesign practice? *For example, one hospital assessed staff knowledge using a structured survey and then used the survey results to design staff education activities to kick off their improvement project. In order to introduce new processes, staff members first need to learn more about the problems in current 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 pressure ulcer practices? *For example, leadership may provide the team with a written charge that specifies target dates and improvement levels that are objectives.*



- Establish the scope of the Implementation Team's charge.
- Develop a clear statement of the team's charge.
- Ensure that senior leadership is in agreement with this statement, and 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 ensure that their efforts will be recognized.

- Ask the member from the quality improvement or performance improvement department to provide some orientation to the team on key principles and approaches used in process redesign work.
- Ensure that the team has the information it needs about the scope of the pressure ulcer problem in **your** facility, 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 completion of those tasks.



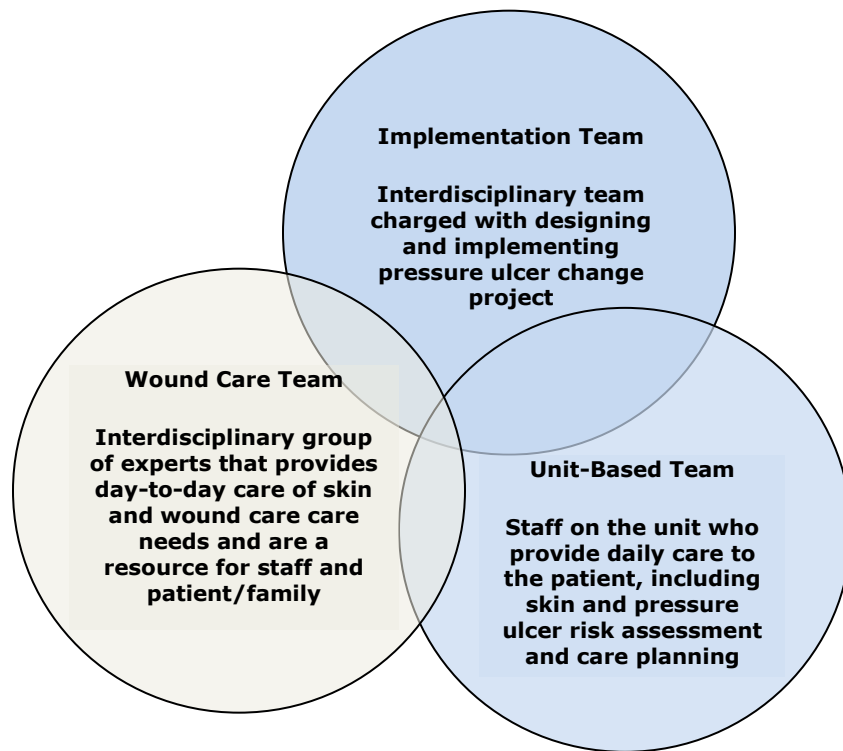
This Web site has guidance on setting team goals and other aspect of team startup:
www.ihl.org/IHI/Topics/Improvement/ImprovementMethods/HowToImprove/tipsforsettingaims.htm.

2.1.3 How does the Implementation Team work with other teams involved in pressure ulcer 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 project alone. The Implementation Team will need to collaborate with at least two other types of teams: the Wound Care Team and the Unit-Based Team in any unit where changes are to be implemented. Each team has unique responsibilities but these teams communicate and work together to make the program a success. Figure 1 illustrates the relationship between the three teams.


The Implementation Team will look at the big picture, including strengths and deficiencies in current practices and the current status of prevention and incidence tracking. This team will then determine what changes need to be made and what specific practices, tools, and resources will be needed to implement these changes. Throughout this process, the Wound Care Team may serve as an expert resource on current practices and procedures, potentially through membership on the Implementation Team. Unit Teams, also potentially represented on the Implementation Team, will actually implement the changes, integrating them into existing workflows and providing feedback about how the changes work. While the Implementation Team is likely to have a time-limited role, the Wound Care and Unit Teams will have ongoing responsibility for maintaining effective pressure ulcer practices.

Figure 1. Team relationships



No single team can make the program a success by itself. Figure 1 illustrates the overlapping and interdisciplinary nature of the team roles. In beginning its work, the Implementation Team needs to outline roles for the other teams that are clear and workable. In considering these roles during the change efforts, the Implementation Team needs to think not only about individual responsibilities but also about how the roles interact. The Implementation Team also needs to consider what ongoing communication and reporting is needed and what the best linking methods across the teams might be.

For instance, in some organizations, **Unit Champions** provide this coordination function. Unit Champions hold membership in 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, and consider how Implementation Teams for other clinical change efforts have operated successfully within your organization in the past. Within your organization, quality improvement or performance improvement experts are likely to have expertise in how to best organize and coordinate such teams. In larger hospitals, the training and development area may also be a resource for team organization expertise.

	<ul style="list-style-type: none">• Clarify the roles that the Wound Care Team and the Unit Teams will play in the change process.• Define the communication that is needed and the methods for linkages across teams.
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2.2 What needs to change and how do we need to redesign it?

In this section, we identify the steps the Implementation Team needs to take in order 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 (QI), defined broadly to include system redesign and process improvement. These methods are appropriate methodologies for an effort that seeks to improve the quality of care by preventing pressure ulcers.

2.2.1 How do we start the work of redesign?

For the Implementation Team, the work of redesign has already begun through gathering the information suggested in section 1 and earlier in this section. Many of the other tools needed by the team are either provided or referenced in this toolkit. This QI process may already be familiar to your organization. If you are not sure about the strength of your organization's QI infrastructure, you may want to complete the "QI process inventory" found in Tools and Resources section ([Tool 2B 'Quality Improvement Process'](#)). If some of the QI processes listed in this inventory are not fully operational or present at all in your organization, you will need to build your team's improvement capability. One strategy is to identify individuals in your organization who have improvement expertise and invite them to join the team. Another approach is to develop basic improvement skills within the team 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 QI projects, such as information on the Plan, Do, Study, Act (PDSA) approach (described below in "Practice Insights"). Teams may want to spend some time initially ensuring that all necessary disciplines are represented and establishing practices for how the team will work.

If your organization already has well-established QI processes and structures, it will be beneficial to connect the pressure ulcer improvement project with those processes. For example, if you have an established reporting structure to leadership, including this project in those processes will help keep it on the leadership agenda. If managers are already evaluated on the basis of their QI efforts and results, making this project a part of the large QI enterprise in your organization will help ensure that managers are on board.



Assess your organization's current resources for QI by completing the "QI process inventory" found in the Tools and Resources section ([Tool 2B 'Quality Improvement Process'](#)).



This includes a brief summary of the PDSA cycle and some clinical examples of it in use:
www.ihl.org/IHI/Topics/Improvement/ImprovementMethods/HowToImprove/testingchanges.htm.



Examples of Improvement Processes

PDSA (Plan, Do, Study, Act) is an iterative process based on the scientific method in which it is assumed that not all information or factors are available at the outset; thus, repeated cycles of change will be needed to achieve the goal, each cycle closer than the previous one. With the improved knowledge, we may choose to refine or alter the goal (ideal state).

For more information, refer to Chapter 5 in:
www.rand.org/pubs/monograph_reports/2007/MR1267.pdf.

Six Sigma. Developed at Motorola, Six Sigma methodology is based on the careful analysis of data on process deviations from specified 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 methodology (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: bring problems to the surface in the context of continuous workflow, level out the workload, develop a culture of stopping to fix problems, promote the use of standardized tasks, enable worker empowerment to identify and fix problems, allow problems to be visible, and ensure the use of reliable technology that serves the process. For more information, read:
www.ahrq.gov/qual/leanprocess.htm.

2.2.2 What is the current state of pressure ulcer prevention practice?

The work of redesign begins with an assessment of the current state of practice in your organization. In addition to the tools suggested below, you may want to look ahead to section 5 for additional tools for assessing current skin status and risk rates. We suggest looking carefully at the gap between current practice and the evidence-based practices that are parts of the bundle recommended in section 3. Do any aspects of the care process already follow best practices? Are there others that 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 pressure ulcer practice

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

- Have there been prior efforts to improve pressure ulcer care or prevention? Were those efforts successful? If not, what barriers did they encounter and how can you avoid the same problems? If successful, are there lessons you can build on?
- Does your organization have a certified wound care nurse? If not, what options can you create for building that expertise?
- Are physicians involved in wound care? In what ways? What are their attitudes?
- How is information about patient skin condition and risks documented and shared? What metrics, if any, are currently used to assess organizational performance with respect to skin care issues?

Understanding current processes on the units

In order to make changes to practice, it is critical to first understand what the current practices are. The fact that pressure ulcer prevention has taken on new urgency reflects one or more perceived performance problems in this area. There are gaps, possibly of multiple types, between current best practices and actual work practices due to uneven access to current information, variation in staff knowledge, and lack of coordination across different clinical units. There are also likely to be gaps between stated practices and actual practices (e.g., how often staff report they are turning patients versus how often it is actually accomplished and pressure ulcer rates and stages).

The extent and size of these gaps is usually not known until current practice is systematically examined. Understanding where any unit that is targeted for change is starting will help you identify gaps in knowledge and resources and will allow you to see how much progress is made. As reference points for these analyses, best practices for a pressure ulcer prevention bundle are outlined in section 3 and approaches to measuring pressure ulcer rates and key processes of care are outlined in section 5.

Process mapping to document current practices

One useful approach to understanding current practices is to use **process mapping** to examine key processes where pressure ulcer prevention activities could or should be happening. For example, process mapping can be applied to a process, such as inpatient admissions from the emergency department (ED). 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.

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**. Each approach can provide different insights and answer different questions. Therefore, experimentation with different data presentation options can be helpful during the redesign planning phase.

Before processes are mapped, it is necessary to identify who will conduct the mapping and to define the scope of the process to be mapped. It is also necessary to define a beginning, an end, and a methodology for all of the processes to be mapped. For example, some processes are mapped through direct observation, while others can be mapped by knowledgeable stakeholders talking through and documenting each step in the process. The mapping team should include clinical members of the Implementation Team and at least one nonclinician with some experience using this type of method. Participation in the process will not only identify opportunities for improvement, but will also engage staff so that they buy in to the proposed changes.

Observation ability and mapping improve with time, so standardization of the data collection tool and consistency in team members may be important. While it is possible to map many different processes, it is suggested that you begin by identifying key processes where, based on initial exploration, pressure ulcer prevention is likely to be of concern.

Integrating change to current work routines

Beyond the gap analysis and mapping of current practices, the team should consider how the recommended evidence-based practices 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 use of the evidence-based practices. For example, if pressure ulcer risk assessment is not being reliably completed on patients within the specific period of time from admission, what are the reasons? Is it lack of staff awareness that this should happen? Is it because it is not designated as a specific responsibility of someone during the admissions process? Is it because staff lack training in how to perform or document the results?



- Conduct an assessment of current practice on a sample of representative units to determine which, if any, pressure ulcer prevention practices are already in place (see sections 3 and 5). For example, is an initial risk assessment completed within a certain timeframe of admission? If so, what tool is used? Are the results used to assign risk? What is the risk assessment process? Are prevention pathways in use for different risk categories?
- Use process mapping to describe current prevention practices and to identify problem points. Process mapping will enhance understanding of how and when pressure ulcer 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 what practices need changing and consider how the new practices can be built into ongoing routines in preparation for determining how the best practices will be operationalized (discussed in section 4.1).



This worksheet in the Tools and Resources has a possible approach to process mapping ([Tool 2C ‘Current Process Analysis’](#)).

Use these worksheets to assess existing pressure ulcer prevention practices in your facility ([Tool 2D ‘Assessing Pressure Ulcer Policies’](#), [Tool 2E ‘Assessing Screening for Pressure Ulcer Risk’](#), and [Tool 2F ‘Assessing Pressure Ulcer Care Planning’](#)).



Process Mapping

One hospital found it very successful to include staff members in the process of mapping and examining key pressure ulcer prevention steps. During a staff meeting, team leaders handed out 4” x 6” pieces of paper and asked the group to work together to map all steps necessary for pressure ulcer prevention. Each person wrote one step on each piece of paper. As the team thought more about it, they were able to brainstorm more and more steps from the time a patient arrives at the hospital until the time they are released. Then, they started to use different colors to highlight potential roadblocks and risk factors along the way. In a second meeting a few weeks later, the team leader brought back the process map they had worked on. As a group, they talked about what was missing and where the potential problems are, and then each unit chose an issue to work on.



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

If you would like to learn more about the current state of pressure ulcer practice, the following article provides an example of a review of practices. Catania K, Huang CH, James P, et al. PUPPI: The Pressure Ulcer Prevention Protocol Interventions. *Am J Nurs* 2007;107(4):44-52.

Key points from this publication include:

- Review of assets and barriers before implementation.
- Review of the literature to show the costliness of failing to prevent pressure ulcers.
- Regular monitoring and evaluation of the intervention.

2.2.3 What is the current state of staff knowledge about pressure ulcer prevention?

Due to turnover, different levels of prior knowledge and training, and other factors, it is quite likely that staff members vary in their knowledge of current pressure ulcer prevention and treatment practices. To address these gaps through education, you need to know what the gaps are and where they are located. Thus, assessing the current state of staff knowledge is critical.

Several assessment tools are available. For example, the Pieper Pressure Ulcer Knowledge Test has been used in multiple urban and rural settings to examine pressure ulcer knowledge among nurses and other professionals. Findings have shown that nurses generally have a “C” level of knowledge about pressure ulcers. Nurses with more education or years of practice have slightly higher scores, but only familiarity with national pressure ulcer guidelines or certification in wound care leads to significantly higher scores. Those who are wound certified are significantly more knowledgeable (90-94%) than those with other certifications or those without any certification. Certified Nursing Assistant scores are about 60 percent correct.

Nurses’ Pieper test scores were tracked over 2 years as part of the New Jersey Hospital Association pressure ulcer collaborative. Collaborative results showed that nurses’ scores significantly increased after education and that pressure ulcer incidence decreased by 70 percent. Six years of followup data showed that these results could be sustained. Physician knowledge, even among those with relevant advanced training, tends to be even more problematic (see box below for details).

Understanding national trends will allow you to compare the results from your facility to these averages. Regardless of what score your staff starts at, what matters is improvement over time.

Based on this analysis, 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 both through the assessment of staff knowledge and through the assessment of current practice. For instance, do staff believe that a certain level of pressure ulcer incidence is inevitable? Or do they believe that risk 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 pressure ulcer knowledge to staff members. Tools are listed below for this task.
- Consider collecting demographic information so that results can be analyzed by unit and occupation. 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 two tools can be used to assess staff knowledge:

- The Pieper Pressure Ulcer Knowledge Test ([Tool 2G, Pieper Pressure Ulcer Knowledge Test](#)).
- Staff knowledge test developed by Iowa Health Des Moines ([Tool 2H, Pressure Ulcer Baseline Assessment](#)).



Among a group of physicians with extended training in geriatrics, 67 percent of those surveyed correctly identified a description of a Stage I pressure ulcer and only 52 percent identified a description of a Stage IV (more severe level) pressure ulcer. Less than half (48%) identified the Braden Scale for pressure ulcer risk assessment.

For more details, refer to: Odierna E, Zeleznik J. Pressure ulcer education: a pilot study of the knowledge and clinical confidence of geriatric fellows. *Adv Skin Wound Care* 2003;16(1):26-30.

More information on the results from the New Jersey Hospital Association pressure ulcer collaborative can be found here: Zulkowski K, Ayello E, Wexler S. Does certification and education make a difference in nurses' pressure ulcer knowledge? *Adv Skin Wound Care* 2007;20(1):34-38.

2.3 How should goals and plans for change be developed?

2.3.1 What goals should we set?

Once the team has completed its analysis of the gaps in pressure ulcer prevention, the team will want 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 can be related both to outcomes (e.g., a reduction in the incidence rate of pressure ulcers related to hospitalizations) and to processes (e.g., how much of the time recommended practices for patient repositioning are followed). Goals should be related both to current internal data and to broader benchmarks and will help determine what steps the team should take next in terms of redesigning pressure ulcer prevention within your facility.

For example, your gap analysis may reveal problems in performance measures related to processes of care such as these:

- Staff are not conducting head-to-toe skin assessments within 8 hours of admission and daily.
- Risk assessment is not being documented at least daily.

In this case, you may want to set goals related to the improvement of these measures to certain levels within a certain timeframe. 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 internal and external benchmarks against which to judge goals and progress.
- Use goals to guide next steps in redesigning pressure ulcer prevention.



For guidance on various methods to set challenging performance goals, refer to the “Setting targets for objectives” tool (p. 93) in Healthy People 2010 Toolkit: a field guide to health planning. Washington, DC: Public Health Foundation; 1999: www.healthypeople.gov/state/toolkit/.

2.3.2 How do we develop the plan for change?

By now, the Implementation Team will be in place and you will have developed much more information about the current state of pressure ulcer knowledge, attitudes, and practices in your organization. The current state of your organization’s QI practices should also be clearer, and a specific team of staff members identified to move the pressure ulcer prevention project forward. It is now time 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 respond to particular unit-based variations, it is critical that a comprehensive plan to guide next steps be formulated as you move forward. The best practices that will be discussed in the upcoming sections are critical to the implementation plan but are not independently sufficient, 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.
- The standards of care and practice to be met.
- How gaps in staff education and competency will be addressed.
- The plans for rolling out new standards and practices, where needed.
- Who is accountable for monitoring the implementation.
- How changes in performance will be assessed.
- How 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 2I ‘Plan of Action’](#)).

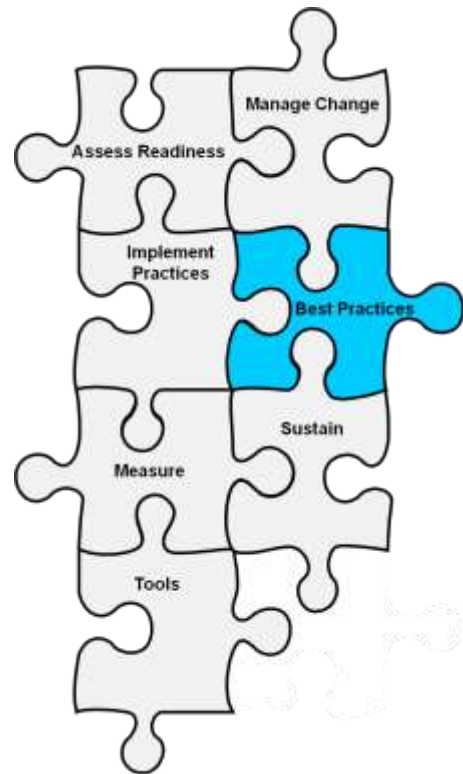
2.4 Checklist for managing change

2. Managing Change Checklist	
Implementation Team composition	
Team leader is identified and in place	
Members with necessary expertise/role have been identified and invited	
Linkage to senior leadership defined and established	
Team startup	
Team agenda and charge are clearly stated	
Team has necessary training and resources to get started	
Current state of pressure ulcer practice and knowledge	
Current practice and policies have been systematically examined	
Challenges to good practice have been identified at organization and unit levels	
Staff knowledge has been assessed	
Starting the work of redesign	
Approaches to redesign have been explored and chosen	
Gap analysis has been conducted between current practice and guideline-consistent practice	
Setting goals and plans for change	
Specific goals have been set	
A plan for making changes to meet those goals has been initiated	
A preliminary plan for sustaining the changes is in place	

3. What are the best practices in pressure ulcer prevention that we want to use?

Once you have determined that you are ready for change, the Implementation Team and Unit-Based Teams should demonstrate a clear understanding of where they are headed in terms of implementing best practices. People involved in the quality improvement effort need to agree on what it is that they are trying to do. Consensus should be reached on the following questions:

- What “bundle” of best practices do we use?
- How should a comprehensive skin assessment be conducted?
- How should a standardized pressure ulcer risk assessment be conducted? How frequently?
- How should pressure ulcer care planning based on identified risk be used?
- What items should be in our bundle?
- What additional resources are available to identify best practices for pressure ulcer prevention?



In addressing these questions, this section provides a concise review of the practice, emphasizes why it is important, discusses challenges in implementation, and provides helpful hints for improving practice. Further information regarding the organization of care needed to implement these best practices is provided in Chapter 4 and additional clinical details are in Tools and Resources.

In describing best practices for pressure ulcer prevention, it is necessary to recognize at the outset that implementing these best practices at the bedside is an extremely complex task. Some of the factors that make pressure ulcer prevention so difficult include:

- It is **multidisciplinary**: Nurses, physicians, dietitians, physical therapists, and patients and families are among those who need to be invested.
- It is **multidimensional**: Many different discrete areas must be mastered.
- It needs to be **customized**: Each patient is different, so care must address their unique needs.
- It is also highly **routinized**: The same tasks need to be performed over and over, often many times in a single day without failure.
- It is not perceived to be **glamorous**: The skin as an organ, and patient need for assessment and care, does not enjoy the high status and importance of other clinical areas.

3.1 What bundle of best practices do we use?

Given the complexity of pressure ulcer prevention, with many different items that need to be completed, thinking about how to implement best practices may be daunting. One approach that has been successfully used is thinking about a care bundle. A **care bundle** incorporates those best practices that if done in combination are likely to lead to better outcomes. It is a way of taking best practices and tying them together in a systematic way. These specific care practices are among the ones considered most important in achieving the desired outcomes.

The pressure ulcer bundle outlined in this section incorporates three critical components in preventing pressure ulcers:

- Comprehensive skin assessment.
- Standardized pressure ulcer risk assessment.
- Care planning and implementation to address areas of risk.

Because these aspects of care are so important, we describe them in more detail in the subsequent subsections along with helpful clinical hints. While these three components of a bundle are extremely important, your bundle may stress other aspects of care. It should build on existing practices and may need to be tailored to your specific setting. Whatever bundle of recommended practices you select, you will need to take additional steps. We describe strategies to ensure their successful implementation as described in Chapter 4.

The challenge to improving care is how to get these key practices completed on a regular basis.



The bundle concept was developed by the Institute for Healthcare Improvement (IHI). Their Web site includes a more detailed description of what is a bundle: www.ihl.org/ihl/topics/criticalcare/intensivecare/improvementstories/whatisabundle.htm.



The following article describe successful efforts to improve pressure ulcer prevention that relied on the use of the components in the IHI bundle: Walsh NS, Blanck AW, Barrett KL. Pressure ulcer prevention in the acute care setting. J Wound Ostomy Continence Nurs 2009;36(4):385-8.

3.1.1 How are the different components of the bundle related?

Each component of the bundle is critical and to ensure improved care, each must be consistently well performed. To successfully implement the bundle, it is important to understand how the different components are related. A useful way to do this is by creating or following a clinical pathway. A **clinical pathway** is a structured multidisciplinary 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 it reduces the possibility that busy clinicians will forget or overlook some important component of evidence-based preventive care.

Some of the advantages of these clinical pathways are to:

- Reduce variation and standardize care.
- Provide efficient, evidence-based care.
- Improve outcomes.
- Educate staff as to best practices.
- Improve care planning.
- Facilitate discussion among staff.



An example of a clinical pathway detailing the different components of the bundle is found in Tools and Resources ([Tool 3A 'Pressure Ulcer Prevention Pathway'](#)). This color-coded 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 (described in section 2), you can compare that to desired practices outlined on the clinical pathway.



Given the complexity of pressure ulcer preventive care, develop a clinical pathway that describes your bundle of best practices and how they are to be performed.

3.2 How should a comprehensive skin assessment be conducted?

The first step in our clinical pathway is the performance of a comprehensive skin assessment. Prevention should start with this seemingly easy task. However, as with most aspects of pressure ulcer prevention, the consistent correct performance of this task may prove quite difficult.

3.2.1 What is a comprehensive skin assessment?

Comprehensive skin assessment is a process by which the entire skin of every individual is examined for any abnormalities. It requires **looking** and **touching** the skin from head to toe, with a particular emphasis over bony prominences.

As the first step in pressure ulcer prevention, comprehensive skin assessment has a number of important goals and functions. These include:

- Identify any pressure ulcers that may be present.
- Assist in risk stratification; any patient with an existing pressure ulcer is at risk for additional ulcers.

- Determine whether there are other lesions and skin-related factors predisposing to pressure ulcer development, such as excessively dry skin or moisture-associated skin damage (MASD).
- Identify other important skin conditions.
- Provide the data necessary for calculating pressure ulcer incidence and prevalence.



It is important to differentiate MASD from pressure ulcers. The following articles provide useful insights on how to do this:

- DeFloor T, Schoonhoven L, Fletcher J, et al. Statement of the European Pressure Ulcer Advisory Panel: pressure ulcer classification. *J Wound Ostomy Continence Nurs* 2005;32:302-6.
- Gray M, Bliss DZ, Doughty DB. Incontinence associated dermatitis a consensus. *J Wound Ostomy Continence Nurs* 2007;34(1):45-54.

3.2.2 How is a comprehensive skin assessment performed?

A comprehensive skin assessment has a number of discrete elements. **Inspection** and **palpation**, though, are key. To begin the process, the clinician needs to explain to the patient and family that they will be looking at their entire skin and to provide a private place to examine the patient's skin. Make sure that the clinicians' hands have been washed, both before and after the examination. Use gloves to help prevent the spread of resistant organisms.

Recognize that there is no consensus about the minimum for a comprehensive skin assessment. Usual practice includes assessing the following five parameters:

- Temperature.
- Color.
- Moisture level.
- Turgor.
- Skin integrity (skin intact or presence of open areas, rashes, etc.).



Detailed instructions for assessing each of these areas are found in Tools and Resources ([Tool 3B 'Elements of a comprehensive skin assessment'](#)).



- Take advantage of every patient encounter to evaluate part of the skin.
- Always remind staff performing comprehensive skin assessments of the following helpful hints:
 - Don't forget to wash your hands before doing the skin assessment and after and to use gloves.
 - Make sure the patient is comfortable. Minimize exposure of body parts while you are doing the skin assessment.
 - Ask for assistance if needed to turn the patient in order to examine the patient's backside, with a particular focus on the sacrum.
 - Look at the skin underneath any devices such as oxygen tubing, indwelling urinary catheter, etc. Make sure to remove compression stockings to check the skin underneath them.

3.2.3 How frequently should comprehensive skin assessments be performed?

Comprehensive skin assessment is **not** a one-time event limited to admission. It needs to be repeated on a regular basis to determine whether any changes in skin condition have occurred. In most hospital settings, comprehensive skin assessment should be performed by a unit nurse on admission to the unit, daily, and on transfer or discharge. In some settings, though, it may be done as frequently as every shift. The admission assessment is particularly important on arrival to the emergency room, operating room, and recovery room. It may be appropriate to have more frequent assessments on units where pressure ulcers may develop rapidly, such as in a critical care unit; or less frequently on units in which patients are more mobile, such as psychiatry. Staff on each unit should know the frequency with which comprehensive skin assessments should be performed.

Optimally, the daily comprehensive skin assessment will be performed in a standardized manner by a single individual at a dedicated time. Alternatively, it may be possible to integrate comprehensive skin assessment into routine care. Nursing assistants can be taught to check the skin any time they are cleaning, bathing, or turning the patient. Different people may be assigned different areas of the skin to inspect during routine care. Someone then needs to be responsible for collecting information from these different people about the skin assessment. The risk with this alternative approach is that a **systematic** exam may not be performed; everybody assumes someone else is doing the skin assessment. Decide what approach works best on your units.



Assess whether your staff know the frequency with which comprehensive skin assessment should be performed.

3.2.4 How should results of the comprehensive skin exam be reported and documented?

In order to be most useful, the result of the comprehensive skin assessment must be documented in the patient's **medical record** and **communicated** among staff. Everyone must know that if

any changes from normal skin characteristics are found, they should be reported. Nursing assistants need to be empowered and feel comfortable reporting any suspicious areas on the skin. Positive reinforcement will help when nursing assistants do find and report new abnormalities.

In addition to the medical record, consider keeping a separate **unit log** that summarizes the results of all comprehensive skin assessments. This sheet would list all patients present on the unit, whether they have a pressure ulcer, the number of pressure ulcers present, and the highest stage of the deepest ulcer. By regularly reviewing this sheet, you can easily determine whether each patient has had a comprehensive skin assessment. This log will also be critical in assessing your incidence and prevalence rates (see section 5.1). Nursing managers should regularly review the unit log.



Assess the following:

- Are results of the comprehensive skin assessment easily located for all patients?
- Are staff comfortable reporting any observed skin abnormalities to physicians and nurse managers?



A sample sheet can be found in Tools and Resources ([Tool 5A 'Unit Log'](#)).



- Have a standardized place to record in the medical record the results of the skin assessment. A checklist or standardized computer screens with drop-down prompts with key descriptors of the five components of a minimal skin assessment can help capture the essential information obtained through the patient examination.
- Communication among licensed and unlicensed members of the health care team is important in identifying and caring for any skin abnormalities. Some places have found it effective to use a diagram of a body outline that an unlicensed health care worker can mark with any skin changes they might see while bathing or performing care activities.

3.2.5 What are some barriers to practice?

There are many challenges to the performance of comprehensive skin assessments. Be especially concerned about the following issues:

- **Finding the time for an adequate skin assessment:** As much as possible, integrate the comprehensive skin examination into the normal workflow. But remember that this is a separate process that requires a specific focus by staff if it is to be done correctly.
- **Determining the correct etiology of wounds:** Many different types of lesions may occur on the skin and over bony prominences. In particular, do not confuse moisture-associated skin changes with pressure ulceration. If unsure about the etiology of a lesion, ask someone else who may be more knowledgeable.
- **Using documentation forms that are not consistent with components of skin assessments:** Develop forms that will facilitate the recording of skin assessments.
- **Having staff who do not feel empowered to report abnormal skin findings:** Communication among nursing assistants, nurses, and managers is critical to success. If communication problems exist, staff development activities targeting cross-level communication skills may be in order. Nurses and managers may need to solicit and positively reinforce such reporting if nursing assistants do not have confidence in this area. Develop methods to facilitate communication. One example would be a sticky note pad that includes a body outline, patient name, and date. Aides would mark down any suspicious lesions and give the note to nurses.



An example of a notepad to be used for communication among nursing assistants, nurses, and managers can be found in Tools and Resources ([Tool 3C 'Pressure Ulcer Identification Notepad'](#)).

3.2.6 How can practice be improved?

Comprehensive skin assessment requires considerable skill and ongoing efforts are needed to enhance skin assessment skills. Take advantage of available resources to improve skills of all staff. Encourage staff to:

- **Ask a colleague to confirm their skin assessments.** Having a colleague evaluate the skin assessment will provide feedback as to how they are doing and will help correct documentation errors.
- **Perform skin assessments with an expert.** Consider having an expert or nurse from another unit round with unit staff quarterly to confirm findings from the comprehensive skin assessment.
- **Ask for clarification when they are unsure of a lesion.** Take advantage of the local wound care team or other staff who may be more knowledgeable.
- **Use available resources** to practice their ability to differentiate the etiology of skin and wound problems.



This slide show illustrates how to perform a skin assessment:
<http://www.authorstream.com/Presentation/ann5844-150720-skin-assessment-nursing-1-curdeline-product-training-manuals-ppt-powerpoint/>.

Watch these free videos developed by the Minnesota Hospital Association on how to perform a skin assessment:

- www.mha-apps.com/media/VTS_01_1.html (12minutes)
- www.mha-apps.com/media/safeSkinVid.html (9minutes)

Consult the European Pressure Ulcer Advisory Panel Web site (www.epuap.org) for useful advice on evaluating erythema and the proper staging of pressure ulcers. Take the staging self-assessment examination to see how much you really know. Information on differentiating pressure ulcers from other skin problems is available at: www.puclas.ugent.be/puclas/e/.



Tips for helping staff make prevention part of their routine

A full-body skin inspection does not have to mean visualizing all aspects of the patient in the same time period.

- When applying oxygen, check the ears for pressure areas from the tubing.
- If the patient is on bed rest, look at the back of the head during repositioning.
- When auscultating lung sounds or turning the patient, inspect the shoulders, back, and sacral/coccyx region.
- When checking bowel sounds, look into skin folds.
- When positioning pillows under calves, check the heels and feet (using a hand-held mirror makes this easier).
- When checking IV sites, check the arms and elbows.
- Examine the skin under equipment with routine removal (e.g., TENS units, restraints, splints, oxygen tubing, endotracheal tubes).
- Each time you lift a patient or provide care, look at the exposed skin, especially on bony prominences.
- Pay special attention to areas where the patient lacks sensation to feel pain or has had a breakdown in the past and if epidural/spinal pain medications are being administered.

3.3 How should a standardized pressure ulcer risk assessment be conducted?

As discussed above, one purpose of comprehensive skin assessment is to identify visible changes in the skin that indicate increased risk for pressure ulcer development. However, factors other than skin changes must be assessed to identify patients at risk for pressure ulcers. This can best be accomplished through a standardized pressure ulcer risk assessment.

3.3.1 What is a standardized pressure ulcer risk assessment?

After a comprehensive skin examination, pressure ulcer risk assessment is the next step in pressure ulcer prevention. Pressure ulcer risk assessment is a **standardized and ongoing process** with the goal of identifying patients at risk for the development of a pressure ulcer so that plans for targeted preventive care to address the identified risk can be implemented. This process is multifaceted and includes many components, one of which is a validated risk assessment tool or scale.

Other risk factors not quantified in the assessment tools must be considered. Risk assessment does not identify who will develop a pressure ulcer. Instead, it determines which patients are more likely to develop a pressure ulcer, particularly if no special preventive interventions are introduced. In addition, risk assessment may be used to identify different levels of risk. More intensive interventions may be directed to patients at greater risk.



Ask yourself and your team:

- Do you have a policy about who is responsible for doing the risk assessment on admission and thereafter?
- Does everyone know the process for performing risk assessment?

3.3.2 Why is a pressure ulcer risk assessment necessary?

Pressure ulcer risk assessment is essential for a number of reasons:

- **It aids in clinical decisionmaking.** Many clinicians are not skilled in identifying patients at risk for developing pressure ulcers. Use of a standardized risk assessment helps to direct the process by which clinicians identify those at risk and quantify the level of this risk.
- **It allows the selective targeting of preventive interventions.** Pressure ulcer prevention is resource intensive. Resources should be targeted toward those at greatest risk who would most-benefit.
- **It facilitates care planning.** Care plans focus on the specific dimensions that place the patient at greatest risk.
- **It facilitates communication** between health care workers and care settings. Workers have a common language by which they describe risk.



Ask yourself and your team:

- Do the unit staff understand why they are doing the risk assessment?
- Are unit staff communicating the risk assessment results to all clinicians who need to know?

3.3.3 How is risk assessment performed?

Pressure ulcer risk assessment is a **standardized process** that uses previously developed **risk assessment tools or scales**, as well as the assessment of other risk factors that are not captured in these scales. Risk assessment tools are instruments that have been developed and validated to identify people at risk for pressure ulcers. Typically, risk assessment tools evaluate several different dimensions of risk, including mobility, nutrition, and moisture, and assigns points depending on the extent of any impairment.

Clinicians often believe that completing the risk assessment tool is all they need to do. Help staff understand that risk assessment tools are only one small piece of the risk assessment process. The risk assessment tools are not meant to replace clinical assessments and judgment but are to be used in conjunction with clinical assessments.

Many other factors might be considered as part of clinical judgment. However, many of these factors, such as having had a stroke, are captured by existing tools through the resulting immobility. Several additional specific factors should be considered as part of the risk assessment process. However, also remember that patients who are just “not doing well” always seem to be at high risk for pressure ulcers.

- **Presence of a pressure ulcer:** All patients with an existing pressure ulcer should be considered at-risk for an additional ulcer.
- **Prior Stage III or IV pressure ulcers:** When Stage III or IV ulcers close through a process of scar tissue formation and eventual epithelialization, the resulting skin is not normal as it lacks its former tensile strength and is very prone to break down again.
- **Hypoperfusion states:** Patients who are not perfusing vital organs as a result of conditions such as sepsis, dehydration, or heart failure are also not adequately perfusing the skin. Minimal amounts of pressure may then cause ulceration.
- **Peripheral vascular disease:** Because of the limited blood supply to the legs, these patients are predisposed to pressure ulcers of the feet, particularly the heels.
- **Diabetes:** Patients with diabetes have consistently been shown to be at increased risk of pressure ulcers.
- **Smoking:** Smoking interferes with oxygen delivery. Smoking is associated with recurrence of pressure ulcers postsurgery and likely increases risk of new pressure ulcers.
- **Restraint use:** Patients with physical restraints have limited mobility in addition to having pressure applied at the site of the restraints. Chemical restraints with resulting sedation may lead to rapid decline in mobility.
- **Spinal cord injury:** Immobility, incontinence, and impaired sensation may combine to place these patients at exceptionally high risk. The level and completeness of the spinal cord injury is critical in this determination. Also consider if the individual is receiving epidural/spinal pain medication.
- **End-of-life/palliative care:** Individuals in the terminal stages of disease may have failure of multiple organ systems, including the skin.
- **Operating room (OR) and emergency room (ER) stays:** Prolonged time on a hard surface or in one position increases the risk of skin breakdown. This often happens in an OR or ER, with lengthy procedures, or while transporting a patient,. Always consider the

length of time that the patient may need to stay in one position. Patients who undergo a procedure longer than 4 hours are at particularly high risk.



Comprehensive risk assessment includes both the use of a standardized scale and an assessment of other factors that may increase risk of pressure ulcer development.

3.3.4 What risk assessment scales are used most often?

Remember that risk assessment scales are only one part of a pressure ulcer risk assessment. These scales or tools serve as a standardized way to review some factors that may put a person at risk for developing a pressure ulcer. Research has suggested that these tools are especially helpful in identifying people at mild to moderate risk as nurses can identify people at high risk or no risk. All risk assessment scales are meant to be used **in conjunction with** a review of a person's other risk factors and good clinical judgment.

While some institutions have created their own tools, two risk assessment scales are widely used in the general adult population: the Norton Scale and the Braden Scale. Both the Norton and Braden scales have established reliability and validity. When used correctly, they provide valuable data to help plan care.

The Norton Scale is made up of five subscales (physical condition, mental condition, activity, mobility, incontinence) scored from 1-4 (1 for low level of functioning and 4 for highest level of functioning). The subscales are added together for a total score that ranges from 5 to 20. A lower Norton Scale score indicates higher levels of risk for pressure ulcer development. Scores of 14 or less generally indicate at-risk status.

The Braden Scale is made up of six subscales (sensory perception, moisture, activity, mobility, nutrition, friction/shear) scored from 1 to 4 or 1 to 3 (1 for low level of functioning and 4 for the highest level or no impairment). Total scores range from 6 to 23. A lower Braden Scale score indicates higher levels of risk for pressure ulcer development. Scores of 18 or less generally indicate at-risk status. This threshold may need to be adjusted for the specific patient population on your unit or according to your hospital guidelines.

Other scales may be used instead of the Norton or Braden scales. What is critical is not which scale is used but just that some validated scale is used in conjunction with a consideration of other risk factors not captured by the risk assessment tool. By validated, we mean that they have been shown in research studies to identify patients at increased risk for pressure ulcer development.



Ask yourself and your team:

- Are we using a risk assessment tool in conjunction with the assessment of additional specific patient risk factors?
- When and what kind of training did the staff receive on how to use and interpret the scales?
- Are risk assessment results being used as a basis for planning care?



Additional information on the Braden and Norton scales may be found at the following Web sites:

- Norton Scale: http://coa.kumc.edu/gec/modules/presulc/Nursing/NursFramePage/RiskAsses_norton.htm.
- Braden Scale: www.innovations.ahrq.gov/content.aspx?id=2403.



Copies of the Braden and Norton scales are included in Tools and Resources ([Tool 3D 'Braden Scale'](#) and [Tool 3E 'Norton Scale'](#)).

3.3.5 What risk assessment should be used in special populations?

The risk assessment tools described above are appropriate for the general adult population. However, these tools may not work as well in terms of differentiating the level of risk in special populations. These include pediatric patients, patients with spinal cord injury, palliative care patients, and patients in the OR. Risk assessment tools exist for these special settings but they may not have been as extensively validated as the Norton and Braden scales.



Consider the following resources for risk assessment in special populations:

- Palliative Care: Hunters Hill Marie Curie Centre Risk Assessment Tool. Chaplin J, McGill M. Pressure sore prevention. *Palliative Care Today* 1999;8(3):38-39.
- Home Care: Braden Scale for Predicting Pressure Sore Risk in Home Care. Available at: www.bradenscale.com.
- Pediatrics:
 - Braden Q (21 days to 8 years). Quigley SM, Curly MAQ. Skin integrity in the pediatric population: preventing and managing pressure ulcers. *J Spec Pediatr Nurs* 1996;1(1):7-18.

- Glamorgan Scale (birth to 18 years). Willock J, Harris C, Harrison J, et al. Identifying the characteristics of children with pressure ulcers. *Nursing Times* 2005;101(11):40-43.
- Pediatric Waterlow (neonate to 16 years). Waterlow J. Pressure sore risk assessment in children. *Pediatr Nurs* 1997;9(6):21-24.
- Neonatal Skin Risk Assessment Scale (NSARS) (26 to 46 weeks). Huffines B, Logsdon MC. The neonatal skin risk assessment scale for predicting skin breakdown in neonates. *Issues Compr Pediatr Nurs* 1997;20:103-14.

3.3.6 What information do you get from using a risk assessment scale?

Overall scale scores provide data on general pressure ulcer risk and help clinicians plan care according to the amount of risk (high, moderate, low, etc). Subscale scores provide information on specific deficits such as moisture, activity, and mobility. These deficits should be specifically addressed in care plans. Remember, even a score that indicates no risk does not guarantee that a person will not develop a pressure ulcer, especially as their condition changes.

3.3.7 How often is a pressure ulcer risk assessment done?

Consider performing a risk assessment in general acute care settings on admission and then daily or with a significant change in condition. However, pressure ulcer risk may change rapidly, especially in acute care settings. Therefore, recommendations for frequency of risk assessment will vary.

In settings where patients' status may change quickly, such as in critical care, risk assessment should be performed more frequently, such as every shift. In the OR, recommendations exist to assess on admission, at discharge to the recovery room, and periodically for operations lasting longer than 4 hours. (Consider the time in the holding and recovery rooms when assessing the time). For patients with more stable conditions, such as acute rehabilitation, pressure ulcer risk assessment may be less frequent. What is important is that the frequency of pressure ulcer risk assessment be individualized to the person's unique setting and circumstances.



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

- How often should the risk reassessment be done on your unit?
- How often is it actually being done?



For more information on risk assessment in the OR, see the recommendations from the Minnesota Hospital Association Safe Skin Campaign:
www.mnhospitals.org/inc/data/tools/SafeSkin-Toolkit/OR-pressure-ulcer-recommendations.pdf.

3.3.8 How should pressure ulcer risk assessment be documented and communicated?

Documenting pressure ulcer risk is essential to ensure that all staff are aware of patients' pressure ulcer risk status. While documenting in the medical record is necessary, documentation alone may not be sufficient to ensure that all staff know the level of risk. Among the options to consider for complete documentation are:

- Having a dedicated form (computerized or paper) in the medical record.
- Incorporating results in the daily patient flowsheets.
- Including results as part of patient report or handover.
- Having a separate form for the pressure ulcer risk assessment tool that allows multiple date entries.
- Putting results on patient card or daily patient care worksheet.

Remember that in documenting pressure ulcer risk, you want to incorporate not only the score and subscale scores of the standardized risk assessment tool, but also other factors placing the individual at risk. This information is often included in narrative text.

Risk status should be communicated orally at shift change or by review of the written material in the medical record or patient care worksheet. Consider innovative approaches to conveying level of risk. For example, some facilities have color-coded the patient wristband, placed stickers on the patient chart or worksheet, or used picture magnets on the doors to indicate risk status.

3.3.9 How can we improve the accuracy of pressure ulcer risk assessment?

The accuracy of a risk assessment scale depends on the person completing it. Experience has shown tremendous variability among staff even when evaluating the same patient. Therefore, training in how to use the scale is needed to ensure consistency.



It is important to check how risk assessment is being performed on each unit.

- Look at the patient record and see if the scores have been consistent. Wide fluctuations in risk are unusual in stable patients. Similarly, when there is a major change in clinical condition, has the risk score changed?
- Select a patient and see if the assessment is accurate. Staff may give the patient “the benefit of the doubt” and make scores better than they are.



Information may be found in the Hartford Institute for Geriatric Nursing's *Try This Series* at www.consultgerirn.org/uploads/File/trythis/issue05.pdf. Refer to Issue 5 under the General Assessment Series.

Lindgren M, Unosson M, Krantz AM, et al. A risk assessment scale for the prediction of pressure sore development: reliability and validity. *J Adv Nurs* 2002;38(2):190-9. www.journalofadvancednursing.com/docs/1365-2648.2002.02163.x.pdf.



Learn more about risk assessment:

- Magan MA, Maklebust J. The nursing process and pressure ulcer prevention: making the connection. *Adv Skin Wound Care* 2009;22(2):83-92.
- Magan MA, Maklebust J. Multisite Web-based training in using the Braden Scale to predict pressure sore risk. *Adv Skin Wound Care* 2008;21(3):124-33.

3.4 How should pressure ulcer care planning based on identified risk be used?

Knowing which patients are at risk for a pressure ulcer is not enough; **you must do something about it.** Care planning provides the guide for what you will actually do to prevent pressure ulcers. Once risk assessment has helped identify patient risk factors, it is important to match care planning to those needs. This includes planning for any risks found on the risk assessment tool, such as nutrition, activity, mobility, moisture, and friction/shear, as well as any additional risk factors.

A score that indicates a patient is not at risk does not guarantee that the patient will not develop a pressure ulcer. While the total score may help prioritize your use of resources, think beyond the score on the overall risk assessment tool and address all areas of potential risk in every patient. This means addressing at-risk scores on each subscale, as well as other risk factors not quantified on the subscales.

3.4.1 What is pressure ulcer care planning?

Pressure ulcer 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. Its specific purpose in this case is to implement care practices so that the patient does not develop a pressure ulcer during the hospitalization. It takes into account multiple factors that pertain to the patient's problems, some of which may be obvious and others that may not. This synthesis of multiple types of patient data requires the clinician to take a holistic approach rather than just relying on one specific piece of patient information. Because each person has a unique risk profile, the care plan should be individualized for each patient.

The care plan is a written document that ensures continuity of care by all staff members. All staff members should follow the care plan. The care plan is a legal document designed to guide the treatment plan, to keep the patient safe and comfortable, and to educate the patient and family prior to discharge.

The care plan is also 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 pressure ulcer development?

The care plan should indicate specific actions that should, or should not, be performed. All care planning needs to be individualized to fit the patient's needs. Any area of risk should have a corresponding plan of care *regardless* of the overall risk assessment scale score. In fact, when

developing the plan of care, it is important to think beyond just a risk assessment scale score to include all the patient risk factors.

To illustrate this point, consider a patient whose overall Braden Scale is 19, indicating not at-risk for pressure ulcer development. However, in examining the subscales, the nurse notes that the patient is very moist (moisture subscale of 2) and there is a potential problem with friction and shear (subscale score of 2). These two subscales need to be addressed in the care plan despite the overall score. The subscales are important indicators of risk.

In another scenario, a patient has an overall Braden Scale score of 19, but this patient has a *history* of a healed sacral pressure ulcer. Despite the score, this patient is at particular risk for developing a pressure ulcer on the sacrum and needs a care plan that reflects this risk factor.

Patients and their families should understand their pressure ulcer risk and how their proposed care plan is addressing 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 about knowledge gaps can occur. Use of educational resources, such as appropriate-level written materials, can augment but not take the place of instruction. Patients and their significant others need to understand the consequences of not following a recommended prevention care plan as well as suggested alternatives offered and possible outcomes.

Every patient has the right to refuse the care designed 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 an alternative plan, offering alternatives, and documenting everything, including the patient’s comprehension of all options presented. This revised strategy needs to be described in the care plan and documented in the patient’s medical record.

Update the care plan to reflect any changes in the patient’s risk status. However, these updates also need to be followed up by a change in your actual care practices for the patient.



Assess whether all areas of risk are addressed within the care plan.



- A sample initial care plan for a patient based on Braden Scale assessment that can be modified for your specific patients is available in Tools and Resources ([Tool 3F ‘Care Plan’](#)).
- A sample patient/family education pamphlet on the care plan is also available ([Tool 3G ‘Patient and Family Education Booklet’](#)).



Most patients do not fit into a “routine” care plan. Here are some common problems and how care plans can address them:

- Patients with feeding tubes or respiratory issues need to have the head of the bed elevated more than 30 degrees, which is contrary to usual pressure ulcer prevention care plans. Care plans and documentation in the medical record will need to address this difference.
- Preventing heel pressure ulcers is a common problem that must be addressed in the care plans. Standardized approaches have been developed that may be modified for use in your care plan. These are described using mnemonics such as HEELS (© 2005 by Ayello, Cuddington, and Black) or using an algorithm such as universal heel precautions.
- Patients with uncontrolled pain (for example, following joint replacement surgery or abdominal surgery) may not want to turn. Care plans must address the pain and how you will encourage them to reposition. Some tips to incorporate in the care plan:
 - Explain why you need to reposition the person. Try having several pillows placed under the patient’s shoulder and back. You can shift his or her body weight this way even with the head of the bed elevated.
 - Sit the person in a chair. This maintains the more elevated position and allows for small shifts in weight every 15 minutes.
 - Try having patients turn toward their stomach at a 30 degree angle. They can be propped up or leaning on pillows.
 - Ask the patient what his or her favorite position is. All of us have certain positions we prefer for sleep. After surgery or injury, the favorite may not be possible. For example, after knee replacement surgery the person cannot bend that leg to curl up. Try to find an alternative that the patient will like.
- Frequent small repositioning shifts can help prevent pressure ulcers. Care plans should acknowledge the need for patients to shift their weight a little each time you enter the room (at least 15 to 20 degrees if possible). If they are on their side, pull the pillow out just a little. Bend or straighten the legs just a little, using care not to hyperextend the knee.
- Dehydration is a common problem predisposing patients to pressure ulcers. Care plans may suggest offering a sip of a beverage each time you enter the room.



Read more about universal heel pressure relief: Cuddigan JE, Ayello EA, Black J. Saving heels in critically ill patients. *World Council Enterostomal Ther J* 2008;28(2):16-23.

3.4.3 How should care planning be documented and communicated?

Documentation of care planning is essential to ensure continuity of care and staff knowledge of what they should be doing. Most hospitals choose to have a dedicated care plan form within the medical record. Responsibility for generating the care plan and incorporating the input from multiple disciplines needs to be delineated.

The plan of care is also a communication tool. Information is then available for other staff and disciplines to see what needs to be done. The care plan also needs to be shared through discussion in all shift reports, during patient assignments, during patient handoffs, and during interdisciplinary rounds.

3.4.4 What are barriers to care planning?

Sometimes, putting together all the discrete parts of the 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 what 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 that develops and implements treatment plans. Physical and occupational therapists, dietary staff, and others are important contributors to pressure ulcer 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, the staff have to go to multiple screens, which can be time consuming and increases the chance of overlooking key elements.

3.4.5 How can we improve care planning?

Planning care is essential to quality. The plan of action needs to be based on the assessment data gathered but has to be adaptable to changing needs. The complexity and importance of integrating all the information to render appropriate care to the patient cannot be overemphasized.

- **Ensure that staff appreciate the value of care planning.** All levels of staff need to be empowered and understand what portion of the care they are responsible for and the value they bring to the overall care of the patient.
- **Use or create systems that make care planning more streamlined by linking to the assessment task.** Computer documentation that ties assessment directly to the care plan is time saving for staff and facilitates comprehensive information. Having prompts to

update the plan as the patient's condition changes helps ensure that needs will continue to be met. For example, patients who are in the OR for more than 4 hours could generate a reminder to the staff to do a pressure ulcer risk assessment. Patients who are identified as at risk may generate an automatic order for support surfaces and skin care products, avoiding delays arising from care planning.

- **Link the care plan to routine practice.** The plan of care, including addressing pressure ulcer risk, should be routinely included in shift reports and patient handoffs. All levels of staff should know what is required daily or by shift and automatically do it. Prompts may be needed at first to incorporate the prevention program into everyday care practices.



Read more about delays in implementing the care plan: Rich SE, Shardell M, Margolis D, et al. Pressure ulcer prevention device use among elderly patients early in the hospital stay. *Nurs Res* 2009;58(2):95-104.

3.5 What items should be in our bundle?

The sections above have outlined best practices in pressure ulcer prevention that we recommend for use in your bundle. However, your bundle may need to be individualized to your unique setting and situation. Think about which items you may want to include. You may want to include additional items in the bundle. Some of these items can be identified through the use of additional guidelines (see the guidelines listed in section 3.6).



Identify your bundle of best practices.

3.5.1 How do we customize the bundle for specific work units?

Patient acuity and specific individual circumstances will require customization of the skin and pressure ulcer risk assessment protocol. It is imperative to identify what is unique to the unit that is beyond standard care needs. These special units are often the ones that have patients whose needs fluctuate rapidly. These include the operating room, recovery room, intensive care unit, emergency room, or other units in your hospital that have critically ill patients. In addition, infant and pediatric patients have special assessment tools, as discussed in section 3.3.5.

Skin must be observed on admission, before and after surgery, and on admission to the recovery room. In critical care units, severity of medical conditions, sedation, and poor tissue perfusion make patients high risk. Research has shown that patients with hypotension also are at high risk for pressure ulcer development. In addition, patients with lower extremity edema or patients who

have had a pressure ulcer in the past are high risk. Therefore, regardless of their Braden score, these patients need a higher level of preventive care: support surface use, dietary consults, and more frequent skin assessments. Documentation should reflect the increased risk protocols.



- Identify the units that will require customization of the skin and risk assessment protocols.
- Modify the bundle, the assignment of roles, and the details of the unit to meet these special features.



Read more about how critically ill patients have factors that put them at risk for developing pressure ulcers despite implementation of pressure ulcer prevention bundles: Shanks HT, Kleinhelter P, Baker J. Skin failure: a retrospective review of patients with hospital-acquired pressure ulcers. *World Council Enterostomal Ther J* 2009;29(1):6-10.

3.6 What additional resources are available to identify best practices for pressure ulcer prevention?

A number of guidelines have been published describing best practices for pressure ulcer prevention. These guidelines can be important resources to use in improving pressure ulcer care. In addition, the International Pressure Ulcer Guideline released by the National Pressure Ulcer Advisory Panel and the European Pressure Ulcer Advisory Panel is available. A Quick Reference Guide can be downloaded from their Web site at no charge.



Clinical Practice Guideline 3: Pressure ulcers in adults: prediction and prevention. Rockville, MD: Agency for Healthcare Policy and Research; May 1992. AHCPR Pub. No. 92-0047. Available at: www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=hstat2.chapter.4409.

Pressure ulcer prevention and treatment following spinal cord injury: a clinical practice guideline for health-care professionals. Consortium for Spinal Cord Medicine Clinical Practice Guidelines. *J Spinal Cord Med* 2001 Spring;24 Suppl 1:S40-101.

National Pressure Ulcer Advisory Panel (NPUAP) and European Pressure Ulcer Advisory Panel (EPUAP). Quick Reference Guide version of the NPUAP/EPUAP International Pressure Ulcer Prevention Guidelines: Available at: www.epuap.org and www.npuap.org.

The following guidelines are available for a fee:

American Medical Directors Association: Pressure Ulcers in the Long-Term Care Setting. Available at: <http://www.amda.com>

National Pressure Ulcer Advisory Panel and European Pressure Ulcer Advisory Panel. Prevention and treatment of pressure ulcers: clinical practice guideline. Washington, DC: National Pressure Ulcer Advisory Panel; October 2009. Available at: www.npuap.org.

Wound, Ostomy and Continence Nurses Society. Pressure ulcer assessment: best practices for clinicians. Available at: www.wocn.org.

3.7 Checklist for best practices

3. Best Practices Checklist	
Identify a bundle of best practices	
A clinical pathway has been created	
Key elements of a comprehensive skin assessment have been identified	
Approaches to document and report results of skin assessment have been explored	
A tool for assessing risk has been chosen	
An appropriate bundle of best practices has been identified for our organization	
Develop pressure ulcer care plan based on identified risk	
Approaches to document and communicate care plan have been identified	
A system linking care planning to assessment has been developed	
All levels of staff are aware of care plan	
Customize the bundle for specific work units	

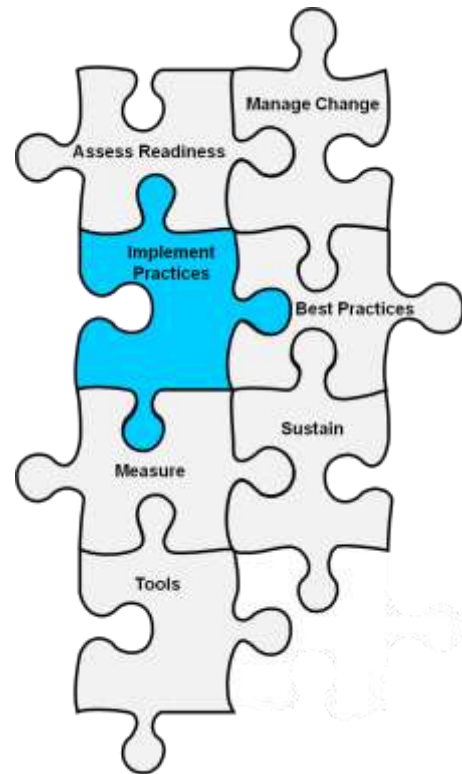
4. How do we implement best practices in our organization?

Now you are ready to begin implementing the bundle of pressure ulcer prevention best practices you have identified. *No matter how good the bundle that you develop is, 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 pressure ulcer 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-Based Teams and Wound Care Team to bring this earlier work to bear on actually implementing the new prevention practices at the frontline care level.

Your organization may already be using some of the best practices you identified in your bundle, but other practices will involve changes in the way you complete tasks. You will need to be flexible and may need to modify your plan to fit the needs of your organization. For the new practice bundle to be fully implemented and sustained, it will need to be customized to your organization and integrated into ongoing work processes rather than simply layered on top as a special project. As you progress, your improvement efforts may still have interim steps or midcourse corrections along the way and you will recognize that quality improvement is an ongoing process.

The questions in this section are intended to guide you in multiple aspects of implementation, from determining the specific roles that different clinical and support staff will play to putting the practices into operation first on a pilot basis and then across the organization. To successfully implement your change program, you should answer three sets of questions:

1. What roles and responsibilities will staff have in preventing pressure ulcers?
 - How do we assign roles and responsibilities?
 - What role will the Wound Care Team play?
 - What if our hospital has no formal Wound Care Team?
 - What role will the Unit-Based Team play?
 - What role will the Unit Champions play?
 - How should the prevention work be organized at the unit level?
2. What pressure ulcer prevention practices go beyond the unit?
3. How do we put the new practices into operation?
 - How do we manage the change process at the front line?
 - How do we pilot test the new practices?



- How do we get staff engaged and excited about pressure ulcer prevention?
- How can we help staff learn new practices?

4.1 What roles and responsibilities will staff have in preventing pressure ulcers?

In section 2 you examined current practices and identified aspects needing improvement and in section 3 reviewed the bundle of best practices. Now you need to define specifically what needs to change to put your selected bundle into practice and to decide who is going to do what in each aspect of the bundle. Specific areas of responsibility and paths of communication and accountability will be needed.

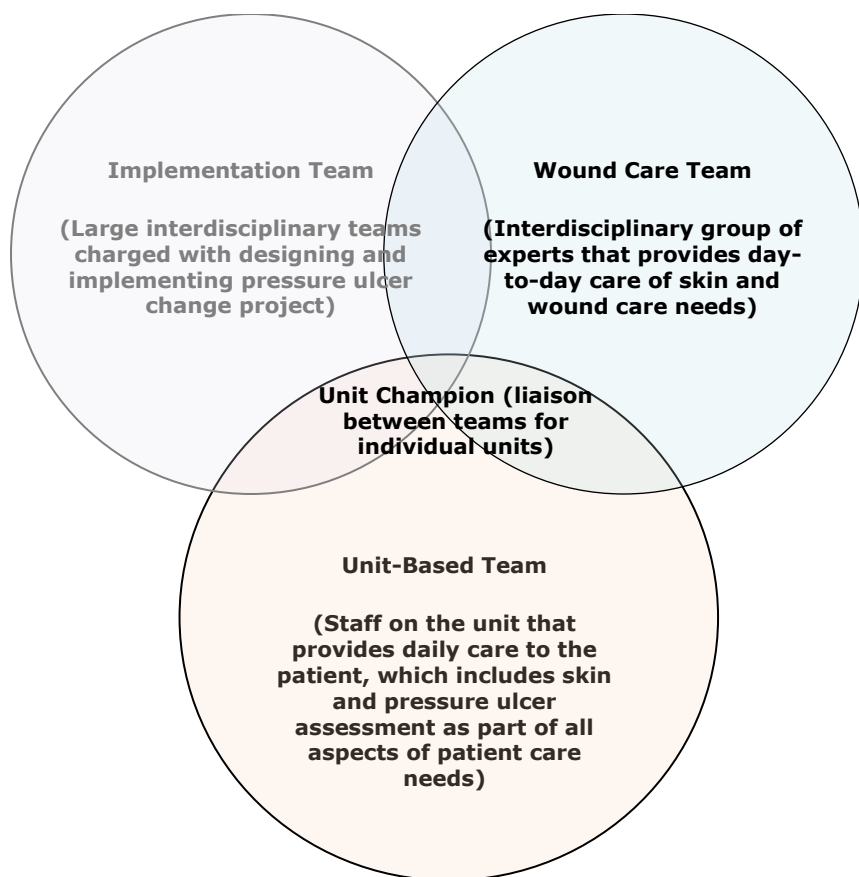
Hospitals and units within them vary in their staffing patterns and usual ways of doing business. You will need to consider staff roles based on the features of your organization overall and the individual units involved in pressure ulcer prevention. The Implementation Team will want to involve members of the Unit-Based Team and Wound Care Team in these decisions. That way, the implementation of the new practices will be tailored to each unit's staffing and operating practices and staff will be engaged in the change process, which will increase the likelihood of success.

Staff roles should be clearly defined so that everyone will understand if and how their roles will change. If you will implement the prevention bundle with current staff, you will want 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. As highlighted earlier, successful pressure ulcer prevention will require teamwork. Teams at all levels must work together in an interdisciplinary manner.

The figure below illustrates the overlapping responsibilities of different staff involved in pressure ulcer prevention. We introduced this figure in section 2.1.3 to highlight the multiple teams involved in the effort to improve pressure ulcer prevention. The original picture was intended to illustrate with overlapping circles the distinct but intersecting roles of the Implementation Team, Wound Care Team, and Unit-Based Team in the improvement process.

In this section, the focus shifts to how the new bundle of practices will work in daily operations and to defining what the ongoing responsibilities of the Wound Care Team and the Unit-Based Team will be in that new bundle. In this context, the figure highlights their different but intersecting ongoing roles. Consistent with that shift in focus, a new role of Unit Champion is added to the illustration and the Implementation Team begins to move to the background.

Figure 2. Team responsibilities



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

4.1.1 How do we assign roles and responsibilities?

It is important to determine who will perform each specific task identified in the bundle of best practices you have identified. 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 from your bundle and entering it into the summary page of the worksheet provided as Tool 4A in Tools and Resources. Then assign specific individuals or groups to each task. Sections 4.1.2 through 4.1.5 include examples of responsibilities different staff might take on; those examples are summarized in Tool 4B. 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 Practice Bundle’](#)) together with a summary page illustrating how responsibilities might be organized ([Tool 4B ‘Staff Roles’](#)).

4.1.2 What role will the Wound Care Team play?

Most hospitals have a Wound Care Team that directs wound care and assists in preventive practices. The Wound Care Team is your hospital’s content expert on pressure ulcer prevention. The Wound Care Team may be a formal or informal department, or it may be an individual clinician. The team may consist of nurses (RN, LPN), physical therapists, dietitians, or nurse aides, as well as health care providers (physicians, physician assistants, and nurse practitioners).

Team members may or may not be certified in wound care and may be led by a physician, nurse, or physical therapist. The team may provide day-to-day care for wounds in both inpatient and outpatient settings. Regardless of the team’s size or composition, the team members are the hospital *experts* and *resources* in current wound care practice and evidence. When people have questions, this is where they go for answers.



Beyond serving as content experts, the Wound Care Team may engage in a variety of different activities. These include:

- Providing formal educational activities for clinicians including lectures and inservice sessions.
- Providing education to patients and families.
- Developing hospitalwide policies and procedures related to pressure ulcer prevention and treatment.
- Rounding on pressure ulcer patients.
- Rounding on high-risk patients.
- Rounding periodically with unit staff to ensure that prevention practices are being carried out and any identified pressure ulcers are being appropriately staged and treated.
- Organizing and participating in prevalence and incidence audits; examining clinical practice, care planning, and documentation by unit staff.

What if your hospital has no formal Wound Care Team?

Not all hospitals have a formal Wound Care Team. Small hospitals may have one nurse or physical therapist who handles all wound care or may contract with an outside company to provide wound care when needed. The available wound care expertise, or lack thereof, must be carefully considered by the Implementation Team in planning the change project. The Implementation Team may have to advocate for the recruitment of additional expertise through

hiring of new staff or outside contracts. Other options are providing advanced wound training by interested staff or using experts from nearby universities or your State Quality Improvement Organization (QIO).



- Determine what responsibilities the Wound Care Team will have in preventing pressure ulcers.
- Highlight which of these responsibilities will differ from the Wound Care Team’s current role and therefore will require changes in practice. These will require special attention as you manage the implementation of the new bundle (section 4.2).
- If there is no formal Wound Care Team or designated wound care lead, determine how this role will be filled before going further.
- If there are other barriers to the Wound Care Team or designated wound care lead filling the defined roles, highlight them for use in planning your change strategies (discussed in section 4.2).

4.1.3 What role will the Unit-Based Team play?

The Unit-Based Team consists of staff members who provide daily direct patient care by conducting comprehensive skin and risk assessment, planning care for risk prevention, and ensuring that care is performed and documented. In other words, they are responsible for the performance of your bundle of best practices. In most cases, the Unit-Based Team will include everyone on the unit, such as RN, LPN, CNA, hospitalist, dietitian, 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 (“Practice Insights”). 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 skin and risk assessments.
- Monitors progress or changes in medical/skin condition.
- Documents care and prevention practices.
- Reports patient problems to health care provider.
- Obtains consults and medical orders as needed.
- Works with wound team to prevent or treat pressure ulcers.
- Educates patient and family as appropriate.
- Supervises aides.
- Knows how to obtain needed supplies if the wound nurse is not available.

Nurse aides

- Examine skin during each position change or skin cleaning.
- Perform appropriate care plan tasks.

- Report task completion and skin issues to the nurse.

Hospitalist

- Reviews need for specific types of rehabilitation therapy.
- Writes orders for specific interventions.

Dietitian

- Assesses nutritional status of patient.
- Makes specific recommendations regarding diet, including supplements.

The Unit-Based Team will work collaboratively with the Wound Care Team. Members may notify the Wound Care Team if skin problems arise or if high-risk patients are identified. They also will work collaboratively with the Wound Care Team to design education and care plans for patients and their families. Most important, they must be empowered to ask questions of the Wound Care Team. They should all feel able to contact the experts if they are unsure what care they should be providing.

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 pressure ulcer prevention. Given how frequently this occurs 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-Based 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-Based Team members' current roles and therefore will require changes in practice. These will require special attention as you manage the implementation of the new bundle (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).



The summary sheet presented as Tool 4B ([Tool 4B ‘Staff Roles’](#)) can help you think through these issues, and Tool 4A ([Tool 4A ‘Assigning Responsibilities for Using Best Practice Bundle’](#)) can help you record your decisions.

4.1.4 What role will the Unit Champions play?

Many successful improvement efforts have relied on Unit Champions as critical members of the Unit-Based Team, especially during the implementation process. A Unit Champion is a staff member who serves as the liaison between the Implementation Team, the Wound Care Team, and the unit staff. The Unit Champion is someone who is familiar with the program goals, bundles of care, 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 and 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.

A promising approach would be to have two champions per shift. This approach ensures that a champion is always available and assists with succession planning if one person leaves. However, some hospitals might not have enough staff to have this many champions. For example, in smaller hospitals, two champions for days and one for nights could be enough for the entire hospital. 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 pressure ulcer resources without the formal title of Unit Champion. This has occurred when frontline staff have become engaged in and excited about pressure ulcer 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 they would remain in place after pressure ulcer prevention has become routine.

You should consider which approach will be most successful in your organization.



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

- Satisfactory level of performance.
- Excellent communication skills.
- Effective linkage to other staff members.

- A demonstrated positive image of their unit and with nursing personnel.
- The ability to identify and help solve typical nursing issues.
- Knowledge of the benefits and process of pressure ulcer prevention.
- Ability to collaborate with all key stakeholders in the improvement process.



[Tool 4B ‘Staff Roles’](#) and worksheet [Tool 4A ‘Assigning Responsibilities for Using Best Practice Bundle’](#) in Tools and Resources may help you define the role of Unit Champions and resource staff.

4.1.5 How should the prevention work be organized at the unit level?

While the definition of team member roles is the first step in determining how the prevention work will be carried out, attention must also be paid to how the work is organized: 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 pressure ulcer 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 and may need contingency plans.

What paths of ongoing communication and reporting will be used?

Communication must be between staff at all levels: within the unit (e.g., between nurses, nurses and aides, nurses and physician, nurses and other staff) and between unit staff and the Wound Care Team. Consider where your communication weaknesses or breakdowns are and how they can be addressed. What linkages, for example, can you build in for successful interdisciplinary collaboration within the unit and across departments?

Some organizations monitor pressure ulcers in multidisciplinary patient safety rounds. Others specify processes for exchanging information at each shift change and for nurses sharing information with aides at each shift change. The key aspects are that the communication processes occur regularly and thoroughly with the least amount of time and effort.

Nurse’s aides may want to have a mechanism to convey skin issues to their nurse in a written format. Too often if the aide just gives skin information orally, it may be overlooked by the nurse because of time constraints or other urgent patient care needs. You may want to institute a formal method for aides to report skin issues to their supervising nurse. One example is a tablet with pull-off pages. The aide can write the patient name and room number, date/time, and information for the nurse and give it to him or her.

Also consider how you will communicate with patients and their families if the patient is at risk of a pressure ulcer or if the patient's skin deteriorates. Think about whether new processes are needed and, if so, what they will be. You may want to obtain or develop general informational materials for patients about the risks and potential consequences of pressure ulcers.



Examples of communication and reporting

- Risk and skin assessment information are included at all shift reports.
- Pressure ulcer risk or presence is documented on a unit flowsheet daily.
- Five-minute standup meetings are used to communicate important patient safety issues and changes in care plans.
- Interdisciplinary “Skin Rounds” are used to examine patients at risk for pressure ulcers.
- Nurse aides have guidelines and tools for reporting new skin or risk problems, such as a tablet with pull-off pages including patient name, room number, and date/time to be given to the designated nurse.
- Nurses have guidelines for treatment if Wound Care Team is not available.
- Patient and family are given pressure ulcer information on admission.
- Patient and family are notified if skin or risk changes.
- Staff have pocket cards to remind them of the practices they should be following.

What will the lines of oversight and accountability be?

Accountability of staff action is critical to successful improvement. Knowing something should be done does not ensure that it is. Skin and risk need to be assessed, care planning is needed to address that risk, and someone has to ensure that the plan is actually carried out. Possible mechanisms to address accountability are competency testing, inclusion of information on staff evaluations, and inclusion in policies, procedures, and care guidelines. Accountability should apply to both the unit and individual staff members.



Examples of oversight and accountability

- For unit accountability, Unit Champions post the latest pressure ulcer audit results and work with the Wound Care Team to educate their staff on areas still requiring improvement.
- For individual accountability, supervisory meetings between nurse managers and staff are routinely conducted to review pressure ulcer practices; competency testing is done annually.

How will pressure ulcer prevention be integrated into ongoing work processes?

Building new pressure ulcer prevention practices into ongoing work processes will be key to sustainability. If new practices are simply layered on top of current practices, they are likely to be dropped when the special project is over. Strategies for building into ongoing processes include:

- Making certain procedures universal so that staff do not have to decide which patients they apply to,
- Adding pressure ulcer communication to other established processes such as shift handoffs, and
- Creating visual cues or reminders in physical locations, such as turning clocks to remind staff when repositioning is due.



Examples of incorporating change into routine

- A newly admitted high-risk patient automatically triggers a wound care and dietary consult with consult information used by unit staff to individualize care planning to meet the patient's specific needs.
- Pressure-redistributing support surfaces are provided for all patients.
- Regular processes are instituted for ordering special surfaces and ensuring prompt delivery to the units. Correct-sized equipment is readily available.
- Processes are streamlined to order and obtain support surfaces quickly for patients identified as at risk.
- Nurses have access to dressings when wound staff are unavailable.
- Visual or auditory prompts (turning clocks, chimes, etc.) are used to prominently signal turning schedules to ensure that patients are turned at appropriate intervals.
- A "skin cart" incorporates all necessary supplies in one place.

Many hospitals are now using electronic medical records, which provide additional opportunities for integrating best practices into the daily routine. Work with your information technology (IT) department to explore how the electronic medical record may be used in the quality improvement effort. Questions to consider in this context include:

- What information about skin condition and risk 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 pressure ulcer risk?
- What is the most logical place in the record to collect/organize/assess information about patient skin condition and any necessary precautions?



Building electronic documentation systems

Quality improvement teams at several sites collaborated with IT to build documentation of pressure ulcer risk and care planning into their computer charting systems. Features that were added to electronic documentation systems included:

- Automatic consults to wound care nurses, dietitians, or physical therapists if a pressure ulcer is recorded or risk assessment scores are below a certain threshold.
- Patient education booklet linked to the documentation system so that it is readily available if needed.
- Pressure ulcer prevention guidelines or quick reference text integrated into the computer charting system.



- Working from the process map for pressure ulcer prevention and gap analysis you developed for your organization in the redesign process (section 2.4), develop your individualized operating rules to specify:
 - The paths of ongoing communication and reporting.
 - The lines of oversight and accountability.
 - Documentation that is needed and people to whom it is submitted.
 - Strategies for integrating pressure ulcer prevention into ongoing work processes.

These rules should include not only regular activities, but also contingencies, such as gaining access to the supply cabinet on weekends when the regular wound nurse is out.

- 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 pressure ulcer prevention practices go beyond the unit?

Our focus in the toolkit is primarily on preventing pressure ulcers 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 pressure ulcer risks is conveyed in handing off patients to other units or when discharging patients. Handoffs are generally weak links in our systems. When patients are transferred from the ED or ICU, do you regularly get information on their skin condition? Is there information about how long they were lying in the ED or whether there were problems in transit that could compromise their skin integrity? On discharge, are patients and families given information about skin care and pressure ulcer prevention? Are there gaps in practice that you should address?

Second, consider how the interactions of other members of the hospital staff with patients could contribute to the observation and care of patients on the unit. For example, orderlies who transfer and transport patients on and off the unit can assist in care by ensuring that their transfer techniques are consistent with standards of practice and by being alert to the dangers of lying too long on the gurney in one position. Dietary staff who distribute and collect trays can tell you how well the patients are eating and drinking. The environmental staff who are in and out of the rooms can tell you if the patient's pain is adequately controlled or if they are depressed. It can be surprising what patients and their families share with these people and keep from clinical staff.

4.3 How do we put the new practices into operation?

After you determine the bundle of pressure ulcer prevention practices (described in section 3) and how roles will be defined and work organized to carry out those practices at the care level in the units (described in section 4.1), you will need to develop strategies for putting these 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 we manage the change process at the front line?
- How do we pilot test the new practices?
- How do we get staff engaged and excited about pressure ulcer prevention?
- How can we help staff learn new practices?

The plans and activities triggered by these questions will need to be addressed simultaneously because while separate conceptually, they will overlap in practice.

4.3.1 How do we manage the change process at the front line?

As highlighted in earlier sections, incorporating the new bundle 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:

- It will be important to ensure that staff understand the new roles and have the knowledge and tools to carry them out.
- 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 bundle of practices fully, ensure that they understand that those practices offer promising strategies for providing high-quality care for patients.
- Identify and minimize practical barriers to using the new practices, such as inadequate access to supplies.
- At all levels, engage staff to gain their support and buy-in to the improvement effort and help tailor the practices in pressure ulcer 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 4.1.4 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.

Refining the implementation plan

The assessments and planning that your Implementation Team conducted earlier in the process will provide the basis for addressing these issues and thus managing this change process successfully at the front line. The assessments and planning will have helped you identify the issues you need to deal with and chart the paths for dealing with them. If the Implementation Team did not work through those sections earlier, you should consider working through them now.

- Tools are provided in section 1.2 to assess staff understanding of the reasons for change and in 2.2.3 to assess current levels of knowledge about pressure ulcer prevention and to identify gaps in knowledge, such as beliefs that a certain incidence of pressure ulcers is inevitable. Together, these assessments can help you determine where attitudes need to be changed and knowledge improved, and what barriers need to be addressed at the unit level.
- Section 2.2.2 provided guidance for process mapping and gap analyses of current practices that can help you systematically assess barriers to consistently using best practices, such as lack of awareness, lack of assignment of responsibility, or lack of training. These assessments can help you target training to areas where there were gaps and where practices will now be changed and to reinforce existing practices that will be continued.
- Section 1.5 provided guidance on determining the types of resources needed to support the improvement process and the level of pressure ulcer prevention care that will result from the process. Sections 1.1 and 1.2 provided guidance on working to ensure that your colleagues and organizational leaders understand why change is needed. Together, these sections can help you make the case for obtaining the resources needed.

Building on your understanding of your organization and the issues you need to address, you should review and may want to refine your Implementation Plan (discussed in section 2.3.2). You can outline your strategies for **introducing and supporting** the new practices (described in this section), **pilot testing** the bundle (discussed in section 4.2.2), and **engaging and educating** staff to implement the new bundle (discussed in more detail in sections 4.2.3 and 4.2.4).

Getting started

The Implementation Team should work with Unit Champions to get the implementation process started and to coordinate it. The Unit Champions will provide an important link between the Implementation Team and the Unit-Based Team in the pilot and early implementation efforts. Their roles should be clearly defined so that both they and others in the unit know what to expect.

Unit Champions can work with the Implementation Team to introduce the new practices to the unit staff. Champions can talk both about organizational change and the specifics of the new pressure ulcer practices and engage staff in tailoring the practices to their unit. Champions also

can address perceived barriers and potential resistance and troubleshoot problems if any arise when implementation begins.

All shifts should be included in these discussions. Unit Champions should be available to answer questions and problem solve. You should consider whether Implementation Team members will also be available for frontline questions and troubleshooting or whether they will work at a higher level.

Involving staff, clinicians, and middle managers

At the unit level, it will be important not only to involve frontline nurses and support staff but also to involve nurse managers and physicians. We talked earlier about 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 bundle will be introduced and strongly supported in their units.

Physician involvement is often overlooked in wound care but needs to be encouraged. This is especially true if much of the medical care is provided by a small number of hospitalists. Make sure they are aware of best practices in pressure ulcer prevention and hospital policies and procedures.

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 assessment and incidence and prevalence rates, 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 engage senior leaders and middle managers to sustain their early support for the improvement effort. Progress and performance should be reported to senior leadership regularly. Management support will be needed during implementation in multiple ways:

- Leaders and managers are important sources of communication. Their expressed support for improving pressure ulcer 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 pressure ulcer prevention and thus have the right people at the table to work across them, 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 support surfaces are recommended in the bundle or if a pressure ulcer prevention campaign needs visibility tools such as posters or buttons. You initially considered resource needs for pressure ulcer prevention in section 1.5. As suggested above, the Implementation Team should review that list and update 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 unit staff involved in prevention.
 - 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 we 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* you do the entire launch. It also can generate early success that will build momentum for later spread across the organization.

Small hospitals may have only be 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 bundle 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 the selection. 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 pressure ulcer incidence and a unit with high incidence, or units that present different implementation challenges, such as surgery and ICU. By selecting several very different units, your Implementation Team can hear from the Unit Champions and staff what they like and problems they have had implementing the project. Two widely different units will give you a better overall feel for refinement that may be needed and how 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 bundle. The pilot test can provide two types of information: (1) the outcomes you will collect to judge the pilot's success, such as rates of completion of comprehensive risk assessments or better adherence to repositioning guidelines, and (2) feedback from participants on how the new bundle is working in terms, for example, of the clarity of expectations or the impact of the new practices on their workflow. Section 5 provides tools that will help in measuring outcomes.

You should use information from the pilot to change the bundle to meet your hospital needs and to change the ways in which it 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 pressure ulcer prevention bundle—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 answers to create an implementation tool for the hospitalwide launch.

4.3.3 How do we get staff engaged and excited about pressure ulcer prevention?

Engaging the buy-in, commitment, 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.

Should we mount a pressure ulcer prevention campaign?

Given the many competing demands for time on busy clinicians and clinical staff, how can you best achieve engagement in pressure ulcer prevention across the hospital? Just as we all celebrate birthdays, weddings, and other life-changing events differently, changing practice in your

hospital depends on knowing the culture of your own organization. For some, launching a very public and highly publicized campaign is vital to the success of the improvement project. For other health care organizations, a large campaign could provoke a negative reaction from staff. For instance, some might think, “What’s all the fuss about?” or “Here they go again with the latest campaign of the month. Let’s do nothing, it will blow over, and there will be something else in a few months.” Knowing what will work best in your institution is critical to the success of getting your staff motivated, involved, and committed.

Consider how the focus on pressure ulcer prevention fits into the core mission and values of your institution. Also consider whether there have been local events or cases that would help staff meaningfully connect with the importance of pressure ulcer prevention. Look at past improvement projects that involved multiple processes and disciplines across the hospital, and consider what the characteristics are of the most successful efforts in bringing about change.

An important aspect of engagement and something key to success in any change strategy will be clear communication through multiple paths. Be sure staff know the program is coming and are familiar with the new materials and roles prior to start. For example, you might have information sheets for the staff outlining changes to proactive, enhanced, and accountable prevention, and posters for unit display; also include information on how the program will be evaluated, what rewards will be, and how their results will be known.



Examples of campaigns in other hospitals:

- One collaborative used a “No Ulcer” logo with staff lapel pins and unit posters. To launch the program, brochures on pressure ulcer prevention education were developed to give to patients and families on admission.
- Another hospital identified a theme called PUPPI on Patrol. This program used a puppy picture outside the room of a high-risk patient to remind staff to turn/reposition the patient and gave “best of show” awards to units with the highest documentation of prevention practices.
- A third site used the theme “no pressure at <name of site>” to raise awareness of their pressure ulcer prevention program. Their activities included a “no pressure” theme song played at staff training sessions, ID holders, and a mannequin named Uncle Ulcer for hands-on staff training.

How should we work with staff at the unit level?

Regardless of whether you decide to mount a visible campaign or pursue a more low-key approach, you will need to work with staff at the unit level. 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 be a success, 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 Champion should meet with unit staff on all shifts. They should review the newly defined roles and responsibilities and work with the staff to determine how those roles and the paths for communication and reporting among staff need to be adjusted for their unit and how to address

barriers to adherence. This process can be done with a unit-level improvement team or with the entire staff, for example, at a regular staff meeting.

You should choose the approach that works best for improvement efforts in your organization. A challenge in facilitating these discussions will be to distinguish between constructive tailoring that will enhance adherence to the new bundle and watering down the new practices that reflects reluctance to change or failure to accept the new practices.

Even with involvement in tailoring the changes to their unit or position, some clinicians and staff may be reluctant to use the new bundle. 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 bundle is worth using. Or as implementation advances and the new bundle becomes the norm, peer pressure may spur resisters to change their minds.

Including pressure ulcer 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 and then either redesign the bundle 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 bundle 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 identifying 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 and reducing barriers in their units; include all shifts in this process.
- From the staff input and earlier analyses of current practices, identify potential barriers to the uptake of new practices, including staff resistance to change, and develop strategies for removing or working 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 for reducing staff resistance

- Continue to persuade staff of importance of prevention:
 - 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 lose reimbursement for hospital-acquired pressure ulcers.
- 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 e-mail) that initially highlight the problem of high pressure ulcer rates and later show success in preventing them.



Examples of methods and strategies to increase staff engagement can be found in the following article. Key points from this article include:

- Ongoing, multilevel staff education for all clinical staff and physicians.
- “Skin tips” newsletter.
- Annual skin fairs and wound conferences.
- Certificate for “most improved” unit in terms of outcomes.

Hiser B, Rochette J, Philbin S, et al. Implementing a pressure ulcer prevention program and enhancing the role of the CWOCN: impact on outcomes. *Ostomy Wound Manage* 2006;52(2):48-59.

4.3.4 How can we help staff learn new practices?

Once the initial needs assessment 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 experiential 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 round talks.

- Care practice simulations, expert practitioner observation of care delivery, and competency validation are also strategies that can enhance learning.
- Clinical bedside rounds, patient case review, or “spend a day with the WOC [wound, ostomy, and continence] nurse” are excellent ways of translating abstract knowledge into behavior changes.

Any and all plans for new or changed staff education should be worked out in close collaboration with the content experts, the Wound Care Team. As discussed in section 6 on sustaining the redesigned prevention practices, 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 pressure ulcer 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 pressure ulcer knowledge assessment 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’](#)).



A recent nursing home project used 5-minute standups to improve communication and provide ongoing staff education. The key steps in that process include:

1. Review medical record audit data for pressure ulcer risk and skin assessment and associated care planning for the past week. Did planning match needs? Was care documented as completed using medical record documentation specific to the particular unit?
2. Discuss unit goals for the upcoming week (for example, “This week we will focus on nutrition”).
3. Provide specific strategies for meeting the upcoming week’s goal (usually only one or two strategies are presented).
4. Show a brief video clip or use a case example or handouts of the specific strategy in use (video clips should be 1 to 2 minutes at most in length).
5. Discuss any questions or concerns from staff and discuss possible solutions.



- A model curriculum to use for staff education: www.npuap.org/PDF/prevcrr.pdf.
- A range of resources, including many that can be used for staff education: www.safetyandquality.sa.gov.au/Default.aspx?PageContentID=17&tabid=76.

In addition, the AHRQ-sponsored On-Time nursing home initiative used 5-minute standup meetings to integrate the use of a nutrition report into clinical practice and to facilitate communication among CNAs, nurses, and dietary staff. To learn more about this initiative, refer to their Quality Improvement Manual at: www.ahrq.gov/research/ltc/ontimeqimanual/ontimeqimanual.pdf.

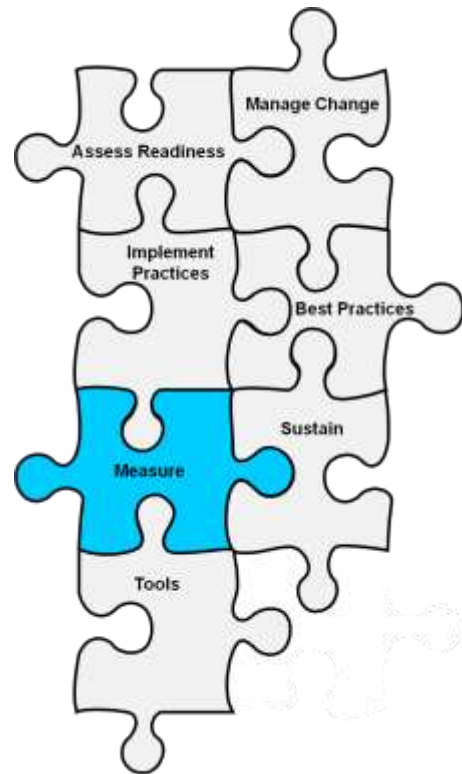
4.4 Checklist for implementing best practices

4. Checklist for implementing best practices	
Roles and responsibilities of staff:	
Specific roles and responsibilities have been assigned to	
<ul style="list-style-type: none"> • Members of the Wound Care Team • Members of the Unit-Based Team • The Unit Champion 	
Organizing the prevention work	
Paths of ongoing communication and reporting have been identified	
Mechanisms to address accountability have been developed	
Strategies for building new practices into daily routine have been identified	
Putting practices into operation	
Preliminary implementation plan has been refined	
Support from key stakeholders has been assured	
A plan to pilot test new practices has been initiated	
A strategy for engaging staff has been established	
Education plans have been devised to help staff learn new practices	

5. How do we measure our pressure ulcer rates and practices?

A basic principle of quality measurement is: *If you can't measure it, you can't improve it.* Therefore, pressure ulcer performance 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 be key to understanding where you are starting and to sustaining your improvement gains.

During the course of your pressure ulcer prevention improvement effort and on an ongoing basis, you should regularly assess your pressure ulcer rates and practices. We recommend that you regularly monitor: (1) an outcome (preferably pressure ulcer incidence or prevalence rates), (2) at least one or two care processes (e.g., skin assessment), and (3) key aspects of the infrastructure to support best care practices (e.g., clear lines of responsibility for overseeing accuracy of skin assessments). The questions in the rest of this section will help you develop measures and processes for assessing pressure ulcer rates and practices.



5.1 Measuring pressure ulcer rates

5.1.1 Why measure pressure ulcer rates?

Pressure ulcer rates are the most direct measure of how well you are succeeding in preventing pressure ulcers. If your rate is low or improving, then you are likely doing a good job in preventing pressure ulcers. Conversely, if your pressure ulcer rate is high or increasing, 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 pressure ulcer rates, you will be counting the number of patients with pressure ulcers. It is important that you only measure and track pressure ulcers. Many other types of skin lesions may develop in hospitalized patients. Remember, pressure ulcers are areas of soft tissue damage caused by pressure or pressure and shear. **Do not** count skin lesions not related to pressure such as skin breaks or maceration from friction/moisture, even when found over a bony prominence.



Determine whether hospital staff can distinguish pressure ulcers from other causes of skin damage.

5.1.3 What measures do we use in monitoring pressure ulcer rates?

Two types of measures can be monitored: incidence and prevalence rates.

- **Incidence** describes the number or percentage of people **developing** a new ulcer while in your facility or on your unit. Therefore, it only counts pressure ulcers developing after admission. **Incidence** rates provide the most direct evidence of the quality of your care. Therefore, your quality improvement efforts should focus on incidence rates.
- **Prevalence** describes the number or percentage of people **having** a pressure ulcer while on your unit. It may reflect a single point in time, such as on the first day of each month. This is known as **point prevalence**. However, it can also reflect a prolonged period of time, such as an entire hospital stay. This is known as **period prevalence**. Both types of prevalence rates (point and period) include pressure ulcers present on admission as well as new ulcers that developed while in your facility or on your unit. Therefore, they can provide a useful snapshot of the pressure ulcer burden but they say less about your quality of preventive care than do incidence rates.

Make sure everyone looking at the data understands the difference between incidence and prevalence. Incidence rates capture only new pressure ulcers developing during an admission. Prevalence rates include all pressure ulcers present in a group of patients; those that developed during a hospital stay as well as those that developed elsewhere..

There is no single “right” approach to measuring pressure ulcer rates. Every approach has advantages and disadvantages. While we make specific recommendations below, the most important thing is to be **consistent**. Rates calculated by one approach or methodology cannot be compared to rates calculated another way.



- Assess whether unit staff understand the difference between incidence and prevalence rates and clarify understanding if they do not, using the definitions above.
- Define the measurement approach that you will use.

5.1.4 What do we need to calculate pressure ulcer incidence or prevalence rates?

To calculate pressure ulcer incidence or prevalence rates, whether at the unit level or at the overall facility, you need to know **who** has a pressure ulcer and **when** it developed. To obtain this information, you must complete two tasks:

- Perform a **comprehensive skin inspection** on every patient (see section 3.2). Look carefully for any lesions of the skin and determine whether the lesion is a pressure ulcer. If unsure whether it is a pressure ulcer, get help from the wound care nurse or another experienced clinician.
- **Document** the results of the comprehensive skin inspection on all patients. To calculate incidence or prevalence rates, you need to have the information on all patients easily available. Therefore, it is best if you use a standard form that lists each patient on the unit and the results of the daily skin inspection. This form notes whether there is a pressure ulcer, the number of different pressure ulcers, their location, and the stage of the deepest pressure ulcer.

While we recommend performing a comprehensive skin inspection daily and documenting the results on a standard form as the best approach for calculating pressure ulcer rates, hospitals have found it difficult to convince staff to create a new document for recording pressure ulcer status. Other approaches are possible that allow calculation of incidence and prevalence rates. One common approach is to pick a date, such as the first of the month, and perform a detailed skin examination of each patient. For each pressure ulcer present, the stage is described and it is determined whether the ulcer was present on admission. This approach allows the determination of both incidence and prevalence rates.

Typically, this comprehensive evaluation is performed by an “outside” expert such as a wound nurse or the nurse manager from another unit. The National Database of Nursing Quality Indicators (NDNQI) uses a similar approach, with assessments performed every 3 months. Whatever approach you select, use it consistently and always remember that rates calculated by different approaches are not comparable.



Adopt or create a standard form on which you can easily record the results of the skin inspection. Some hospitals with electronic medical records have developed computerized skin assessment forms that must be completed daily on each patient.



You can record the results of a skin inspection in a number of ways. A sample unit log for use in skin inspection documentation is included in Tools and Resources ([Tool 5A ‘Floor Log’](#)).



To learn how NDNQI recommends capturing data on pressure ulcers, refer to the survey guide in the section for pressure ulcer training at the NDNQI Web site:
<https://www.nursingquality.org/NDNQIPressureUlcerTraining/module3/Default.aspx>.

5.1.5 How do we calculate pressure ulcer incidence or prevalence rates?

Incidence and prevalence rates should be calculated monthly based on the information from the skin inspection form. When using a standard form such as the one shown in Tools and Resources, at the end of the month count the total number of patients present, how many had a pressure ulcer at any time while on the unit, and how many developed a new ulcer while on the unit. In calculating rates, consider rates for all ulcers and those Stage II or greater.

Rates are calculated as follows:

- PREVALENCE measures the number of patients with pressure ulcers at a certain point or period in time.
 - The numerator will be the number of patients with any pressure ulcer (count for both any ulcer and Stage II or greater).
 - Just count patients, not the number of ulcers. Even if a patient has four Stage II ulcers, he or she is only counted once.
 - The denominator is the number of patients on your unit or in your facility during that month.
 - Divide the numerator by the denominator and multiply by 100 to get the percentage.

Example: 17 patients with any pressure ulcer \div 183 patients = .093 \times 100 = 9.3 percent

- INCIDENCE measures the number of patients developing new pressure ulcers during a period in time:
 - The numerator will be the number of patients who develop a new pressure ulcer (count all ulcers and those Stage II or greater) after admission.
 - Just count patients, not the number of ulcers. Even if a patient has four Stage II ulcers, he or she is only counted once.
 - The denominator is the number of all patients admitted during that time period.
 - Sometimes in calculating incidence rates, studies have excluded patients with an existing pressure ulcer on admission. Neither approach is necessarily better; just be consistent.
 - Divide the numerator by the denominator and multiply by 100 to get the percentage.

Example: 21 patients with a new pressure ulcer \div 227 patients = .093 \times 100 = 9.3 percent

In calculating rates, consider rates for all ulcers and those Stage II or greater.



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

5.1.6 How should we use the monthly data on pressure ulcer rates?

Use the information on pressure ulcer 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 pressure ulcer rate to changes in practice? Think about what you have or have not been doing well over the past month and relate it to whether the incidence rate is better or worse.

Note that when you implement a quality improvement program and begin tracking performance, increased pressure ulcer rates are frequently seen. This is not necessarily related to worse care. Instead, unit staff members are becoming better at detecting pressure ulcers that were previously missed.

Second, **disseminate** this 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.

Third, **study** in detail what led to the occurrence of each Stage III or IV pressure ulcer. When a deep pressure ulcer develops, it usually reflects not so much the failure of an individual clinician, but rather a system failure. Thus, these deep pressure ulcers represent a learning opportunity regarding aspects of care that may need improvement. Perhaps risk assessment was not done in a timely manner or care planning did not fully address the patient's skin care needs.

Try to understand why the pressure ulcer developed and how such incidence can be prevented in the future. **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.



- 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.
- Assess whether unit staff know the unit's rate and whether it is improving over time.



A more detailed description of root cause analysis is available at: <http://psnet.ahrq.gov/primer.aspx?primerID=10>.

5.1.7 Are there national benchmarks we can use for comparison with our pressure ulcer rates?

The question of how well we are performing relative to other hospitals often arises. Are our rates lower than those at other hospitals? Unfortunately, there are no national benchmarks with which you can compare your performance. In large part this is due to the many different approaches used in studies measuring incidence and prevalence rates. **Rates calculated using different approaches are not comparable.**

There are a number of ongoing initiatives to determine pressure ulcer rates using a standardized method across a large number of hospitals. These include the NDNQI and periodic surveys by some of the large manufacturers of pressure relief devices, including Hill-Rom and KCI. In addition, as present on admission (POA) coding is implemented for pressure ulcers, the Centers for Medicare & Medicaid Services (CMS) databases will likely become a more accurate and useful source of data on national rates of pressure ulcer development in hospitals.

5.1.8 How can we improve the quality of the data being collected for pressure ulcer rates?

To improve data quality, you will need to improve staff recognition and staging of pressure ulcers. Many errors are made in the recognition and staging of pressure ulcers and there are only limited opportunities to learn. Therefore, consider performing a comprehensive skin assessment every 3 months with a wound care nurse or other knowledgeable clinician from another unit.

Consider collecting data on pressure ulcers developing after transfer from your unit. Pressure ulcers may take several days to develop after a severe pressure injury. Therefore, they may not be first noticed until after the patient has left your unit.



Many resources have information on calculating pressure ulcer incidence and prevalence rates. Consider reviewing the following Web sites:

- www.woundsinternational.com/pdf/content_24.pdf. This document describes the results from an expert working group on pressure ulcer incidence and prevalence rates. It is well written and easily understandable but may be too advanced for some people on your unit. Use it as a resource to answer any questions you may have.
- <https://www.nursingquality.org/NDNQIPressureUlcerTraining/module3/default.aspx>. This Web site from the NDNQI contains a slide show describing a protocol for conducting a prevalence study. Also included are other measures of care that could be collected. The material is basic and will be understandable by most staff.
- The National Pressure Ulcer Advisory Panel is preparing a slide presentation on calculating pressure ulcer prevalence and incidence rates. It will be available for purchase at their Web site at www.npuap.org.

5.2 Measuring Key Processes of Care

5.2.1 Why measure key processes of care?

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

processes of care could be measured in assessing pressure ulcer prevention. We recommend initially looking at no more than three:

- Performance of comprehensive skin assessment within 24 hours of admission.
- Performance of standardized risk assessment within 24 hours of admission.
- Performance of care planning that addresses each deficit on standardized risk assessment.

5.2.2 What data sources should be used in measuring key processes of care?

In measuring key processes of care, 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 whether a comprehensive skin assessment is done on a particular patient, would be the most accurate approach but would be extremely labor intensive. Surveys are also labor intensive and rely on staff members' recall of specific events. These recollections might be inaccurate. Medical record reviews are the easiest approach to complete but rely on what is documented in the record.

Much pressure ulcer preventive care may not be documented. Nonetheless, we recommend medical record reviews as the source of data on the performance of key processes of care. While rates may initially be low because of poor documentation, this finding will encourage improved documentation of the care actually being provided.



Use this tool developed by the Quality Improvement Organizations program for abstracting medical record data ([Tool 5B 'Preventing Pressure Ulcers Data Tool'](#)).

5.2.3 How do we ensure performance of comprehensive skin assessment within 24 hours of admission?

As the first step in prevention, it is essential to ensure that a comprehensive skin assessment is performed within 24 hours of admission. Determine whether this assessment is being performed.

Sample protocol for assessing performance of comprehensive skin assessment

1. Take a sample of records of patients newly admitted to your unit within the past month. As few as 10 records may be sufficient for initial assessments of performance.
2. 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.
3. Determine whether there is any documentation of a skin examination. This might include mention of any lesions or specific mention that none are present.
4. Determine how comprehensive the initial skin assessment was. Is there specific mention of all five dimensions of the assessment: temperature, color, moisture, turgor, and whether skin intact.
5. Calculate the percentage having any documentation of skin assessment as well as having a comprehensive exam.



This tool can also be found in the Tools and Resources section ([Tool 5C](#) ‘Assessing comprehensive skin assessment’).

5.2.4 How do we ensure performance of standardized risk assessment within 24 hours of admission?

Risk assessment is the cornerstone of prevention. It identifies whether patients are at risk and what specific interventions need to be implemented. Ensure that a standardized risk assessment was performed within 24 hours of admission. A sample protocol for checking risk assessments can be found in Tools and Resources (Tool 5D, Assessing Standardized Risk Assessment).is described below.

Sample protocol for assessing performance of standardized risk assessment

1. Take a sample of records of patients newly admitted to your unit within the past month. As few as 10 records may be sufficient for initial assessments of performance.
2. Identify nursing notes from the first 24 hours of hospitalization. This should include the admission nursing assessment, subsequent nursing progress notes, or any notes specifically documenting pressure ulcer risk assessment.
3. Determine whether there is any documentation of the completion of the standardized risk assessment. This may include a Braden Scale, Norton Scale, or other system. Completion should be indicated by the assignment of an actual score.
4. Calculate the percentage having the actual score completed.



This tool can also be found in the Tools and Resources section ([Tool 5D](#) ‘Assessing standardized risk assessment’).

5.2.5 How do we assess care planning to ensure that it addresses each deficit on the standardized skin assessment?

For risk assessment to make a difference, all areas of risk identified on the standardized risk assessment need to be addressed in the care plans. 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 have an abnormal standardized risk assessment. As few as 10 records may be sufficient for initial assessments of performance.
2. For each patient, determine on which dimensions of the standardized risk assessment there was a score that was not normal.
3. Identify the care plans prepared shortly after admission.
4. Determine whether each abnormally scored dimension of the standardized risk assessment is addressed in the care plans.
5. Calculate the percentage of abnormally scored dimensions of the standardized risk assessment that are addressed in the care plan.



This tool can also be found in the Tools and Resources section ([Tool 5E 'Assessing care planning'](#)).

5.2.6 What should be done if we are not doing well on measures of these key processes of care?

Good performance on these key processes of care is critical to preventing pressure ulcers. 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. Go back to section 2.2 for suggestions on how to accomplish this goal.

5.3 Checklist for measuring progress

5. Checklist for measuring pressure ulcer rates and practices	
Measuring pressure ulcer rates	
Incidence and prevalence measures are frequently monitored	
Pressure ulcer rates are examined on a monthly basis	
Information on rates is disseminated to key stakeholders and staff	
Root cause analysis is conducted for each occurrence of Stage III or IV pressure ulcer	
Measuring key processes of care	
Comprehensive skin assessment is performed within 24 hours of admission	
Standardized risk assessment is performed within 24 hours of admission	
Care plan addressing every deficit on standardized risk assessment has been developed	

6. How do we sustain the redesigned prevention practices?

Those who have been involved in multiple organizational change projects recognize that the only step more difficult than implementing the initial changes is ensuring that those changes become woven into the day-to-day fabric of operations so that they are sustained beyond the life of the 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 achieve this goal, *it is essential that the changes become integrated into existing organizational structures and routines and that management's goals and reporting mechanisms are in alignment with the new standards and practices.* 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 pressure ulcer prevention efforts on an ongoing basis?
- What types of ongoing organizational support do we need from others to keep the new practices in place?
- How can we reinforce the desired results?

6.1 Who will be responsible for sustaining active pressure ulcer prevention efforts on an ongoing basis?

The role of the Implementation Team will change as new practices are successfully adopted. A key decision for your organization will be whether to keep the Implementation Team going or to transfer the responsibility for sustaining active pressure ulcer prevention to another group. The decision will be influenced by your organizational structure, improvement culture, and location of commitment to pressure ulcer prevention. For example, if the Implementation Team has been chartered as an ad hoc, time-limited quality improvement team and the expectation in your organization is that it will be disbanded, you may need to hand off responsibility to an ongoing committee or operational owner. Or if on a sustained basis, the work of the Implementation Team will duplicate or compete with an ongoing committee that is active and capable, then you may want to transfer responsibility. On the other hand, if there is no other team—for example, the Skin Committee has too many responsibilities or is not an engaged group—you will need to keep the Implementation Team active, although you may decide to reduce the frequency of team meetings.



If the Implementation Team decides to hand off responsibility, it must identify which hospital manager or team will “own” oversight responsibility for pressure ulcer prevention practices on an ongoing basis. The Implementation Team will need to hand off all information about the project and ongoing reporting efforts before making the decision to reduce or stop meetings.

The critical point is that ongoing responsibility for pressure ulcer prevention should be clearly assigned. For ease of presentation in the rest of this section, we will refer to the group responsible for pressure ulcer 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 take up new challenges (e.g., revise online documentation forms).

The Sustainability Team will continue to ensure that collection of data and regular reporting of rates are taking place and that these activities become fully integrated into regular work processes. Intermittent meetings will be important in discussing outcomes and updating materials and policies on an ongoing basis as more information about the project’s effect becomes available.

6.2 What types of ongoing organizational support do we need to keep the new practices in place?

While the frontline work to prevent pressure ulcers depends on unit staff and the Wound Care Team, the Sustainability Team will need support from other parts of the organization to be successful on an ongoing basis. Support will take the form, for example, of training for new employees and refresher training for current employees; human resources promptly filling staff vacancies; facility management for supplies and equipment; and information technology staff support to assist with regularly reporting monitoring data.

If your organization is using Unit Champions, the Sustainability Team will need to consider strategies for keeping 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 pressure ulcer resource staff on the units, you will need processes for keeping them engaged and replacing them when needed.

The Sustainability Team also will need to consider how to engage and communicate with the staff at large about the new practices as they become integrated into ongoing operations. This communication is essential for keeping staff involved and up to date. 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 and involved. Some teams have even posted “on the john” or “potty briefs” flyers in staff bathrooms detailing a skin issue on a monthly basis. Be sure that pressure ulcer prevention becomes a standard part of yearly staff education fairs or other similar events.

To further solidify ongoing support, you should determine to which oversight committee pressure ulcer prevention 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. It is important that the group report to hospital

leadership so that pressure ulcer prevention will have the leadership attention needed for continued accountability and to ensure support of other divisions as needed.

In addition to assessing the extent to which processes and outcomes of care appear to be changing in response to the pressure ulcer prevention program, it is important to examine the extent to which organizational structures and routines have also changed. 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 pressure ulcer prevention:

- Are unit staff very familiar with their role in preventing pressure ulcers and how their role relates to other staff members involved in pressure ulcer prevention?
- Are there unit experts of some sort who can be given extra training and work within units to maintain skin care awareness and knowledge?
- Can you identify systems or prompts that have been put into place to ensure that care is carried out appropriately? For example, does the electronic medical record now have a section on skin care assessment and treatment?
- Have barriers to obtaining needed supplies and equipment, such as support surfaces, been addressed?
- Is performance being routinely tracked?
- Are performance data regularly reported to the staff?
- Is there a committee reporting to hospital leadership that monitors pressure ulcer data, holds staff accountable, and ensures that needed resources are available to keep rates low?

6.3 How can we reinforce the desired results?

Generating and maintaining excitement about change is critical to success. Given the difficulty in improving care, improvements in performance measures may not initially be evident. It is thus important to find small successes early on which can be rewarded (e.g., the calculation of incidence and prevalence rates depends on completion of the monthly skin documentation form). Consider giving a small framed certificate or other acknowledgement to unit staff the first time the skin documentation form is completed correctly. The key is to find small and regular ways to recognize when unit staff members do the right thing.

- **Reward changed behavior at the unit level:** For example, you might start by giving certificates to the units turning in reports on time and slowly raise the bar to awards for 100 percent documentation of skin and risk assessment within 8 hours or no facility-acquired pressure ulcers in a 3-month period (or whatever outcomes your organization has selected). Consider giving rewards to the unit with the greatest decrease in pressure

ulcer incidence. Post results and comparative information for units and for the facility in general.

- **Reward changed behavior at the individual level:** For example, you might ask Unit Champions to nominate a staff member (from a variety of disciplines) quarterly to receive recognition as an individual who made a difference in pressure ulcer prevention. Also, consider taking steps to encourage and reward staff members seeking additional education on pressure ulcer prevention.



Gibbons W. Shanks HT. Kleinhelter P. Jones P. Eliminating Facility-Acquired Pressure Ulcers at Ascension Health. *Journal on Quality and Patient Safety*. 2006; 32(9): 488-496.

This article describes strategies to reinforce desired outcomes. Key points from this article include:

- The importance of continued leadership support and staff dedication at all levels.
- Rewarding staff with pizza parties and gift certificates to help them stay motivated.
- Ongoing monitoring and measuring of pressure ulcer rates.

6.4 Summary and plan for moving forward

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 pressure ulcer prevention. These best practices have become the standard way care is now provided. Because of these changes, you can now demonstrate how your patients have better outcomes with fewer pressure ulcers developing. These are major achievements for the Implementation Team and the hospital, and everyone should be congratulated for this collective effort.

At this point, you have reorganized your Implementation Team to be a Sustainability Team. Ongoing vigilance will still be required in a number of areas:

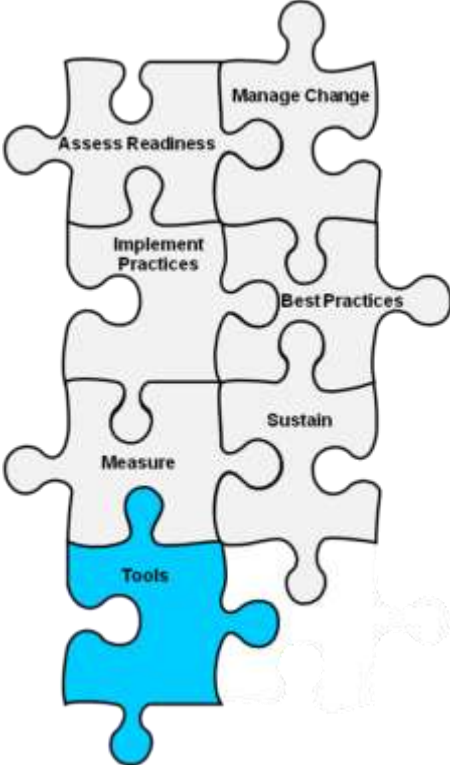
- Turnover will mean that new staff will come onto units who do not have the same knowledge as existing staff who have been exposed to your education and awareness activities. Ensure that orientation for new clinical staff is modified to include a focus on skin care.
- Old habits have a way of resurfacing. Despite all the changes, people may slowly go back to the approach they are more used to. This tendency supports the need for ongoing refresher training in the context of the needs of each particular unit.
- Additional quality improvement efforts may be initiated in areas other than pressure ulcers. The changes in practice that are implemented may affect pressure ulcer care in unexpected ways. *For example, at one facility, a new focus on reducing indwelling urinary catheter time led to an increase in skin moisture and related skin changes.*
- 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, a new cost management system of charging specialty bed costs back to unit budgets may create a disincentive for unit managers to order such beds even when indicated for preventive purposes.*

- New problems may arise due to unannounced changes in other policies and/or products. *For example, one hospital noticed an increase in tubing-related pressure ulcers.* Investigation revealed that the tubing vendor had made an unannounced change to more rigid tubing that posed a greater danger of pressure-related skin damage.
- Best practices in pressure ulcer care also continue to evolve. New studies are performed that may require you to reconsider your practices. As your content experts, the Wound Care Team can update the entire hospital on such changes in recommended practices.

Finally, always remember that no matter how well you are doing, sustained attention is still needed to keep improvements on track. Perfection in pressure ulcer prevention care is never achieved. There are always additional steps to get closer to the ideal of zero incidence of avoidable pressure ulcers.

7. Tools and Resources



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Tool ØA: Introductory Executive Summary 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 pressure ulcer project.

Reference: Developed by the Boston University Research Team.

Instructions: Adapt this letter as needed and present it to key players to enlist their support before mounting your pressure ulcer prevention project. You may want to use tool 1B, Key Stakeholder Analysis, to identify individuals and departments that may have an interest in the project.

Dear <Name>:

We would like to introduce you to a new pressure ulcer prevention project. We hope that you will support this exciting new endeavor.

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

Why is this project important? Pressure ulcers acquired during acute care stays present significant treatment and recovery delays for patients, increase length and cost of inpatient stays, and have become a “never” event from the standpoint of Medicare reimbursement.

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

- **Materials and supplies:** Do we have the most evidence-based products and equipment necessary for preventing pressure and skin breakdown? Are new products evaluated with this outcome in mind?
- **Housekeeping:** Do standard bed-making techniques and materials result in too much moisture being retained next to patient skin?
- **Information technology:** Is information about skin assessment and pressure ulcer prevention interventions effectively integrated into the electronic medical record?
- **Respiratory therapy:** Is all respiratory equipment appropriately placed to reduce the chances of pressure sores developing where tubing or mouthpieces are in contact with patient skin?
- **Medicine:** Are appropriate orders on file or available for any needed special surfaces or other preventive measures?
- **Quality improvement:** Are QI training and techniques available to the team working on this effort?
- **Transport:** Is patient time on hard wheelchairs or stretchers minimized or mitigated when patients are taken off the unit for diagnostic or therapeutic activities?

What will happen? In this project, we will use the Agency for Healthcare Research and Quality's (AHRQ) 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 pressure ulcer prevention, analyze patient care processes to identify where there are risks to patient skin integrity, and target interventions in those areas. Pressure ulcer incidence while patients are under our care will be tracked and reported more widely so that progress can be assessed.

Everyone has a role: Most important in this effort is a shift of thinking and culture, from seeing pressure ulcers as the inevitable result of patient immobility to seeing them as never events that can be prevented through a comprehensive prevention program. Your support in helping <hospital name> staff make this shift is essential to the success of this effort. Thank you!

1A: Clinical Staff Attitudes Toward Pressure Ulcer Prevention

Background: The Staff Attitude Scale can be used to provide useful feedback on clinical staff beliefs regarding pressure ulcer prevention. It was adapted from a scale used by Moore and Price and uses a 5-point scoring system ranging from strongly agree to strongly disagree. Nurses who completed the scale in the study cited below had scores ranging from 28 to 50, with a median of 40.

Reference: Moore Z, Price P. Nurses' attitudes, behaviors, and perceived barriers towards pressure ulcer prevention. *J Clin Nurs* 2004;13:942-52.

Instructions:

1. Administer the survey. It can be used with all staff involved in direct patient care.
2. Typically, the survey is given anonymously. Depending on your organizational culture, you may want to ask for the name of the respondents to allow followup with individuals after the survey.
3. To score, assign a numeric value to each response. For most, "strongly disagree" =5, "disagree" = 4, and so on. However, questions 1, 6, 7, and 11 should be reverse scored. For those questions, "strongly disagree"= 1, and so on. Scores on this scale range from 11 (most negative attitudes) to 55 (most positive attitudes).

Use: The results from this survey can help to identify existing attitudes toward pressure ulcer prevention. You may want to administer it to different groups and compare the results to obtain insight on potential inconsistencies among staff. If you find scores that are lower than 40, one of the early goals of the interventions may be to address these misperceptions.

Views on Pressure Ulcer Prevention

Your role: _____

Date: _____

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
1. All patients are at potential risk of developing pressure ulcers					
2. Pressure ulcer prevention is time consuming for me to carry out					
3. In my opinion, patients tend not to get as many pressure ulcers nowadays					
4. I do not need to concern myself with pressure ulcer prevention in my practice					
5. Pressure ulcer treatment is a greater priority than pressure ulcer prevention					
6. Continuous assessment of patients will give an accurate account of their pressure ulcer risk					
7. Most pressure ulcers can be avoided					
8. I am less interested in pressure ulcer prevention than other aspects of care					
9. My clinical judgment is better than any pressure ulcer risk assessment tool available to me					
10. In comparison with other areas of care, pressure ulcer prevention is a low priority for me					
11. Pressure ulcer risk assessment should be regularly carried out on all patients during their stay in hospital					

1B: Stakeholder Analysis

Background: The purpose of the stakeholder analysis is to help the project initiators identify what departments/individuals will have an interest in the project, where barriers might exist, and what actions need to be taken to obtain the buy-in and participation of those departments and individuals. This tool was adapted from a template developed by Project Agency, a British company focused on effective project management.

Reference: Available at: <http://www.businessballs.com/project%20management%20templates.pdf>.

Instructions: 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.

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

Stakeholder	Interest or requirement in the project	What the project needs from stakeholder	Perceived attitudes and risks	Actions to take
Example: health information systems officer	Gatekeeper for making any changes to the electronic medical record (EMR) system. Not necessarily interested in the project beyond his general mandate to keep the EMR tied to clinical documentation needs.	The project may need to add or make changes to any parts of the EMR that concern skin assessment, preventive measures, and skin 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 project leaders/advocates.

Stakeholder	Interest or requirement in the project	What the project 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 pressure ulcer prevention project.

Reference: Developed by Boston University Research Team.

Instructions: Complete the checklist.

Use: 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 facility has implemented a shared leadership model		
There is a dedicated budget allocated for patient safety activities		
The budget includes funding for education and training on patient safety issues such as pressure ulcer prevention		
Improved pressure ulcer prevention is a priority within the facility		
The facility has implemented a pressure ulcer prevention policy		
Current pressure ulcer prevention goals are being addressed		
There are visible role models/champions for pressure ulcer prevention		

1D: Business Case Form

Background: This tool can be used to make the case for the implementation of a quality improvement initiative by addressing the concerns of key leadership. The form was adapted from a template developed by Project Agency to help write a business case.

Reference: Available at: www.businessballs.com/project%20management%20templates.pdf.

Instructions: Complete the form with all the required information.

Use: Present the completed form to your project sponsor and discuss the potential benefits of the pressure ulcer prevention initiative.

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

1E: Resource Needs Assessment

Background: The purpose of this tool is to identify resources that are available for a quality improvement initiative.

Reference: Developed by Boston University Research Team.

Instructions: Complete this checklist to assess the resources that are available and the resources that are still needed.

Use: Ensure that all resources needed for launching a pressure ulcer prevention initiative are available.

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

2A: Multidisciplinary Team

Background: Crucial to a pressure ulcer prevention initiative is the creation of a multidisciplinary implementation team that will oversee the improvement effort. This tool can be used to identify people from different interdisciplinary areas to take part on the implementation team.

Reference: Developed by Boston University Research Team.

Instructions: List the names of possible team members from each department or discipline and their area of expertise.

Use: Use this list to form your implementation team.

Discipline	Names of possible implementation team members from each area	Area of expertise
Senior manager		
Quality improvement/Safety/risk manager		
Wound staff		
Wound nurse		
Wound physician		
Staff nurse		
Nursing assistants		
Registered dietitian		
Hospitalist physicians		
Physical therapists		
Occupational therapists		
Medical/surgical staff		
Other providers		
Patient representative		
Educator		
Materials manager		
Information systems staff		
Clerical staff		

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.

Instructions: This tool should be filled out by the implementation team 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.

Use: If you find that your organization has fully operationalized QI processes, connect the pressure ulcer prevention initiative with these existing processes. If some processes are missing, advocate for them to be put into place in the context of the pressure ulcer initiative.

Quality Improvement Process

Assessment Question	No	Somewhat	Yes (fully operational)
1. Do you have a process(es) to improve quality or performance?			
Is an entity or person responsible for decision-making 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?			
2. Are managers and employees evaluated for their performance improvement efforts (i.e., is performance improvement in their job descriptions)?			
3. Are performance reports used regularly for decisionmaking?			
4. 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			
5. 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?			
6. Does the organization regularly develop performance improvement or QI plans that specify timelines, actions, and responsible parties?			
7. Is there a process or mechanism to coordinate QI efforts among programs, divisions, or organizations that share the same performance targets?			
8. Is QI training available to managers and staff?			
9. 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 pressure ulcer prevention activities could or should happen.

Reference: Adapted from: Quality Partners of Rhode Island. QI Worksheet E, Current Process Analysis. Available at:

<https://www.qualitynet.org/dcs/ContentServer?c=MQTools&pagename=Medqic%2FMQTools%2FToolTemplate&cid=1096585074914>.

Instructions:

- Have the implementation team identify and define every step in the current process for pressure ulcer prevention.
- 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 resident, serving meals, assessing pain, or managing a nursing unit. The ultimate goal of defining a process is identifying problems in the current process.

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

Tips:

- 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 team agrees on the final process.
- If a process does not exist (for example, there is no process to screen for pain 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	Define
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 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).

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?
- What staff are involved in this process?
- What part of this process does 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 Pressure Ulcer Policies

Background: This worksheet can be used to determine if your facility has a policy for preventing and managing pressure ulcers. The tool is one of a series of Facility Assessment Checklists used to identify areas that need improvement in nursing homes and has been modified for hospitals.

Reference: Adapted from: Quality Partners of Rhode Island. Pressure Ulcers: Facility Assessment Checklists. Available at:

<https://www.qualitynet.org/dcs/ContentServer?cid=1098482996140&pagename=Medqic%2FMQTools%2FToolTemplate&c=MQTools>.

Instructions: Complete the checklist. For certain questions, you may want to consult with appropriate staff in your organization.

Use: Use the results of this assessment to identify issues that you need to deal with, and formulate goals for your pressure ulcer prevention initiative.

Pressure Ulcer Policy Assessment

Does your facility's policy for the prevention and management of pressure ulcers include these components?

	Yes	No	Person Responsible	Comments
1. Does your hospital's policy include a statement regarding your facility's commitment to pressure ulcer prevention and management?				
Does your hospital's policy include a standard protocol for assessing a patient's risk for developing pressure ulcers?				
Does your hospital's policy state that all patients be reassessed for pressure ulcer risk at the following times: a. Upon admission b. Upon transfer c. When a change in condition occurs				
Does your hospital's policy state that a skin assessment should be performed on all patients at risk for pressure ulcers at the following times: a. Upon admission b. Daily c. Upon transfer				
Does your hospital's policy include who, how and when pressure ulcer program effectiveness should be monitored and evaluated?				
Does your hospital's policy include goals of pressure ulcer management such as: a. Prompt assessment and treatment b. Specification of appropriate pressure ulcer risk and monitoring tools c. Steps to be taken to monitor treatment effectiveness d. Pressure ulcer treatment techniques that are consistent with clinically-based guidelines				
Does your hospital's policy address steps to be taken if pressure ulcer is not healing?				

2E: Assessing Screening for Pressure Ulcer Risk

Background: The purpose of this tool is to determine if your facility has a process to screen patients for pressure ulcer risk. The tool is one of a series of Facility Assessment Checklists developed to identify areas that need improvement.

Reference: Quality Partners of Rhode Island. Pressure Ulcers: Facility Assessment Checklists. Available at:

<https://www.qualitynet.org/dcs/ContentServer?cid=1098482996140&pagename=Medqic%2FMQTools%2FToolTemplate&c=MQTools>.

Instructions: Complete the checklist. For certain questions, you may want to consult with appropriate staff in your organization.

Use: Use the results of this assessment to identify issues that you need to deal with, and formulate goals for your pressure ulcer prevention initiative.

Assessment of Screening for Pressure Ulcer Risk

Does your facility have a process for screening that addresses all the areas listed below?

	Yes	No	Person Responsible	Comments
1. Do you screen all patients for pressure ulcer risk at the following times: <ul style="list-style-type: none"> • Upon admission • Upon readmission • When condition changes 				
2. If the patient is not currently deemed at risk, is there a plan to rescreen at regular intervals?				
3. Do you use either the Norton or Braden pressure ulcer risk assessment tool? <i>If Yes, STOP. If No, please continue to #4.</i>				
4. If you are not currently using the Norton or Braden risk assessment, does your screening address the following areas: <ul style="list-style-type: none"> • Impaired mobility: <ul style="list-style-type: none"> ○ Bed ○ Chair a. Incontinence: <ul style="list-style-type: none"> ○ Urine ○ Stool • Nutritional deficits: <ul style="list-style-type: none"> ○ Malnutrition ○ Feeding difficulties • Diagnosis of: <ul style="list-style-type: none"> ○ Diabetes Mellitus ○ Peripheral Vascular Disease • Contractures • Hx of pressure ulcers 				

2F Assessing Pressure Ulcer Care Planning

Background: This tool can be used to determine if your facility has a process for developing and implementing a pressure ulcer care plan for patients who have been found to be at risk or who have a pressure ulcer. The tool is one of a series of Facility Assessment Checklists developed to identify areas that need improvement.

Reference: Quality Partners of Rhode Island. Pressure Ulcers: Facility Assessment Checklists. Available at:
<https://www.qualitynet.org/dcs/ContentServer?cid=1098482996140&pagename=Medqic%2FMQTools%2FToolTemplate&c=MQTools>.

Instructions: Complete the checklist. For certain questions, you may want to consult with appropriate staff in your organization.

Use: Use the results of this assessment to identify issues that you need to deal with, and formulate goals for your pressure ulcer prevention initiative.

Assessment of Pressure Ulcer Care Plan

Does the care plan for pressure ulcers address all the areas below (as they apply)?

	Yes	No	Person Responsible	Comments
Impaired Mobility <ul style="list-style-type: none"> • Assist with turning, rising, position • Encourage ambulation • Limit static sitting to 2 hours at any time 				
Pressure Relief <ul style="list-style-type: none"> • Support surfaces: Bed • Support surfaces: Chair • Pressure-relieving devices • Repositioning • Bottoming out in bed and chair* 				
Nutritional Improvement <ul style="list-style-type: none"> • Supplements • Feeding assistance • Adequate fluid intake • Dietitian consult as needed 				
Urinary Incontinence <ul style="list-style-type: none"> • Toileting plan • Wet checks • Treat causes • Assist with hygiene • Use of skin barriers and protectants 				
Fecal Incontinence <ul style="list-style-type: none"> • Toileting plan • Soiled checks 				
Skin Condition Check <ul style="list-style-type: none"> • Intactness • Color • Sensation • Temperature 				
Treatment <ul style="list-style-type: none"> • Physician-prescribed regimen • Appropriateness to wound staging • Treatment reassessment timeframe 				
Pain <ul style="list-style-type: none"> • Screen for pain related to ulcer • Choose appropriate pain med • Provide regular pain med administration • Reassess effectiveness of med • Assess/treat side effects • Change or cease pain med as needed 				

To determine if a patient has bottomed out, the caregiver should place his or her outstretched hand (palm up) under the mattress overlay below the existing pressure ulcer or that part of the body at risk for pressure formation. If the caregiver can feel that the support material is less than an inch thick at this site, the patient has bottomed out.

2G: Pieper Pressure Ulcer Knowledge Test

Background: This tool can be used to assess staff knowledge on pressure ulcer prevention. The 47-item test was developed by Pieper and Mott in 1995 to examine the knowledge of nurses on pressure ulcer prevention, staging, and wound description. Questions 1, 3, 15, 29, 33, and 40 have been modified from the original to make it more specific to hospital care.

Reference: Pieper B, Mott M. Nurses' knowledge of pressure ulcer prevention, staging, and description. *Adv Wound Care* 1995;8:34-48.

Instructions:

1. Administer the test to nursing and other clinical staff members.
2. It is generally recommended that responses be anonymous, but some staff might appreciate the opportunity to receive individual feedback. Find out what people on your unit want to do.
3. Use the answer key to evaluate the responses. Note that some questions may need to be modified for your hospital.

Use: Mean scores on this test are usually analyzed. Analyze the test results. If you find gaps of knowledge, work with your education department to develop and tailor educational programs that address these items.

Pieper Pressure Ulcer Knowledge Test

For each question, mark the box for True, False, or Don't Know.

	True	False	Don't Know
1. Stage I pressure ulcers are defined as intact skin with nonblanchable erythema in lightly pigmented persons.			
2. Risk factors for development of pressure ulcers are immobility, incontinence, impaired nutrition, and altered level of consciousness.			
3. All hospitalized individuals at risk for pressure ulcers should have a systematic skin inspection at least daily and those in long-term care at least once a week.			
4. Hot water and soap may dry the skin and increase the risk for pressure ulcers.			
5. It is important to massage bony prominences.			
6. A Stage III pressure ulcer is a partial thickness skin loss involving the epidermis and/or dermis.			
7. All individuals should be assessed on admission to a hospital for risk of pressure ulcer development.			
8. Cornstarch, creams, transparent dressings (e.g., Tegaderm, Opsite), and hydrocolloid dressings (e.g., DuoDerm, Restore) do not protect against the effects of friction.			
9. A Stage IV pressure ulcer is a full thickness skin loss with extensive destruction, tissue necrosis, or damage to muscle, bone, or supporting structure.			
10. An adequate dietary intake of protein and calories should be maintained during illness.			
11. Persons confined to bed should be repositioned every 3 hours.			
12. A turning schedule should be written and placed at the bedside.			
13. Heel protectors relieve pressure on the heels.			
14. Donut devices/ring cushions help to prevent pressure ulcers.			
15. In a side lying position, a person should be at a 30 degree angle with the bed unless inconsistent with the patient's condition and other care needs that take priority.			
16. The head of the bed should be maintained at the lowest degree of elevation (hopefully, no higher than a 30 degree angle) consistent with medical conditions.			

	True	False	Don't Know
17. A person who cannot move him or herself should be repositioned every 2 hours while sitting in a chair.			
18. Persons who can be taught should shift their weight every 30 minutes while sitting in a chair.			
19. Chair-bound persons should be fitted for a chair cushion.			
20. Stage II pressure ulcers are a full thickness skin loss.			
21. The epidermis should remain clean and dry.			
22. The incidence of pressure ulcers is so high that the government has appointed a panel to study risk, prevention, and treatment.			
23. A low-humidity environment may predispose a person to pressure ulcers.			
24. To minimize the skin's exposure to moisture on incontinence, underpads should be used to absorb moisture.			
25. Rehabilitation should be instituted if consistent with the patient's overall goals of therapy.			
26. Slough is yellow or creamy necrotic tissue on a wound bed.			
27. Eschar is good for wound healing.			
28. Bony prominences should not have direct contact with one another.			
29. Every person assessed to be at risk for developing pressure ulcers should be placed on a pressure-redistribution bed surface.			
30. Undermining is the destruction that occurs under the skin.			
31. Eschar is healthy tissue.			
32. Blanching refers to whiteness when pressure is applied to a reddened area.			
33. A pressure redistribution surface reduces tissue interface pressure below capillary closing pressure.			
34. Skin macerated from moisture tears more easily.			
35. Pressure ulcers are sterile wounds.			
36. A pressure ulcer scar will break down faster than unwounded skin.			
37. A blister on the heel is nothing to worry about.			
38. A good way to decrease pressure on the heels is to elevate them off the bed.			
39. All care given to prevent or treat pressure ulcers must be documented.			

	True	False	Don't Know
40. Devices that suspend the heels protect the heels from pressure.			
41. Shear is the force that occurs when the skin sticks to a surface and the body slides.			
42. Friction may occur when moving a person up in bed.			
43. A low Braden score is associated with increased pressure ulcer risk.			
44. The skin is the largest organ of the body.			
45. Stage II pressure ulcers may be extremely painful due to exposure of nerve endings.			
46. For persons who have incontinence, skin cleaning should occur at the time of soiling and at routine intervals.			
47. Educational programs may reduce the incidence of pressure ulcers.			

Pieper Pressure Ulcer Knowledge Test: Answer Key

1. Stage I pressure ulcers are defined as intact skin with nonblanchable erythema in lightly pigmented persons.	True	
2. Risk factors for development of pressure ulcers are immobility, incontinence, impaired nutrition, and altered level of consciousness.	True	
3. All hospitalized individuals at risk for pressure ulcers should have a systematic skin inspection at least daily and those in long-term care at least once a week.	True	
4. Hot water and soap may dry the skin and increase the risk for pressure ulcers.	True	
5. It is important to massage bony prominences.		False
6. A Stage III pressure ulcer is a partial thickness skin loss involving the epidermis and/or dermis.		False
7. All individuals should be assessed on admission to a hospital for risk of pressure ulcer development.	True	
8. Cornstarch, creams, transparent dressings (e.g., Tegaderm, Opsite), and hydrocolloid dressings (e.g., DuoDerm, Restore) do not protect against the effects of friction.		False
9. A Stage IV pressure ulcer is a full thickness skin loss with extensive destruction, tissue necrosis, or damage to muscle, bone, or supporting structure.	True	
10. An adequate dietary intake of protein and calories should be maintained during illness.	True	
11. Persons confined to bed should be repositioned every 3 hours.		False
12. A turning schedule should be written and placed at the bedside.	True	
13. Heel protectors relieve pressure on the heels.		False
14. Donut devices/ring cushions help to prevent pressure ulcers.		False
15. In a side lying position, a person should be at a 30 degree angle with the bed unless inconsistent with the patient's condition and other care needs that take priority.	True	
16. The head of the bed should be maintained at the lowest degree of elevation (hopefully, no higher than a 30 degree angle) consistent with medical conditions.	True	
17. A person who cannot move him or herself should be repositioned every 2 hours while sitting in a chair.		False
18. Persons who can be taught should shift their weight every 30 minutes while sitting in a chair.		False
19. Chair-bound persons should be fitted for a chair cushion.	True	
20. Stage II pressure ulcers are a full thickness skin loss.		False
21. The epidermis should remain clean and dry.	True	
22. The incidence of pressure ulcers is so high that the government has appointed a panel to study risk, prevention, and treatment.	True	

23. A low-humidity environment may predispose a person to pressure ulcers.	True	
24. To minimize the skin's exposure to moisture on incontinence, underpads should be used to absorb moisture.	True	
25. Rehabilitation should be instituted if consistent with the patient's overall goals of therapy.	True	
26. Slough is yellow or creamy necrotic tissue on a wound bed.	True	
27. Eschar is good for wound healing.		False
28. Bony prominences should not have direct contact with one another.	True	
29. Every person assessed to be at risk for developing pressure ulcers should be placed on a pressure-redistribution bed surface.	True	
30. Undermining is the destruction that occurs under the skin.	True	
31. Eschar is healthy tissue.		False
32. Blanching refers to whiteness when pressure is applied to a reddened area.	True	
33. A pressure redistribution surface reduces tissue interface pressure below capillary closing pressure.	True	
34. Skin macerated from moisture tears more easily.	True	
35. Pressure ulcers are sterile wounds.		False
36. A pressure ulcer scar will break down faster than unwounded skin.	True	
37. A blister on the heel is nothing to worry about.		False
38. A good way to decrease pressure on the heels is to elevate them off the bed.	True	
39. All care given to prevent or treat pressure ulcers must be documented.	True	
40. Devices that suspend the heels protect the heels from pressure.	True	
41. Shear is the force that occurs when the skin sticks to a surface and the body slides.	True	
42. Friction may occur when moving a person up in bed.	True	
43. A low Braden score is associated with increased pressure ulcer risk.	True	
44. The skin is the largest organ of the body.	True	
45. Stage II pressure ulcers may be extremely painful due to exposure of nerve endings.	True	
46. For persons who have incontinence, skin cleaning should occur at the time of soiling and at routine intervals.	True	
47. Educational programs may reduce the incidence of pressure ulcers.	True	

2H: Pressure Ulcer Baseline Assessment

Background: The purpose of this tool is to assess general staff knowledge on pressure ulcer prevention. It is shorter than the Pieper but has not been as widely used. The tool is available on the Web site of the Institute for Healthcare Improvement.

Reference: Adapted from: Iowa Health Des Moines. Pressure Ulcer Baseline Assessment. Available at:
www.ihi.org/NR/rdonlyres/F2EF9AB3-BB0F-4D3D-A99A-83AC7E0FB0D3/6224/IowaHealthDesMoinesPUBaselineAssesment.pdf.

Instructions: Administer the questionnaire to registered nurses and nursing assistants. The survey may need to be modified if certain questions are not consistent with your policies and procedures.

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

Pressure Ulcer Baseline Assessment for Registered Nurse

For which factors in the Braden Scale are you evaluating the patient's ability to respond to verbal command?

- A. Activity
- B. Mobility
- C. Sensory/Perception
- D. Friction/Shear

Minimally, a patient in the acute care setting should be assessed for pressure ulcer risk at least every:

- A. 48 hours
- B. 24 hours
- C. 8 hours
- D. 4 hours

How often should you, the RN, assess and document skin condition?

- A. Daily
- B. Once a shift
- C. Upon admission and discharge, every shift, and as patient condition warrants
- D. Upon admission and discharge

What can you, the RN, do when one of your patients has discoloration of the skin (red, purple, blue) indicating pressure?

- A. See what happens over the next 24 hours.
- B. Let the next nurses know about it. Start a skin care plan.
- C. Place the patient on a pressure-reducing surface and explain to the patient and family that the patient needs to limit pressure to the area.
- D. B&C from above

Who is the *primary* person accountable for patient skin assessment, pressure ulcer prevention, and documentation?

- A. WOC Nurse (ET nurse)
- B. RN
- C. Nursing assistant
- D. All of the above

Pressure Ulcer Baseline Assessment for Nursing Assistant

What is the most common reason a patient gets a pressure ulcer?

- A. Patient is a smoker.
- B. Patient is very thin.
- C. Patient is incontinent.
- D. Patient does not move.

How often should you look at every patient's skin to look for signs of redness or discoloration?

- A. Daily, when patient bathes.
- B. Every time the patients asks me to look.
- C. Every 8 hours.
- D. The RN should do that.

The correct procedure for checking an air mattress every shift is

- A. Push down and if it feels soft it is OK.
- B. Ask the patients if it feels like there is enough air underneath them.
- C. Do a hand check by placing palm up and feeling for a cushion of air under the heaviest areas of the body.
- D. The air mattress should be OK once it is blown up and does not need to be checked.

What should you report to your patient's RN every shift?

- A. Skin tears
- B. Discoloration of skin, such as red, blue, or purple
- C. Open sores
- D. All of the above

Pressure Ulcer Baseline Assessment – Answer Key

Registered Nurse

For which factors in the Braden Scale are you evaluating the patient’s ability to respond to verbal command?

- A. Activity
- B. Mobility
- C. Sensory/Perception**
- D. Friction/Shear

Minimally, a patient in the acute care setting should be assessed for pressure ulcer risk at least every:

- A. 48 hours
- B. 24 hours**
- C. 8 hours
- D. 4 hours

How often should you, the RN, assess and document skin condition?

- A. Daily
- B. Once a shift
- C. Upon admission and discharge, every shift, and as patient condition warrants**
- D. Upon admission and discharge

What can you, the RN, do when one of your patients has discoloration of the skin (red, purple, blue) indicating pressure?

- A. See what happens over the next 24 hours.
- B. Let the next nurses know about it. Start a skin care plan.
- C. Place the patient on a pressure-reducing surface and explain to the patient and family that the patient needs to limit pressure to the area.
- D. B&C**

Who is the *primary* person accountable for patient skin assessment, pressure ulcer prevention, and documentation?

- A. WOC Nurse (ET nurse)
- B. RN**
- C. Nursing assistant
- D. All of the above

Nursing Assistant

What is the most common reason a patient gets a pressure ulcer?

- A. Patient is a smoker.
- B. Patient is very thin.
- C. Patient is incontinent.
- D. Patient does not move.**

How often should you look at every patient's skin to look for signs of redness or discoloration?

- A. Daily, when patient bathes.**
- B. Every time the patients asks me to look.
- C. Every 8 hours.
- D. The RN should do that.

The correct procedure for checking an air mattress every shift is

- A. Push down and if it feels soft it is OK.
- B. Ask the patients if it feels like they have enough air underneath them.
- C. Do a hand check by placing palm up and feeling for a cushion of air under the heaviest areas of the body.**
- D. The air mattress should be OK once it is blown up and does not need to be checked.

What should you report to your patient's RN every shift?

- A. Skin tears
- B. Discoloration of skin, such as red, blue, or purple
- C. Open sores
- D. All of the above**

2I: Plan of Action

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

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

Instructions:

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: 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.

Pressure Ulcer Prevention Action Plan

Date: February 16, 2011

Improvement Objective: Implement standard pressure ulcer 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
1. Analyze current state of pressure ulcer prevention practices in this organization.	Identify strengths and weaknesses using process mapping and gap analysis. Tool 2C and Tools 2E-2G. Assess the current state of staff knowledge about pressure ulcer prevention. Tool 2H. Set target goals for improvement.	Team leader, RNs, and WOCNs Education department	Within 6 weeks from initiative start Within 6 weeks from initiative start
2. Identify the bundle of prevention practices to be used in redesigned system.	Determine how comprehensive skin assessment should be performed Decide which scale will be used for performing risk assessment. Decide what items of pressure ulcer prevention should be in your bundle	Wound care team Wound care team Clinical staff members	Within 8 weeks from initiative start Within 12 weeks from initiative start Within 12 weeks from initiative start
3. Assign roles and responsibilities for implementing the redesigned pressure ulcer prevention practices.	Examples Determine who will complete the daily skin and risk assessments. Tool 4A. Identify unit champions. Determine how prevention work will be organized at the unit level, such as paths of communication and lines of	Examples Implementation team Team leader QI team	Examples Within 16 weeks from initiative start Within 16 weeks from initiative start Within 16 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	Examples
	oversight.		
4. Put the redesigned bundle 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
5. Monitor pressure ulcer rates and practices.	Determine how incidence and prevalence data will be collected. Tool 5A.	QI department	Within 6 weeks from initiative start
	Organize quarterly prevalence studies.	QI department	Within 6 weeks from initiative start, ongoing
6. Sustain the redesigned prevention practices.	Ensure continued leadership support.	Team leader	Within 4 weeks from initiative start and 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 pressure ulcer prevention oversight and continuous quality improvement.	Team leader and implementation team	Within 40 weeks from initiative start

**Pressure Ulcer Prevention Action Plan
Improvement Objective:**

Date:

Key Interventions/Tasks	Steps To Complete Task and Tools To Use	Team Members Responsible for Task Completion	Target Date for Task Completion
1. Analyze current state of pressure ulcer prevention practices in this organization.			
2. Identify the bundle of prevention practices to be used in redesigned system.			
3. Assign roles and responsibilities for implementing the redesigned pressure ulcer prevention practices.			
4. Put the redesigned bundle into practice.			
5. Monitor pressure ulcer rates and practices.			
6. Sustain the redesigned prevention practices.			

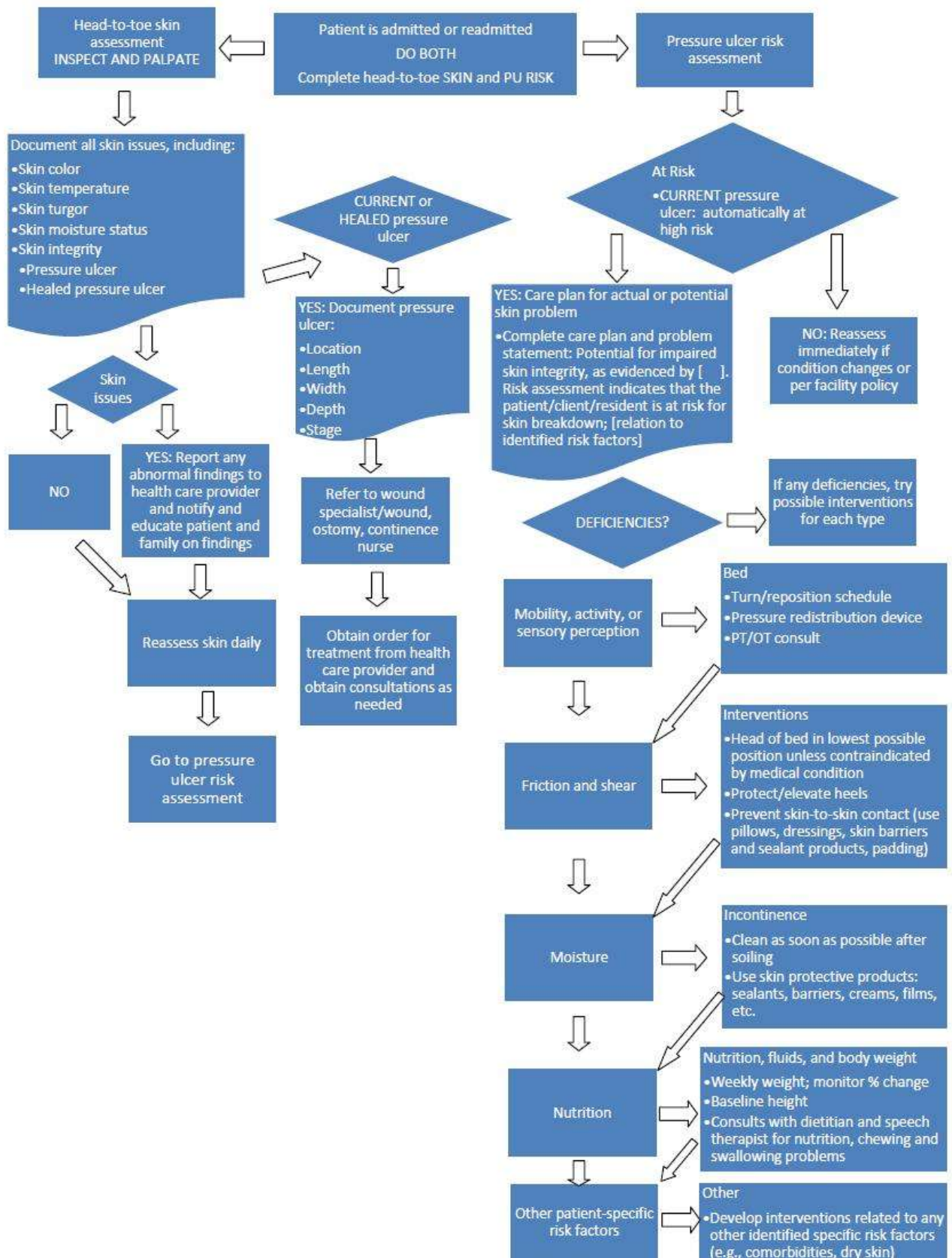
3A: Pressure Ulcer Prevention Pathway for Acute Care

Background: This tool is an example of a clinical pathway, detailing the relationship among the different components of pressure ulcer prevention.

Reference: Developed by Zulkowski and Ayello (2009) in conjunction with the New Jersey Hospital Association Pressure Ulcer Collaborative.

Use: This tool can be used by the hospital unit team in designing a 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, you can compare that to desired practices outlined on the clinical pathway.

Pressure Ulcer Prevention Pathway



3B: Elements of a Comprehensive Skin Assessment

Background: This sheet summarizes the elements of a correct comprehensive skin assessment. You could, for example, integrate them into your documentation system or use this sheet for staff training.

Reference: Developed by Boston University Research Team.

Skin Temperature

Most clinicians use the back rather than the palm of their hand to assess the temperature of a patient's skin.

Remember that increased skin temperature can be a sign of fever or impending skin problems such as a Stage I pressure ulcer or a diabetic foot about to ulcerate.

- Touch the skin to evaluate if it is warm or cool.
- Compare symmetrical body parts for differences in skin temperature.

Skin Color

- Ensure that there is adequate light.
- Use an additional light source such as a penlight to illuminate hard to see skin areas such as the heels or sacrum.
- Know the person's normal skin tone so that you can evaluate changes.
- Look for differences in color between comparable body parts, such as left and right leg.
- Depress any discolored areas to see if they are blanchable or nonblanchable.
- Look for redness or darker skin tone, which indicate infection or increased pressure.
- Look for paleness, flushing, or cyanosis.
- Remember that changes in coloration may be particularly difficult to see in darkly pigmented skin.

Skin Moisture

- Touch the skin to see if the skin is wet or dry, or has the right balance of moisture.
- Remember that dry skin, or xerosis, may also appear scaly or lighter in color.
- Check if the skin is oily.
- Note that macerated skin from too much moisture may also appear lighter or feel soft or boggy.
- Also look for water droplets on the skin. Is the skin clammy?
- Determine whether these changes localized or generalized.

Skin Turgor

- To assess skin turgor, take your fingers and "pinch" the skin near the clavicle or the forearm so that the skin lifts up from the underlying structure. Then let the skin go.

- If the skin quickly returns to place, this is a normal skin turgor finding.
- If the skin does not return to place, but stays up, this is called “tenting,” and is an abnormal skin turgor finding.
- Poor skin turgor is sometimes found in persons who are older, dehydrated, or edematous, or have connective tissue disease.

Skin Integrity

- Look to see if the skin is intact without any cracks or openings.
- Determine whether the skin is thick or thin.
- Identify signs of pruritis, such as excoriations from scratching.
- Determine whether any lesions are raised or flat.
- Identify whether the skin is bruised.
- Note any disruptions in the skin.
- If a skin disruption is found, the type of skin injury will need to be identified. Since there are many different etiologies of skin wounds and ulcers, differential diagnosis of the skin problem will need to be determined. For example is it a skin tear, a pressure ulcer, or moisture-associated skin damage or injury?

3C: Pressure Ulcer Identification Notepad

Background: Reporting of abnormal skin findings among nursing staff is critical for pressure ulcer prevention. This notepad can be used by nursing aides to report any areas of skin concern to nurses.

Reference: This material originated from Status Health and was adapted for use by Mountain-Pacific Quality Health, the Medicare quality improvement organization for Montana, Wyoming, Hawaii, and Alaska, under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services. Contents presented do not necessarily reflect CMS policy. The work was performed under the 9th Statement of Work, MPQHF-AS-PS-09-16.

Instructions: Place an X on any suspicious lesion and give the note to a nurse for followup on the issue.

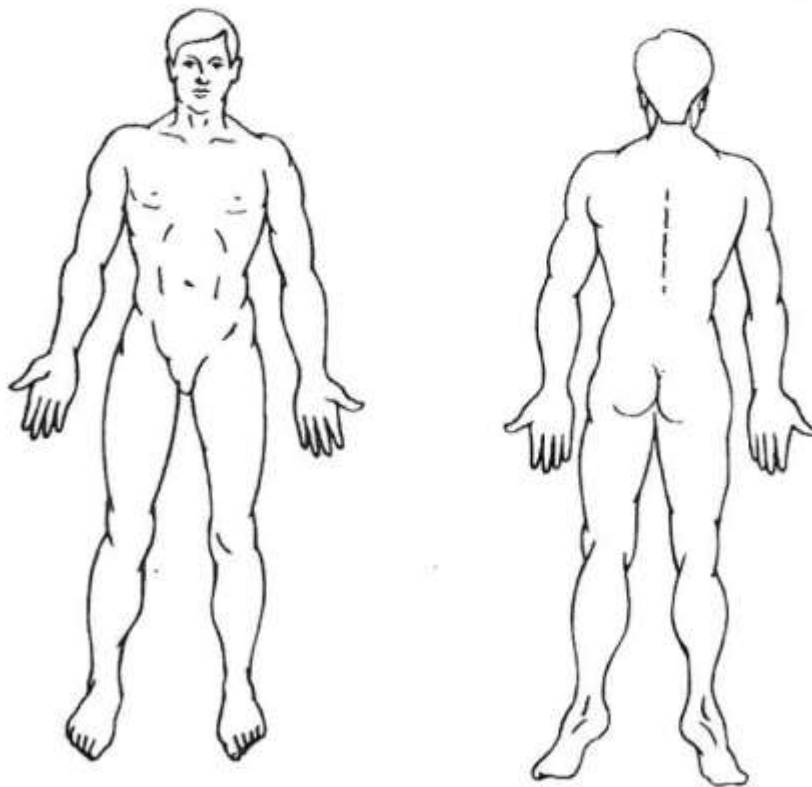
PRESSURE ULCER IDENTIFICATION POCKET PAD

Place the patient's/resident's name on the top of the pad, date it and place an "X" on the area on the body where you see the skin concern. Give this to the nurse and ask him or her to check the patient/resident. They will follow up as needed.

Date: _____ Time: _____

Patient's/Resident's Name: _____

Reporter: _____



3D: The Braden Scale for Predicting Pressure Sore Risk

Background: This tool can be used to identify patients at-risk for pressure ulcers. The Braden Scale was developed by Barbara Braden and Nancy Bergstrom in 1988 and has since been used widely in the general adult patient population. The scale consists of six subscales and the total scores range from 6-23. A lower Braden score indicates higher levels of risk for pressure ulcer development. Generally, a score of 18 or less indicates at-risk status.

Reference: <http://www.bradenscale.com/images/bradenscale.pdf>. Reprinted with permission.

Instructions: Complete the form by scoring each item from 1-4 (1 for low level of functioning and 4 for highest level of functioning) for the first five risk factors and 1-3 for the last risk factor.

Use: Use this tool in conjunction with clinical assessment to determine if a patient is at risk for developing pressure ulcers and plan the care accordingly. In addition to the overall score, abnormal scores on any of the subscales should be addressed in the care plan.

Braden Pressure Ulcer Risk Assessment

Patient's Name _____

Evaluator's Name _____

Date of Assessment _____

SENSORY PERCEPTION ability to respond meaningfully to pressure-related discomfort	1. Completely Limited: Unresponsive (does not moan, flinch, or grasp) to painful stimuli, due to diminished level of consciousness or sedation. OR limited ability to feel pain over most of body surface.	2. Very Limited: Responds only to painful stimuli. Cannot communicate discomfort except by moaning or restlessness. OR has a sensory impairment which limits the ability to feel pain or discomfort over 1/2 of body.	3. Slightly Limited: Responds to verbal commands, but cannot always communicate discomfort or need to be turned. OR has some sensory impairment which limits ability to feel pain or discomfort in 1 or 2 extremities.	4. No Impairment: Responds to verbal commands, has no sensory deficit which would limit ability to feel or voice pain or discomfort.			
MOISTURE degree to which skin is exposed to moisture	1. Constantly Moist: Skin is kept moist almost constantly by perspiration, urine, etc. Dampness is detected every time patient is moved or turned.	2. Very Moist: Skin is often, but not always, moist. Linen must be changed at least once a shift.	3. Occasionally Moist: Skin is occasionally moist, requiring an extra linen change approximately once a day.	4. Rarely Moist: Skin is usually dry, linen only requires changing at routine intervals.			
ACTIVITY degree of physical activity	1. Bedfast: Confined to bed.	2. Chairfast: Ability to walk severely limited or non-existent. Cannot bear weight and/or must be assisted into chair or wheelchair.	3. Walks Occasionally: Walks occasionally during day, but for very short distances, with or without assistance. Spends majority of each shift in bed or chair.	4. Walks Frequently: Walks outside the room at least twice a day and inside room at least once every 2 hours during waking hours.			
MOBILITY ability to change and control body position	1. Completely Immobile: Does not make even slight changes in body or extremity position without assistance.	2. Very Limited: Makes occasional slight changes in body or extremity position but unable to make frequent or significant changes independently.	3. Slightly Limited: Makes frequent though slight changes in body or extremity position independently.	4. No Limitations: Makes major and frequent changes in position without assistance.			
NUTRITION usual/food intake pattern	1. Very Poor: Never eats a complete meal. Rarely eats more than 1/3 of any food offered. Eats 2 servings or less of protein (meat or dairy products) per day. Takes fluids poorly. Does not take a liquid dietary supplement. OR is NPO and/or maintained on clear liquids or IV's for more than 5 days.	2. Probably Inadequate: Rarely eats a complete meal and generally eats only about 1/2 of any food offered. Protein intake includes only 3 servings of meat or dairy products per day. Occasionally will take a dietary supplement. OR receives less than optimum amount of liquid diet or tube feeding.	3. Adequate: Eats over half of most meals. Eats a total of 4 servings of protein (meat, dairy products) each day. Occasionally will refuse a meal, but will usually take a supplement if offered. OR is on a tube feeding or TPN regimen which probably meets most of nutritional needs.	4. Excellent: Eats most of every meal. Never refuses a meal. Usually eats a total of 4 or more servings of meat and dairy products. Occasionally eats between meals. Does not require supplementation.			
FRICTION AND SHEAR	1. Problem: Requires moderate to maximum assistance in moving. Complete lifting without sliding against sheets is impossible. Frequently slides down in bed or chair, requiring frequent repositioning with maximum assistance. Spasticity, contractures or agitation lead to almost constant friction.	2. Potential Problem: Moves feebly or requires minimum assistance. During a move skin probably slides to some extent against sheets, chair, restraints, or other devices. Maintains relatively good position in chair or bed most of the time but occasionally slides down.	3. No Apparent Problem: Moves in bed and in chair independently and has sufficient muscle strength to lift up completely during move. Maintains good position in bed or chair at all times.				

3E: Norton Scale

Background: This tool can be used to identify patients at risk for pressure ulcers. The Norton Scale was developed in the 1960s and is widely used to assess the risk for pressure ulcer in adult patients. The five subscale scores of the Norton Scale are added together for a total score that ranges from 5-20. A lower Norton score indicates higher levels of risk for pressure ulcer development. Generally, a score of 14 or less indicates at-risk status.

Reference: Norton D, McLaren R, Exton Smith AN. An investigation of geriatric nursing problems in the hospital. London, UK: National Corporation for the Care of Old People (now the Centre for Policy on Ageing); 1962. Reprinted with permission.

Instructions: Complete the form by scoring each item from 1-4. Put 1 for low level of functioning and 4 for highest level functioning.

Use: Use this tool in conjunction with clinical assessment to determine if a patient is at risk for developing pressure ulcers.

Physical condition	Mental condition	Activity	Mobility	Incontinent	Total Score
Good	4 Alert	4 Ambulant	4 Full	4 Not	4
Fair	3 Apathetic	3 Walk-help	3 Slightly limited	3 Occasional	3
Poor	2 Confused	2 Chair-bound	2 Very limited	2 Usually-Urine	2
Very bad	1 Stupor	1 Stupor	1 Immobile	1 Doubly	1

3F: 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. This example is based on the pressure ulcer risk assessment captured with the Braden Scale.

Reference: Developed by Zulkowski, Ayello, and Berlowitz (2010). Used with permission.

Instructions: This tool includes examples of interventions that may be considered for specific scores on each Braden subscale, along with the nurse and Certified Nursing Assistant (CNA) responsibilities for care provision. These should be tailored to meet the needs of your patient and used as examples of how all levels of unit staff have responsibilities for pressure ulcer prevention.

Use: Individualize the care plan to address the needs of at-risk patients.

Sample Care Plan

Braden Category	Braden Score: 1	Braden Score: 2	Braden Score: 3	Braden Score: 4
Sensory Perception	<p>Completely limited</p> <ul style="list-style-type: none"> • Skin assessment and inspection q shift. Pay attention to heels. • Elevate heels and use protectors. • Consider specialty mattress or bed. • Use pillows between knees and bony prominences to avoid direct contact. 	<p>Very limited</p> <ul style="list-style-type: none"> • Skin assessment and inspection q shift. Pay attention to heels. • Elevate heels and use protectors. • Consider specialty mattress or bed. 	<p>Slightly limited</p> <ul style="list-style-type: none"> • Skin assessment and inspection q shift. Pay attention to heels. • Elevate heels and use protectors. 	<p>No limitation</p> <ul style="list-style-type: none"> • Encourage patient to report pain over bony prominences. • Check heels daily.
Moisture	<p>Constantly Moist</p> <ul style="list-style-type: none"> • Skin assessment and inspection q shift. • Use moisture barrier ointments (protective skin barriers). • Moisturize dry unbroken skin. • Avoid hot water. Use mild soap and soft cloths or packaged cleanser wipes. • Check incontinence pads frequently (q 2-3h) and change as needed. • Apply condom catheter if appropriate. • If stool incontinence, consider bowel training and toileting after meals or rectal tubes if appropriate. • Consider low air loss bed 	<p>Moist</p> <ul style="list-style-type: none"> • Use moisture barrier ointments (protective barriers). • Moisturize dry unbroken skin. • Avoid hot water. Use mild soap and soft cloths or packaged cleanser wipes. • Check incontinence pads frequently (q 2-3h). • Avoid use of diapers but if necessary, check frequently (q 2-3h) and change as needed. • If stool incontinence, consider bowel training and toileting after meals. • Consider low air loss bed 	<p>Occasionally Moist</p> <ul style="list-style-type: none"> • Use moisture barrier ointments (protective skin barriers). • Moisturize dry unbroken skin. • Avoid hot water. Use mild soap and soft cloths or packaged cleanser wipes. • Check incontinence pads frequently. • Avoid use of diapers but if necessary, check frequently (q 2-3h) and change as needed. • Encourage patient to report any other moisture problem (such as under breasts). • If stool incontinence, consider bowel training and toileting after meals. 	<p>Rarely Moist</p> <ul style="list-style-type: none"> • Encourage patient to use lotion to prevent skin cracks. • Encourage patient to report any moisture problem (such as under breasts).
Activity	<p>Bedfast</p> <ul style="list-style-type: none"> • Skin assessment and inspection q shift. • Position prone if appropriate or elevate head of bed no more than 30 degrees. • Position with pillows to elevate pressure points off of the bed. • Consider specialty bed. • Elevate heels off bed and/or use heel protectors. • Consider physical therapy consult for conditioning and W/C assessment. • Turn/reposition q 1-2h. • Post turning schedule. 	<p>Chairfast</p> <ul style="list-style-type: none"> • Consider specialty chair pad. • Consider postural alignment, weight distribution, balance, stability, and pressure relief when positioning individuals in chair or wheelchair. • Instruct patient to reposition q 15 minutes when in chair. • Stand every hour. • Pad bony prominences with foam wedges, rolled blankets, or towels. • Consider physical therapy consult for conditioning and W/C assessment. 	<p>Walks Occasionally</p> <ul style="list-style-type: none"> • Provide structured mobility plan. • Consider chair cushion. • Consider physical therapy consult. 	<p>Walks Frequently</p> <ul style="list-style-type: none"> • Encourage ambulating outside the room at least bid. • Check skin daily. • Monitor balance and endurance.

Braden Category	Braden Score: 1	Braden Score: 2	Braden Score: 3	Braden Score: 4
Mobility	<ul style="list-style-type: none"> Teach or do frequent small shifts of body weight. <p>Completely Immobile</p> <ul style="list-style-type: none"> Skin assessment and inspection q shift. Turn/reposition q 1-2 hours. Post turning schedule. Teach or do frequent small shifts of body weight. Elevate heels. Consider specialty bed. 	<p>Very Limited</p> <ul style="list-style-type: none"> Skin assessment and inspection q shift. Turn/reposition 1-2 hours. Post turning schedule. Teach or do frequent small shifts of body weight. Elevate heels. Consider specialty bed. 	<p>Slightly Limited</p> <ul style="list-style-type: none"> Check skin daily. Turn/reposition frequently. Teach frequent small shifts of body weight. PT consult for strengthening/conditioning. Gait belt for assistance. 	<p>No Limitations</p> <ul style="list-style-type: none"> Check skin daily. Encourage ambulating outside the room at least bid. No interventions required.
Nutrition	<p>Very Poor</p> <ul style="list-style-type: none"> Nutrition consult. Skin assessment and inspection q shift. Offer nutrition supplements and water. Encourage family to bring favorite foods. Monitor nutritional intake. If NPO for > 24 hours, discuss plan with MD. Record dietary intake and I & O if appropriate. 	<p>Probably Inadequate</p> <ul style="list-style-type: none"> Nutrition consult. Offer nutrition supplements and water. Encourage family to bring favorite foods. Monitor nutritional intake. Small frequent meals. If NPO for > 24 hours, discuss plan with MD. Record dietary intake and I & O if appropriate. 	<p>Adequate</p> <ul style="list-style-type: none"> Monitor nutritional intake. If NPO for > 24 hours, discuss plan with MD. Record dietary intake and I&O if appropriate. 	<p>Excellent</p> <ul style="list-style-type: none"> Out of bed for all meals. Provide food choices. Offer nutrition supplements. If NPO for > 24 hours, discuss plan with MD. Record dietary intake.
Friction and Shear	<p>Problem</p> <ul style="list-style-type: none"> Skin assessment and inspection q shift. Minimum of 2 people + draw sheet to pull patient up in bed. Keep bed linens clean, dry, and wrinkle free. Apply elbow/heel protectors to intact skin over elbows and heels. Elevate head of bed 30 degrees or less. 	<p>Potential Problem</p> <ul style="list-style-type: none"> Keep bed linens clean, dry, and wrinkle free. Avoid massaging pressure points. Apply transparent dressing or elbow/heel protectors to intact skin over elbows and heels. 	<p>No apparent problem</p> <ul style="list-style-type: none"> Keep bed linens clean, dry, and wrinkle free. 	

3G: Patient and Family Education Booklet

Background: This is an example of an education booklet that can be handed out to patients at-risk for pressure ulcers and their families. The booklet was developed by the New Jersey Collaborative to Reduce the Incidence of Pressure Ulcers.

Reference: Available at: <http://www.njha.com/qualityinstitute/pdf/pubrochure.pdf>.

■ Understand what and why things are being done

Find out how you can help prevent pressure ulcers:

- in the nursing home, in the hospital, and at home

Key Steps to Pressure Ulcer Prevention

Protect your skin from injury:

LIMIT PRESSURE:

- If you are unable to move yourself in bed, someone should change your position at least every two hours.
- If you are in a chair, your position should be changed at least every hour.
- If you are able to shift your own weight, you should do so every 15 minutes while sitting.

REDUCE FRICTION:

- When shifting position or moving in your bed, don't pull or drag yourself across the sheets. Also, don't push or pull with your heels or elbows.
- Avoid repetitive movements such as rubbing your foot on the sheets to scratch an itchy spot.
- Avoid doughnut-shaped cushions - they can actually cause injury to deep tissues.

Take care of your skin:

- Allow a member of your health care team to inspect your skin at least once per day.
- If you notice any red dened, purple, painful or sore areas, notify your nurse as soon as possible.
- Clean your skin right away if you get urine or stool on it.
- Prevent dry skin by using creams or oils.
- Don't rub or massage skin over reddened, purple or sore parts of your body.

Safeguard your skin from moisture:

- Tell your health care provider if you have a problem leaking urine or stool.
- If leaking urine or stool is a problem, use absorbent pads while in bed and briefs while out of bed that pull moisture away from your body.
- Apply a cream or ointment to protect your skin from urine and/or stool.

If you are confined to bed for long periods of time:

- Talk to your health care provider about getting a special mattress or overlay.
- Try to keep the head of your bed as low as possible (unless other medical conditions do not permit it). If you need to raise the head of the bed for certain activities, try to raise it to the lowest point possible for as short a time as possible.

■ Pillows or foam wedges may be used to keep your knees or ankles from touching each other.

- Avoid lying directly on your hip bone when lying on your side.
- Pillows may be placed under your legs from mid-calf to ankle to keep your heels off the bed. Never place pillows behind the knee.

If you are in a chair or wheelchair:

- Talk to your health care provider about getting a chair cushion to reduce pressure while sitting.
- Remember that comfort and good posture are important.

Improve your ability to move:

- Ask your nurse if you qualify for a rehabilitation program designed to help you maintain/regain independence and improve movement.

The information presented in this brochure is intended as a guideline based on evidence-based research and best practices. Thanks to the Truse Medical Foundation for sharing their materials.

Project of the NJHA Collaborative to Reduce the Incidence of Pressure Ulcers.

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Help Us Protect Your Skin

Informing you
and your family
about pressure ulcers &
how you can assist your
healthcare providers
in preventing them.

4A: Assigning Responsibilities for using best practice bundle

Background: This tool can be used to determine who will be responsible for each of the tasks identified in your bundle of best practices for preventing pressure ulcers. 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 Boston University Research Team.

Instructions: Complete the table by entering the different best practices and the specific individuals who will be responsible for completing each task.

Use: Use this tool to assign and clarify the roles and responsibilities of each staff member.

What practices will we use?	Who will be responsible?
<i>Example: Perform comprehensive skin assessment on admission, daily or if condition deteriorates.</i>	<i>Example: RN</i>

4B: Staff Roles

Background: This table gives an example of how responsibilities may be assigned among different staff members.

Reference: Developed by Boston University Research Team.

Wound care team*	
Wound Care Physician	<ul style="list-style-type: none"> • Directs patient care, orders tests and treatments, and reviews results • Collaborates on treatment with wound nurse • Helps facilitate communication between medical staff, wound team, and unit staff for pressure ulcer practice
Certified Wound Care Nurse	<ul style="list-style-type: none"> • Assesses wounds, does complex treatments, collaborates with physician for care orders • Works with staff on pressure ulcer education and daily treatments • Works with all members to educate patient/family about care • Coordinates prevalence and incidence audits
Unit based team	
RN	<ul style="list-style-type: none"> • Conducts or supervises accurate assessment and documentation of head-to-toe skin assessment and pressure ulcer risk (Braden Scale or Braden Risk Assessment) on admission, daily, and if condition deteriorates (or according to facility policy) • Documents care plan tied to identified risk <ul style="list-style-type: none"> ○ Sensory perception ○ Moisture ○ Activity ○ Mobility ○ Nutrition ○ Friction/Shear • Performs or supervises performance of care plan procedures or treatments • Collaborates with other staff to ensure timely and accurate reporting of any skin issues • Notifies wound nurse of any skin conditions or high-risk patients • Notifies physician of any skin problems • Educates patient/family about risk factors

* May be large or small group that includes nurses and/or physicians in an outpatient or inpatient setting.

LPN	<ul style="list-style-type: none"> • Conducts accurate assessment and documentation of head-to-toe skin assessment and pressure ulcer risk (Braden Scale) on admission, daily, and if condition deteriorates (or according to facility policy) • Documents care plan tied to identified risk <ul style="list-style-type: none"> ○ Sensory perception ○ Moisture ○ Activity ○ Mobility ○ Nutrition ○ Friction/Shear • Performs care for risk as needed • Informs RN of any skin issues
CNA	<ul style="list-style-type: none"> • Checks skin each time person is turned or cleaned or bed is changed • Reports any skin issues to nurse • Turns/repositions patient as ordered • Offers liquids each time in room • Keeps skin clean and reapplies protective skin barrier • Applies products (lotion, cream, skin sealant, etc.) as needed
Hospitalist	<ul style="list-style-type: none"> • Reviews needs for specific types of rehabilitation therapy • Writes orders for specific interventions
Other staff, such as dietitian, physical therapist, pharmacist, assigned to specific unit	<ul style="list-style-type: none"> • Act as resource for unit staff • Educate family if problem is identified • Modify treatment as needed • Provide specialized care for patients

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 pressure ulcer prevention into existing or new practices.

Reference: Adapted from Facility Assessment Checklist developed by Quality Partners of Rhode Island. Available in the Nursing Home section of the MedQIC Web site:
<https://www.qualitynet.org/dcs/ContentServer?cid=1098482996140&pagename=Medqic%2FMQTools%2FToolTemplate&c=MQTools>.

Instructions: Complete the form by checking the response that best describes your facility.

Use: Identify areas for improvement and develop educational programs where they are missing.

Facility Assessment

Date:

A. Does your facility have initial and ongoing education on pressure ulcer 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 pressure ulcer prevention and management include the following components?

	Yes	No	Person Responsible:	Comments:
1. Are new staff assessed for their need for education on pressure ulcer prevention and management?				
2. Are current staff provided with ongoing education on the principles of pressure ulcer prevention and management?				
3. Does education of staff provide discipline-specific education for pressure ulcer prevention and management?				
4. Is there a designated clinical expert available at the facility to answer questions from all staff about pressure ulcer prevention and management?				
5. Is the education provided at the appropriate level for the learner (e.g., CNA vs. RN)?				
6. Does the education provided address risk assessment tools and procedures?				
7. Does the education include staff training on documentation methods related to pressure ulcers (e.g., location, stage, size, depth, appearance, exudates, current treatment, effect on activities of daily living, pressure redistributing devices used, nutritional support)?				

C. What areas of knowledge does the assessment of staff suggest need more attention in education?

5A: Unit Log

Background: The main purpose of this tool is to summarize the results of the daily comprehensive skin assessments for pressure ulcers on all patients. The form can be completed by registered nurses and nursing assistants.

Reference: Developed by Boston University Research Team.

Instruction: Complete the form for all patients with information on the number of pressure ulcers present and the stage of the deepest ulcer. Use the standardized skin inspection form, using one form for each month.

On the first of each month list the current unit census.

When a patient is discharged:

From the facility, write DC and draw a line from the last day to the end of the month.

Within the facility, write the room number transferred to and draw a line through the remainder of the month.

When a patient is admitted:

Add the name to the sheet.

Draw a line from day 1 to the date patient was admitted to the unit.

A patient may be on any unit multiple times during a month.

Treat each time the patient leaves as a discharge or transfer.

Treat each time a patient is readmitted to a unit as a new admission.

Record each day the results of the comprehensive skin assessment. Include whether the patient has an ulcer, the number of different ulcers, and the stage of the deepest ulcer.

Use: At the end of the month, use this log to calculate your pressure ulcer prevalence and incidence rates. Examine the rates and identify trends over time. Share the results with your unit staff and administrative leadership. For all Stage III and IV pressure ulcers, consider doing a root cause analysis to find out what led to their occurrence.

5B: Preventing Pressure Ulcers Data Tool

Background: This tool can be used to measure key processes of care by abstracting medical records data.

Reference: Adapted from materials available at the Montana Rural Healthcare Performance Improvement Network Web site. Available at:

www.mtpin.org/index.php?p=documents&category_id=118&lp=archivedstudies&lcat_id=20.

Instructions: Complete the form by following the case inclusion and exclusion criteria outlined below:

- Cases to Include: All inpatients admitted to the unit
- Cases to Exclude: All newborns and hospice patients; all patients with a length of stay (LOS) less than 24 hours (observation less than 24 hours, same day surgery, emergency department and other ambulatory care patients).

Use: Use the reviewed data to evaluate key processes of care, such as performance of the daily comprehensive skin assessment or individualized care planning. Define a performance target for each key process and analyze if that target is met. Share the findings with the unit staff and leadership.

Date: _____
 Unit: _____ MR# Number: _____

1. Date of admission (mm/dd/yy): _____ - _____ - _____
2. Admitted to: _____ acute care _____ obs > 24 hr _____ intensive care _____ swing bed
 _____ other (STOP ABSTRACTION; not a qualifying case)
3. Admitted from: _____ home _____ LTC or SNF facility _____ assisted living facility
 _____ other acute care hospital _____ other
4. Length of stay (LOS): _____ equal to or greater than 24 hours; LOS in days = _____ days
 _____ less than 24 hours (STOP ABSTRACTION)
5. Did the patient receive a facility-approved pressure ulcer risk assessment within 24 hr of admit?
 _____ No (skip to question 9)
 _____ Yes
6. Does the risk assessment tool include a Braden Scale or modified Braden Scale score?
 _____ No
 _____ Yes
7. Was the patient identified on admission as being **at risk** for pressure ulcer development?
 _____ No
 _____ Yes; complete the following table:

<i>For at-risk patients, are the following interventions documented:</i>	Yes	No
a. Consult to wound team		
b. Skin inspected daily		
c. Patient repositioned every 2 hours or 'up ad lib'		
d. Pressure redistributing device in place within 24 hours of risk identification		
e. Nutrition assessment completed within 24 hours of risk identification		
• Nutrition assessment includes dietary consult		
• Nutrition assessment includes admit and weekly weight recorded		
f. Provider orders special diet within 24 hours of risk identification		
g. Barrier cream applied if moisture issues identified		
h. Information given to patient and family		

8. Was the patient identified on admission as being **at low risk** for pressure ulcer development?

_____ No

_____ Yes; complete the following table:

<i>For patients with low risk on admission, was the following completed?</i>	Yes	No
a. Documentation of daily skin inspection		
b. Documentation of risk assessment daily		

9. If the patient did not have a pressure ulcer identified on admission, did the patient develop one or more pressure ulcers during the hospital stay?

_____ Ulcer present on admission

_____ No

_____ Yes; stage(s) _____; complete the following table:

<i>For patients developing pressure ulcer during this admission, are the following interventions documented as completed?</i>	Yes	No
a. Provider notified of pressure ulcer prior to end of shift		
b. Consult to wound team		
c. Skin inspected daily		
d. Patient repositioned every 2 hours or “up ad lib”		
e. Pressure redistributing device in place within 24 hours of risk identification		
f. Nutrition assessment completed within 24 hours of risk identification		
• Nutrition assessment includes dietary consult		
• Nutrition assessment includes admit & weekly weight recorded		
g. Provider orders special diet within 24 hours of risk identification		
h. Barrier cream applied if moisture issues identified		
i. Provider order for wound care on the chart within 24 hours of notification		
j. Wound care implemented as ordered		
k. Pressure ulcer assessed for healing, worsening as ordered		
l. Patient and family notified of skin problem		

12. Was the patient discharged with one or more pressure ulcers?

_____ No

_____ Yes; stage(s) _____

5C: Assessing Comprehensive Skin Assessment

Background: This sample protocol illustrates how to evaluate the performance of a comprehensive skin assessment.

Reference: Developed by Boston University Research Team.

Sample protocol for assessing performance of comprehensive skin assessment

1. Take a sample of records of patients newly admitted to your unit within the past month. As few as 10 records may be sufficient for initial assessments of performance.
2. 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.
3. Determine whether there is any documentation of a skin examination. This might include mention of any lesions or specific mention that none are present.
4. Determine how comprehensive the initial skin assessment was. Is there specific mention of all five dimensions of the assessment: temperature, color, moisture, turgor, and whether skin intact.
5. Calculate the percentage having any documentation of skin assessment as well as having a comprehensive exam.

5D: Assessing Standardized Risk Assessment

Background: This sample protocol illustrates how to evaluate the performance of standardized risk assessment.

Reference: Developed by Boston University Research Team.

Sample protocol for assessing performance of standardized risk assessment

1. Take a sample of records of patients newly admitted to your unit within the past month. As few as 10 records may be sufficient for initial assessments of performance.
2. Identify nursing notes from the first 24 hours of hospitalization. This should include the admission nursing assessment, subsequent nursing progress notes, or any notes specifically documenting pressure ulcer risk assessment.
3. Determine whether there is any documentation of the completion of the standardized risk assessment. This may include a Braden Scale, Norton Scale, or other system. Completion should be indicated by the assignment of an actual score.
4. Calculate the percentage having the actual score completed.

5E: Assessing Care Planning

Background: This sample protocol illustrates how to evaluate the performance of care planning.

Reference: Developed by Boston University Research Team.

Sample assessment of care planning performance

1. Take a sample of records of patients newly admitted to your unit within the past month who have an abnormal standardized risk assessment. As few as 10 records may be sufficient for initial assessments of performance.
2. For each patient, determine on which dimensions of the standardized risk assessment there was a score that was not normal.
3. Identify the care plans prepared shortly after admission.
4. Determine whether each abnormally scored dimension of the standardized risk assessment is addressed in the care plans.
5. Calculate the percentage of abnormally scored dimensions of the standardized risk assessment that are addressed in the care plan.