



New York State  
Partnership  
for Patients



*A partnership of the Healthcare Association of New York State  
and the Greater New York Hospital Association.*



## Nursing-Centered Initiatives Action Planning Resource Guide

- Adverse Drug Events
- Falls with Harm
- Pressure Ulcer Prevention
- Venous Thromboembolism

2013



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## Introduction

While organizational structures vary, models of care must be grounded in processes that promote patient safety, patient engagement, and patient satisfaction. This resource guide provides an overview of strategies for enhancing hospitals' patient safety capacity, competency, and reliability in daily patient care activities.

Safe patient care depends on evidence-based care delivery systems in which nurses are critical to how care is organized, how work is designed, and how the multidisciplinary teams work together to determine how the best care can be delivered to the patient.<sup>1</sup> Integration, a principle for combining and optimizing efforts, resources, and practices, is especially significant due to the pace of health care reform and the more comprehensive approach to quality that includes such things as patient-centered care and satisfaction. Hospitals can no longer afford to address improvement in department or team silos since improvements are cross-cutting, impacting quality, efficiency, value, and satisfaction throughout the hospital.

The following is a description of best practices and strategies for the delivery of optimal patient care.

<sup>1</sup> Institute of Medicine. (2004). *Keeping Patients Safe: Transforming the Work Environment of Nurses*. Washington, DC: National Academies Press.





# Cross-Cutting Opportunities for Improvement

## Patient-Centered Care and Engagement

Patient-centered care is based on the principle that health care can be improved by building more effective partnerships among health care providers, patients, and families. Patient-centered care reinforces the care of the patient as not just a function of nursing, but rather the responsibility of every hospital staff member. Accordingly, every staff member is expected to be responsive to patient and family needs. Recognizing that all staff contribute to the overall patient experience reinforces the notion that patient care is a team effort.

Opportunities that facilitate patient and family involvement in care include:

- discussing the types and reasons for ordered medications;
- providing safety and prevention instructions to patients who are at risk for falls;
- encouraging patient verification before patients receive medications or before procedures are performed;
- reviewing the daily plan of care with patients and caregivers;
- providing the opportunity for the patient and family to help establish his or her goal(s) for the day, including goals for discharge; and
- providing note paper or a space on the bedside white board for patients or caregivers to write down questions for providers, and assisting in identifying the questions to be asked.

Hospitals may formally engage patients and their families in a variety of ways, depending on what is most appropriate and important to the organization. The following are examples from the Healthcare and

Patient Partnership Institute for consideration:

- Invite patients to serve on the hospital's board of directors and advisory council.
- Ask patients to help critically evaluate programs and participate in focus groups.
- Recruit patients to serve on quality or safety improvement committees.
- Ask them to learn about hospital safety initiatives and tell others.
- Ask them to attend community events and bring others.
- Have patients serve as co-faculty for staff education.
- Review audiovisual and written materials.
- Recruit them to take part in special events (like Hand Hygiene Week).



The Healthcare and Patient Partnership Institute: <http://h2pi.org/index.html>.

Tools for the health care team to facilitate patient and caregiver engagement, including purposeful rounding, utilization of white boards, implementation of hand-off processes, and utilization of standardized communication techniques are discussed in greater detail in the sections that follow.

## Purposeful Rounding

Purposeful rounding with targeted patient evaluations, education, and intervention can be an effective practice for reducing patient harm and increasing patient satisfaction. The implementation of hourly rounding increases patient safety and satisfaction through improved patient engagement, decreased fall rates, decreased skin breakdown rates, and decreased use of patient calls.<sup>2</sup> Multidis-

<sup>2</sup> Bourgault, A.M., M.M. King, P. Hart, M.J. Campbell, S. Swartz, and M. Lou. "Circle of excellence. Does Regular Rounding by Nursing Associates Boost Patient Satisfaction? Nurses Improve Patient Satisfaction through Hourly Rounding." Department of Physiological & Technological Nursing. *Nursing Management*. Vol. 39, issue 11 (November 2008); 18–24.

disciplinary rounds are a patient-centered model of care focused on meeting daily goals and promoting safety, communication, and efficiency. There are a number of proactive daily rounding strategies that may serve to meet operational and managerial needs.

### Hourly Rounds

Attending to patients' comfort, safety, and environmental needs on a regularly scheduled basis has shown to have a positive effect, particularly in the prevention of adverse events, such as falls and pressure ulcers. Rounding presents a method for patient and family engagement, education, and for providing reminders to the patient, as well as the clinical team. When patients are educated as part of rounds, patient expectations are better managed and satisfaction increases.<sup>3</sup> While rounding on patients, at a minimum, the staff should be encouraged to check on the "Ps" (pain, position, potty, personal/physiological needs, and proximity of personal items), which provides an opportunity to address most patient needs that may arise.<sup>4</sup> Having a structured format for rounding also provides nurses with the efficiency and support of a checklist.

### Multidisciplinary Rounds

Multidisciplinary rounds enable teams from various departments to collectively offer expertise for optimal patient care. Members of the team can include, but need not be limited to, physician, nursing, pharmacy, respiratory therapy, nutrition, rehabilitation therapy, and care management representatives. These teams come together in real time to clarify goals and desired outcomes, and create or update the patient's care plan. This type of rounding is most often used for discharge planning preparation and in critical care and specialty units. It can also be utilized effectively by medical-surgical units.

A model for multidisciplinary rounds includes the following:<sup>5</sup>

- occurs daily;
- includes all appropriate disciplines for the specific patient population;
- has a designated team lead;
- utilizes an individualized daily goal sheet;
- addresses safety concerns for each patient;
- identifies potential discharge or transfer dates and preparation tactics, verbalizing barriers and goals for transition;
- includes the participation of patients and caregivers; and
- occurs in a variety of settings with high-risk patients.

### Nurse/Hospitalist Rounds

One specific type of multidisciplinary round incorporates hospitalists or designated fellows or residents, when appropriate, as a core member to the rounding team. This ensures clear and effective care that addresses the patient's goals, barriers to improvement, safety issues, and coordination of timely care.

### Leadership Rounds

Daily rounds may also serve to meet operational and managerial goals of care. Leadership rounds are typically conducted by the unit or department manager, or designee. Similar to all rounding processes, the daily leadership rounds are conducted at the patient's bedside and engage the bedside nurse, caregivers, and other disciplines. The focus of these rounds includes ensuring that patients are able to meet their daily goals, all prevention processes are in place, and there is a plan for immediate intervention, if necessary.

To the extent practicable, leaders can greet newly admitted patients and take the opportunity to pro-

3 Agency for Healthcare Research and Quality. "Proactive Rounding Reduces Call Light Use and Falls, Eliminates Pressure Ulcers, and Enhances Patient and Staff Satisfaction" (March 2009). (Available at [www.AHRQ.gov](http://www.AHRQ.gov).)

4 Agency for Healthcare Research and Quality. "Hourly Nurse Rounds Help to Reduce Falls, Pressure Ulcers, and Call Light Use, and Contribute to Rise in Patient Satisfaction" (November 2011). (Available at [www.AHRQ.gov](http://www.AHRQ.gov).)

5 Improvement Map. *Getting Started Kit: Multidisciplinary Rounds How-to Guide*. Cambridge, MA: Institute for Healthcare Improvement (2010). (Available at [www.IHI.org](http://www.IHI.org).)

vide unit orientation, reinforce unit and department routines, reinforce safety protocols, and verify care plan compliance and patient satisfaction.

### Bedside White Boards

Bedside white boards serve as a communication tool among hospital providers, patients, and caregivers. Using white boards is an effective strategy to improve a variety of care delivery, discharge planning, and communication requirements.

Developing templates and protocols for white board use can resolve many traditional barriers. Continuous education and reinforcement of the standardized use of white boards is essential to ensure their value and to build reliability.<sup>6,7</sup> White board templates should include, at a minimum, the following items:

- day and date;
- patient's name or initials;
- bedside nurse and nurse assistants;
- primary physician(s);
- family members' contact information (day and evening telephone);
- goal(s) for the day;
- safety protocols and alerts;
- anticipated discharge preparation, status, and date; and
- questions for providers from patients and caregivers.

White boards are intended as a communication tool for caregivers, as well as between nurses and patients. Bedside nurses should facilitate writing and updating information on the white board during bedside change-of-shift rounds. The patient, caregiver, and providers should be encouraged to review the white board and share the responsibility of keeping the information on the white board updated and useful.

### Structured Handoffs

Standardized communication and the effective transfer of information are central to minimizing the risk of error during patient handoffs. Handoffs are oral, written, and can include the use of audio recorders, fax machines, pagers, hand-held devices, and computerized records. Each type and location of a handoff may present similar or unique challenges.

The Joint Commission's National Patient Safety Goals also include guidelines for the handoff process, including the following:

- interactive communication;
- up-to-date and accurate information;
- controlled or limited interruptions;
- a process for verification; and
- an opportunity to review any relevant historical data.<sup>8</sup>

Patient handoffs occur continuously throughout the patient's hospitalization, necessitating reliable, structured protocols. The following recommendations may assist in facilitating a safe handoff:

- Develop a structured tool, such as a handoff checklist, detailing what should be communicated in a handoff and at different handoff points. The checklists may vary depending upon what information is most needed to be transferred during that handoff.
- Conduct verbal handoffs that include a requirement to repeat information back.
- Audit and reinforce standard handoff protocols.

The following include some of the most common handoff principles.

### Bedside Shift Report

The transfer of a patient from one nurse to the next involves a pivotal exchange of information. Performing this shift report at the patient bedside

6 Robert Wood Johnson Foundation. "Transforming Care at the Bedside Toolkit." Robert Wood Johnson Foundation, Princeton, NJ (2008). (Available at [www.rwjf.org](http://www.rwjf.org).)

7 Studer Group. "The Studer Group Toolkit: Patient Safety." Gulf Breeze, Florida (2007). ROC# 020900000507. Available at <http://www.innovations.ahrq.gov/content.aspx?id=2592>.

8 The Joint Commission. "2008 National Patient Safety Goals Manual Chapter." Accessed August 21, 2008, from <http://www.jointcommission.org/>.

can further improve communication, consistency, and compliance while improving patient safety and enhancing satisfaction. Nurses should also use this opportunity to update the white board. The bedside shift report serves a number of purposes, including:

- introducing the on-coming nurse;
- providing information to the patient that can reduce anxiety and increase the trust between the patient and family or caregivers;
- communicating the plan of care and daily goals;
- ensuring immediate needs are met;
- verifying IV fluids and other bedside therapies; and
- decreasing interruptions from call lights.

### Interdepartmental Transfers

Gaps in communication and information transfer at the time that patients are moved between departments are common and may adversely affect patient care.

### Temporary Transfer of Responsibility

Two of the most commonly used tools for information transfer between departments are Situation-Background-Assessment-Recommendation (SBAR) and Trip Ticket, a patient safety tool with pertinent patient information for a temporary transfer of responsibility. The associated documentation ensures that all the temporary providers of care or services will have important information readily available if problems arise, or the patient is away from the unit longer than expected.

At a minimum, the interdepartmental transfer form should include pertinent patient information such as:

- allergies;
- fall risk;
- sensory impairment;
- recent pain, high-alert, or sleep medications;
- time-sensitive treatments;
- special needs, such as supplemental oxygen;
- mental status;
- language difficulties; and

- name of the registered nurse (RN) responsible for the patient and a telephone number for questions or problems.

### Permanent Transfer of Responsibility

When patients are transferred between departments or units, the nurse transferring the responsibility for the patient's care must provide a comprehensive exchange of patient care information to the nurse accepting responsibility for the care of the patient. In contrast to a temporary transfer, this report should be done verbally and in writing, and needs to include patient identification, stability or status of the patient, and risk identification. Two well-respected tools are SBAR or TeamSTEPPS's I Pass the Baton (see page 9).

### TeamSTEPPS

TeamSTEPPS is a set of tools designed to improve communication and teamwork skills among health care professionals. The goal of TeamSTEPPS is to produce highly effective teams that optimize information, people, and resources to achieve the best clinical outcomes for patients.<sup>9</sup> The following list includes fundamental TeamSTEPPS tools, which when consistently executed, have been shown to improve patient safety, care, and patient and staff satisfaction:

- **Brief.** Short planning session prior to the start of activity to discuss team formation, assign roles, establish expectations and climate, and anticipate outcomes and contingencies.
- **Huddle.** Ad hoc problem-solving planning to re-establish situation awareness, reinforcing plans already in place, and assessing the need to adjust the plan.
- **Debrief.** Informal information exchange session designed to improve team performance and effectiveness.
- **Situation Awareness.** Recognizing the potential issues with falls, pressure ulcers, and high-alert medications.
- **Mutual Support and Task Assistance.** Team members protect each other from work overload

<sup>9</sup> Agency for Healthcare Research and Quality. "TeamSTEPPS® Strategies and Tools to Enhance Performance and Patient Safety." AHRQ Pub. No. 06-0020-2. ISBN 1-58763-191-1 (June 2010).

situations, requests for assistance are put in the context of patient safety, and assistance is actively sought and offered.

- **CUS.** I am **C**oncerned! I am **U**ncomfortable! This is a **S**afety Issue!
- **Check-Back.** Process of employing closed-loop communication to ensure that information conveyed by the sender is understood by the receiver as intended. Sender initiates message, receiver accepts messages and provides feedback or repeats, and sender double checks to ensure message was received by confirming.
- **I PASS the BATON.** Strategy designed to enhance information exchange during transitions of care: Introduction of self and role; **P**atient name and identifiers; **A**ssessment of patient condition; **S**ituation description, including patient status, recent changes and response to treatment; **S**afety concerns; **B**ackground, including medical history, family history, and medications; **A**ctions taken or required; **T**iming and prioritization of actions; **O**wnership of responsibility; and **N**ext steps.<sup>10</sup>

### Front Line Staff Engagement

Sharing information, data, and improvement stories relative to performance helps to create an environment that facilitates continuous learning and engagement. Hospitals should strive to involve the front line staff. An effective approach is to routinely post quality improvement stories, story boards, and current unit-based performance. There are many ways to post data, including unit-based run charts or dashboards, comparative and benchmark information, and signage on key indicators, such as the number of days since an incident (e.g., “It has been X days since a fall with harm.”)

Other front line staff strategies include designating individual staff members to serve in patient safety champion roles by initiative such as pressure ulcer, falls, or high-alert medications. The peer-to-peer support provides an additional dimension of value to patient care and staff development. Consider all shifts, since around-the-clock champions heighten the involvement of the entire staff while minimizing patient safety concerns.

The chart below displays the potential application of the specific TeamSTEPPS tools to the NYSPFP initiatives.

NYSPFP INITIATIVES	BRIEF	HUDDLE	DEBRIEF	CUS	SITUATIONAL AWARENESS	MUTUAL SUPPORT	CHECK-BACK	I PASS THE BATON
ADE in High-Alert Medications		X	X	X	X		X	
Falls with Harm	X		X	X	X	X		
Pressure Ulcers	X		X		X	X		
VTE	X					X		

<sup>10</sup> See note 9.

### Principles and Improvement Strategies for Consideration

The following table includes the integration of patient safety practices into the patient care delivery system, and a list of improvement strategies for hospitals' consideration.

EVIDENCE-BASED PRACTICES	PRINCIPLES AND IMPROVEMENT STRATEGIES FOR CONSIDERATION
<p><b>Patient and Caregiver Engagement</b></p>	<ul style="list-style-type: none"> <li>• Patient and caregiver participate in:                             <ul style="list-style-type: none"> <li>• care planning, including setting daily goals;</li> <li>• education utilizing teach-backs;</li> <li>• monitoring of safety programs or protocols that apply to the patient; and</li> <li>• bedside medication verification to enhance patient knowledge of his or her medications and reduce potential errors.</li> </ul> </li> <li>• Encourage the patient and caregiver to ask questions.</li> <li>• Encourage the patient and caregiver to bring omissions of care to the attention of the staff.</li> <li>• Add patient involvement and standardized questions to checklist or documentation tools.</li> <li>• Provide opportunities for the patient and caregiver to participate in rounding activities.</li> <li>• Avoid the use of medical jargon; verify understanding.</li> <li>• Schedule patient education in advance to enable caregiver presence, as feasible. Have the caregiver on the telephone as back-up.</li> <li>• Provide visiting hours that are conducive to the patient and caregiver schedule.<sup>11</sup></li> </ul>
<p><b>Hourly Rounding</b></p>	<ul style="list-style-type: none"> <li>• Adopt a standardized hourly rounding format and tool.</li> <li>• Assign responsibility for rounding to all members of the unit staff.</li> <li>• Educate staff on the process of rounding and ensure staff competency.</li> <li>• Educate the patient and caregiver on the purpose and schedule of rounding.</li> <li>• Inform the patient and caregiver that rounding continues through the night.</li> <li>• Address the patient "4Ps" needs (For example: potty, pain, position, and possessions) with each rounding.</li> <li>• Develop a mechanism to ensure that effective rounding takes place.<sup>12</sup></li> </ul>

<sup>11</sup> Planetree and Picker Institute. "Patient Centered Care Improvement Guide." Derby, CT (2008). Planetree, Inc. and Picker Institute. (Available at [www.Planetree.org](http://www.Planetree.org).)

<sup>12</sup> See note 7.

EVIDENCE-BASED PRACTICES	PRINCIPLES AND IMPROVEMENT STRATEGIES FOR CONSIDERATION
<p><b>Multidisciplinary Rounding (MDR)</b></p>	<ul style="list-style-type: none"> <li>• Establish multidisciplinary rounds (MDRs), which are particularly effective for critical care and specialty units, as well as for discharge planning.</li> <li>• Establish a time for the daily MDR.</li> <li>• Adopt a standardized MDR documentation form.</li> <li>• Designate a MDR leader.</li> <li>• Engage all key team members.</li> <li>• Educate patient and caregiver regarding the purpose of the rounds.</li> <li>• Encourage participation by the patient and caregiver.</li> <li>• Review goals and establish new goals as appropriate.</li> <li>• Address safety protocols for lines, catheter, and high-alert medications.</li> <li>• Identify and develop plan for potential discharge or transfer date.</li> <li>• Update the white board as appropriate.</li> <li>• Post the next rounding date and time on the bedside white board for caregivers.</li> </ul>
<p><b>Leadership Rounding</b></p>	<ul style="list-style-type: none"> <li>• Nurse leaders round, seeing the patient and caregiver.</li> <li>• Adopt a standardized tool that aligns with the white board, safety checklist, daily goals, and EMR.</li> <li>• Provide introduction and orientation to newly-admitted patients.</li> <li>• Review department and unit policies and procedures with the patient, caregiver, and staff.</li> <li>• Ensure compliance with daily goals and safety protocols and checklists.</li> <li>• Look for opportunities to recognize staff and physicians.</li> <li>• Use rapid briefs (per staff) or huddles within the rounding process.</li> <li>• If rounds include hospitalists, residents, or other providers, ensure orders, medications, and care plan are aligned and up to date.</li> </ul>
<p><b>Bedside White Board</b></p>	<ul style="list-style-type: none"> <li>• Standardize content and look of white board.</li> <li>• Develop reliability tools to reduce rework, lost items (For example: attached pens), and other barriers.</li> <li>• Begin at the time the patient is admitted.</li> <li>• Update during bedside shift report with one nurse briefing and involving the patient and caregiver while the other updates the board.</li> <li>• Standardize the white board update time and responsibility.             <ul style="list-style-type: none"> <li>• For example: it could be at shift report.</li> </ul> </li> <li>• Educate the patient and caregiver on the purpose of the white board.</li> <li>• Encourage the patient and caregiver to use the white board.</li> <li>• Update content as patient information changes.</li> <li>• Include areas for daily goals, daily plan, contact information, safety alerts, discharge information, and patient or family questions to providers.<sup>13</sup></li> <li>• Include designated caregiver’s day and evening telephone numbers so they can be contacted for discharge planning meetings, teaching sessions, or questions if not available in person.</li> </ul>

<sup>13</sup> See note 6.

EVIDENCE-BASED PRACTICES	PRINCIPLES AND IMPROVEMENT STRATEGIES FOR CONSIDERATION
<b>Handoffs</b>	<ul style="list-style-type: none"> <li>• Adopt standardized tools for all types of handoffs.</li> <li>• Ensure that all pertinent patient information is included in the handoff.</li> <li>• Utilize evidence-based tools such as SBAR, Trip Tickets, or I PASS the BATON.</li> <li>• Ensure that the receiving department or unit is informed of all safety protocols that apply to the patient.</li> <li>• Include current status of therapy.               <ul style="list-style-type: none"> <li>• <i>For example:</i> IV fluids infusing, equipment, medications received or scheduled</li> </ul> </li> <li>• Include code status and special needs.</li> <li>• Include the patient and caregiver in the process to validate information provided.</li> <li>• Avoid interruptions and distractions during the process.</li> <li>• Ensure that the process includes a validation and clarification step.               <ul style="list-style-type: none"> <li>• <i>For example:</i> check-back</li> </ul> </li> </ul>
<b>Bedside Shift Report</b>	<ul style="list-style-type: none"> <li>• Adopt a standardized report form with all pertinent patient information.</li> <li>• The outgoing nurse assumes the role of leader.</li> <li>• Discuss with the patient whom he or she would like present and ask others to leave the room.</li> <li>• Ask the patient and caregiver if they have any questions or concerns.</li> <li>• Check all lines, IV fluid infusing, and dressings.</li> <li>• Perform safety check and then address the "4 Ps."</li> <li>• Discuss sensitive information in an area that provides for confidentiality.</li> </ul>
<b>Front Line Staff Engagement</b>	<ul style="list-style-type: none"> <li>• Involve staff in unit-based quality improvement activities.</li> <li>• Ensure that the staff are knowledgeable about desired outcomes.</li> <li>• Encourage staff participation in driving needed improvements.</li> <li>• Appoint a safety champion for each shift to facilitate the engagement of all staff.</li> <li>• Communicate the results of improvement activities through the use of:               <ul style="list-style-type: none"> <li>• communication boards</li> <li>• dashboards</li> <li>• storyboards</li> <li>• newsletters</li> <li>• hospital Web site.</li> </ul> </li> </ul>

# NYSPFP Nursing-Centered Domain Initiatives

## Adverse Drug Events in High-Alert Medications

At least 20% of all harm in hospitals is associated with medication errors,<sup>14</sup> the most common of adverse events for hospitalized patients. A U.S. Department of Health and Human Services (HHS) study on adverse drug events found that approximately 55% of adverse event mortalities involved medications and 45% of the adverse drugs events (ADEs) involved anticoagulants and insulin.<sup>15</sup> The NYSPFP ADE Initiative is designed to work with hospitals through an intense learning network approach to implement standardized best practices around the management of high-alert medications. The goal of the NYSPFP ADE Initiative is to reduce medication errors secondary to high-alert medications with a focus on insulin, anticoagulants, and opiates.

NYSPFP defines an ADE as “an occurrence/incident that results in an injury from the use of a drug.” For purposes of NYSPFP this includes *adverse drug reactions, errors in medication preparation, administration, prescribing, dosing, or the discontinuation of drug therapy* that result in harm.

### Occurrence/Incident

Any medication event that causes harm, including an adverse drug reaction, medication error, or results from the use or discontinuation of a drug. There are medication errors, adverse drug reactions, and drug therapy issues that do not cause harm, which would not be included in the ADE definition, though hospitals may also track these.

## Harm

NYSPFP uses the most common and widely recognized scale to classify medication-related harm—the National Coordinating Council (NCC) Medication Error Reporting and Prevention (MERP) Medication Index for Classifying Medication Errors. This classification system is useful in assisting hospitals to consistently identify and classify harm. For NYSPFP purposes, occurrences/incidents of harm classified by MERP as levels E through I should be reported.

## High-Alert Medication

NYSPFP uses the Institute for Safe Medical Practices (ISMP) high-alert medication list for anticoagulants, insulin, and opiates.

The following tables provide specific evidence-based practices for preventing the occurrence of ADEs for high-alert medications. In addition, NYSPFP encourages hospitals to consider strategies provided below when developing and implementing improvement activities.



For a list of available Adverse Drug Events resources, [see page 30](#).

<sup>14</sup> Rashidee, A., J. Hart, J. Chen, and S. Kumar. “High-Alert Medications: Error Prevalence and Severity.” *Patient Safety & Quality Healthcare* (July–August 2009).

<sup>15</sup> Department of Health and Human Services Office of the Inspector General. “Adverse Events in Hospitals: National Incidence Among Medicare Beneficiaries” (2010). OEI-06-09-00090.

Gap Analysis for Best Practices to Reduce ADEs

KEY PROCESS STEPS	EVIDENCE-BASED PRACTICES	CURRENT STATUS	INTERVENTIONS FOR CONSIDERATION
		For Anticoagulants, Insulin, and Opiates	
<b>Admission</b>	Medication reconciliation on admission		
<b>During Hospital Stay</b>	Medication reconciliation with all transfers of care and changes in condition		
	Standardize interventions based upon risk		
	Standardize order sets and protocols		
	Nutritional and/or dietary issues		
	Patient and caregiver engagement and education		
<b>At Discharge</b>	Medication reconciliation		

Principles and Improvement Strategies for Consideration

EVIDENCE-BASED PRACTICES	PRINCIPLES AND IMPROVEMENT STRATEGIES FOR CONSIDERATION
<b>Increase Awareness and Educate Staff</b>	Assess staff knowledge of safe medication practices and educate based on need.
<b>Medication Reconciliation (at admission, during hospital stay, at discharge)</b>	<p><i>Admission</i></p> <p>Patients admitted on high-alert medications have a higher risk for experiencing medication management issues. These medications frequently require a hospital-to-home titration and dose management component.</p> <ul style="list-style-type: none"> <li>• Evaluate the patient’s management of high-alert medications prior to admission.</li> <li>• Ensure all clinicians have access to a full medication list when determining admission orders.</li> <li>• Consult a pharmacist to support the reconciliation process. The pharmacist can complete the reconciliation when certain medications are involved or advise on the process.</li> <li>• Ask caregivers to bring all medications, vitamins, and over-the-counter drug containers to the hospital.</li> </ul>

EVIDENCE-BASED PRACTICES	PRINCIPLES AND IMPROVEMENT STRATEGIES FOR CONSIDERATION
<p><b>Medication Reconciliation (at admission, during hospital stay, at discharge) (continued)</b></p>	<ul style="list-style-type: none"> <li>• Review all medications for drug-drug and drug-food interactions.</li> <li>• If the patient or caregiver is unable to provide you with a history, consider the possibility of a fentanyl patch or implanted infusion pump during skin assessment.</li> <li>• Ask the patient about his or her use and compliance with medications, including frequency, time of day, and other factors that could impact effective clinical care or post-hospital care plans.</li> </ul> <p><i>During the Hospital Stay</i></p> <ul style="list-style-type: none"> <li>• Reconcile medications at each transition of care and major change in the patient's condition.</li> <li>• Check recent blood work to determine medication effectiveness and stability at each transition of care or major change in the patient's condition.</li> <li>• Look for duplicate therapies and interactions, particularly when multiple physicians are working with the patient.</li> </ul> <p><i>At Discharge</i></p> <ul style="list-style-type: none"> <li>• Complete reconciliation of medication prior to admission, those given during the hospitalization, and those prescribed for post-hospital care.</li> <li>• Resolve any discrepancies.</li> <li>• Educate patients and caregivers on the medications, reasons for taking them, possible adverse reactions, and other important information. Confirm patient and caregivers' understanding of information.</li> </ul>
<p><b>Stratify Interventions Based Upon Risk</b></p>	<ul style="list-style-type: none"> <li>• Analyze hospital's ADE data to guide focus of interventions.</li> <li>• Select high-alert drugs with highest priority to begin implementation of improvement strategies.</li> <li>• Multiple medical co-morbidities increase the risk for an ADE. Build alerts into systems to identify patients with these co-morbidities for being at risk for ADEs.</li> <li>• Consider engaging a specialty team or staff for the management of high-alert medications, such as an insulin team, pharmacist (for heparin dosing), or advanced practice or specialty nurses.</li> <li>• Implement nursing protocols for assessing patients on high-alert medications. <ul style="list-style-type: none"> <li>• <b>For example:</b> patients on patient controlled analgesia (PCA) respiratory rates be assessed every two hours, with continuous monitoring of oxygen saturation.</li> </ul> </li> <li>• Consider protocols for the administration of rescue drugs (i.e., Narcan).</li> <li>• Standardize discharge order sets with an automatic referral to the applicable clinic: <ul style="list-style-type: none"> <li>• Anticoagulation clinic</li> <li>• Diabetes clinic</li> <li>• Pain management clinic</li> </ul> </li> </ul>

EVIDENCE-BASED PRACTICES	PRINCIPLES AND IMPROVEMENT STRATEGIES FOR CONSIDERATION
<p><b>Standard Order Sets and Protocols</b></p>	<ul style="list-style-type: none"> <li>• Use smart pumps and pre-determined minimum and maximum administration dose limits.</li> <li>• Utilize visual cues to indicate that a patient is on a high-alert medication.</li> <li>• Incorporate NPO implications (see nutritional and dietary section for further dietary recommendations).</li> <li>• Incorporate “hold medications” implications.</li> <li>• Standardize dosage prescribing protocols, including reducing options, to decrease chance of error.</li> <li>• Continue to address legibility and ambiguous abbreviations by using preprinted order sets for PCAs for the paper-based nursing units and standardized PCA-specific order set for the Computerized Provider Order-Entry (CPOE) system.</li> <li>• Implement the use of flow sheets that follow the patient through the transitions of care to other units.</li> <li>• Hardwire electronic medical record (EMR) for laboratory testing, results reporting, and critical alert actions to enable immediate interventions based on critical values or trends.</li> <li>• Require a double-check policy for high-alert medications.</li> <li>• Require medications to be independently checked and signed off by a second RN, especially on any high-alert medications that require a dosage or rate change. This process may also be included in shift handoffs.</li> </ul> <p><i>Anticoagulants and Insulin</i></p> <ul style="list-style-type: none"> <li>• Coordinate meal and insulin times.</li> <li>• Use a protocol to discontinue or restart warfarin perioperatively.</li> <li>• Institute a process to ensure timely reporting of lab results (INR, glucose).</li> <li>• Create specialized teams for patients on high-alert medications (i.e., insulin team, anticoagulation team).</li> <li>• Utilize a pharmacist or advanced nurse practitioner (ANP) to manage medication protocols throughout the hospital.</li> </ul>
<p><b>Patient and Caregiver Engagement and Education</b></p>	<ul style="list-style-type: none"> <li>• Provide patient and caregivers education at the appropriate literacy level related to high-alert medications utilizing teach-backs. Include education on the administration, signs, and symptoms of possible complications or ineffective results, drug-drug and drug-food interactions, and other care plans unique to the patient (i.e., medication titration, self-managed or prescribed).</li> <li>• Provide pre-approved written patient education material, including visual cues.</li> <li>• Involve patient and caregivers in the post-hospital care medication management plan to ensure needs and lifestyle are taken into consideration.</li> </ul>

EVIDENCE-BASED PRACTICES	PRINCIPLES AND IMPROVEMENT STRATEGIES FOR CONSIDERATION
<b>Nutritional and Dietary Issues</b>	<p><b>Anticoagulants</b></p> <ul style="list-style-type: none"> <li>• Perform automatic nutrition consults for all patients on warfarin to avoid drug-food interactions.</li> </ul> <p><b>Insulin</b></p> <ul style="list-style-type: none"> <li>• Implement American Diabetes Association meal protocols for patients on insulin therapy. Notify dietary services of all patients receiving insulin and respond according to its established food and drug interaction program.</li> <li>• Coordinate meals with insulin delivery schedule.</li> <li>• Require new insulin orders when patient is transitioned from parenteral to enteral nutrition.</li> <li>• Incorporate NPO dietary trays that are labeled for diabetic patients.</li> <li>• Include a certified diabetes educator in meal planning with the nutritional staff and on the care delivery team.</li> </ul> <p><b>All</b></p> <ul style="list-style-type: none"> <li>• Arrange for nutrition services consultation.</li> <li>• Provide clear and simple education on managing diet food choices and the medications to avoid drug-food interaction. <ul style="list-style-type: none"> <li>• <b>For example:</b> insulin relationships to food consumption patterns, heavy diet of green vegetables on warfarin.</li> </ul> </li> </ul>
<b>Use of Technology</b>	<ul style="list-style-type: none"> <li>• Implement paper or electronic alert system critical values related to a high-alert medication.</li> <li>• Standardize order set to include automatic lab draws.</li> <li>• Utilize a bar coded medication administration technology.</li> <li>• Utilize CPOE for all medication orders.</li> <li>• Evaluate new equipment to ensure easier programming and clear setting displays.</li> </ul>

### Falls with Harm

Approximately 1 million inpatient falls are reported in the United States annually, with a rate of three to five falls per 1000 patient days. Between 1% to 3% of falls results in fracture and another 1% to 2% of falls result in loss of function, or death.<sup>16</sup>

The NYSPFP Injuries from Falls Initiative is designed to assist hospitals to implement evidence-based strategies to prevent and reduce the incidence of falls and related injuries by identifying patients at high risk. Falls prevention should be approached with risk-based, multi-factorial interventions, and multidisciplinary input. The evidence-based in-

terventions to consider for prevention programs include: assessment for the risk of falling, control of the environment, risk-based defined nursing and medical interventions, and engagement of the patients and caregivers. Fall prevention programs can be further enhanced through sharing data and information, and fostering teamwork by all members of the care team.<sup>17</sup>

The following tables provide specific evidence-based practices for preventing the occurrence of falls and falls with injury. NYSPFP encourages hospitals to consider these strategies when developing and implementing improvement activities.

#### Gap Analysis for Best Practices to Prevent Falls

KEY PROCESS STEPS	EVIDENCE-BASED PRACTICES	CURRENT STATUS	INTERVENTIONS FOR CONSIDERATION
Admission	Perform a high-risk falls assessment.		
	Standardize interventions for patients at risk of falling.		
During Hospital Stay	Reassess risk of falling and risk for a serious or major injury from a fall.		
	Customize interventions for patients at highest risk of a serious or major fall-related injury.		
At Discharge	Educate patients and caregivers in fall prevention and harm prevention strategies.		

<sup>16</sup> Oliver, D. et al. "Preventing Falls and Fall-Related Injuries in Hospitals." *Clinics in Geriatric Medicine* vol. 26 no. 4 (2010): 645–692.

<sup>17</sup> Boushon, B., G. Nielsen, P. Quigley, P. Rutherford, J. Taylor, and D. Shannon. *Transforming Care at the Bedside How-to Guide: Reducing Patient Injuries from Falls*. Institute for Healthcare Improvement: Cambridge, MA (2008). Available at [www.IHI.org](http://www.IHI.org).

EVIDENCE-BASED PRACTICES	PRINCIPLES AND IMPROVEMENT STRATEGIES FOR CONSIDERATION
<b>High-Risk Falls Assessment</b>	<ul style="list-style-type: none"> <li>• Conduct a risk assessment for falls on admission using a validated risk-assessment tool such as the Heinrich Fall Risk Model (HFRM-II), Stratify Risk Assessment, or Morse Fall Scale (MFS).</li> <li>• Re-assess fall risk at least daily or if there is a change in condition. <ul style="list-style-type: none"> <li>• <b>For example:</b> post surgery, change in medications, psychosocial event.</li> </ul> </li> <li>• Hard-wire fall risk assessment tools as part of the patient documentation process.</li> <li>• Identify patients at risk for harm from a fall using the ABCs High Risk to Harm (HRTH) assessment tool at the start of each shift.</li> <li>• Address the need to prevent harm in patients who fall or who are at risk of falling repeatedly, despite all prevention efforts.</li> </ul>
<b>Standardize Interventions for Patients at Risk of Falling</b>	<ul style="list-style-type: none"> <li>• Conduct proactive, purposeful rounds at least every hour to assess and address patient needs for pain relief, toileting, and positioning.</li> <li>• Place visual cues to alert staff of fall risks (<b>For example:</b> colored arm-bands, socks, blankets, or use of white board or signage).</li> <li>• Implement a program to maintain assistive/adaptive devices connected to the patient. <ul style="list-style-type: none"> <li>• <b>For example:</b> wheelchairs, walkers, canes, proper footwear, eye glasses, and hearing aids.</li> </ul> </li> <li>• Use beds that are closer to the floor, except when standing or during a transfer.</li> <li>• Implement a program to assess devices connected to the patient. <ul style="list-style-type: none"> <li>• <b>For example:</b> Foley and IVs for fluids.</li> </ul> </li> <li>• Educate staff about fall risks, harm, and interventions.</li> <li>• Develop staff education on situational awareness to foster mutual respect and accountability, and provide a safety net for patients.</li> <li>• Implement bathroom safety interventions, including the use of gait belts, non-slip floors, raised toilet seats, etc.</li> </ul>
<b>Customize Interventions for Patients at Highest Risk of a Serious or Major Fall-Related Injury</b>	<ul style="list-style-type: none"> <li>• Increase the intensity and frequency of observation.</li> <li>• Determine need for bed or chair alarms, protective devices, etc.</li> <li>• Make environmental adaptations and provide personal devices (<b>For example:</b> gait belts, soft helmets, hip protectors, fall mats) to reduce the risk of injury related to falls.</li> <li>• Target interventions to reduce the side effects of medications. <ul style="list-style-type: none"> <li>• <b>For example:</b> personal care and toileting prior to administering sedative.</li> </ul> </li> <li>• Encourage family and caregivers to stay with the patient.</li> </ul>
<b>Educate and Engage Patient and Caregivers in Fall Prevention and Harm Prevention Strategies</b>	<ul style="list-style-type: none"> <li>• Ensure safe, standardized handoffs (consider TeamSTEPS tools).</li> <li>• Communicate to all staff which patients are at risk of falling.</li> <li>• Use visual cues for staff and families that patient is at risk for falling. <ul style="list-style-type: none"> <li>• <b>For example:</b> colored socks, color-coded wristbands.</li> </ul> </li> </ul>

EVIDENCE-BASED PRACTICES	PRINCIPLES AND IMPROVEMENT STRATEGIES FOR CONSIDERATION
<p><b>Educate and Engage Patient and Caregivers in Fall Prevention and Harm Prevention Strategies</b> <i>(continued)</i></p>	<ul style="list-style-type: none"> <li>• Empower patients and caregivers to contact the nurse for assistance to set up the room, reduce environmental hazards, and create a safe environment.</li> <li>• Educate patients and caregivers on the risk of falls, environmental hazards, and assisted falls, and ensure that teach-backs are completed during the hospitalization and preparation for home.</li> <li>• Address language deficiencies to ensure patients and families understand the risk for falls and potential harm.</li> </ul>
<p><b>Assessment of Strength and Mobility</b></p>	<ul style="list-style-type: none"> <li>• Employ balance, strengthening, and exercise programs.</li> <li>• Place patient in a bed that allows him or her to exit toward their strongest side.</li> <li>• Administer fear of falling questionnaire and intervention to address falling fears with elderly patients in particular.</li> <li>• Consider the use of physical therapy, physical therapy aides, restorative nurses, unit walkers, or mobility aides.</li> </ul>
<p><b>Medication Assessment</b></p>	<ul style="list-style-type: none"> <li>• Review list of patient’s current medications and collaborate with pharmacist and provider to identify medications that increase risk of falling (<b>For example:</b> narcotics, sedatives, seizure medication, antiparkinson medications, and insulin) and risk of fall-related injury (anticoagulants).</li> <li>• Monitor the patient’s reaction to high-alert medications, such as opiates, sedatives, and narcotics.</li> <li>• Consider the timing of medication administration with the patient’s personal needs and habits.</li> </ul>
<p><b>Environmental Interventions</b></p>	<ul style="list-style-type: none"> <li>• Implement situation awareness protocols and rounding for interdisciplinary staff, including housekeeping, biomedical engineering, physician, physical and occupational therapy, dietary, and pharmacy.</li> <li>• Arrange the patient’s room to eliminate safety risks. Consider conducting an environmental assessment to ensure adequate lighting, bed position, and secured movable furniture.</li> <li>• Create a safe hospital environment with adequate lighting and clear hallways.</li> <li>• Give the patient and caregiver a chance to speak up to express a need or request.</li> </ul>
<p><b>Quality Improvement</b></p>	<ul style="list-style-type: none"> <li>• Conduct a timely and comprehensive root cause analysis of all falls, particularly those with harm.</li> <li>• Employ an immediate intervention, or “SWAT Team,” to assist with patient care, staff support, and fall analysis.</li> <li>• Conduct real-time post-fall or near-miss interdisciplinary “huddles” or debriefs using a standardized debrief form.</li> <li>• Assign unit-based ownership of falls data monitoring and post results on units in the form of a storyboard.</li> <li>• Celebrate successes by rewarding a reduction of falls, or sustained achievement of zero falls, with a staff luncheon or visit from leadership.</li> </ul>

### Pressure Ulcer Prevention and Reduction

Each year, more than 2.5 million people in the United States develop pressure ulcers, which is an estimated 15% of all acute care patients at any given time.<sup>18</sup> In 2006, the average cost of treating a pressure ulcer was \$1,200 per day. Individuals most at risk for developing pressure ulcers are those with diabetes, circulatory disease, diminished mobility, nutrition deficiencies, and cognitive impairments such as dementia.<sup>19</sup>

The NYSPPF Pressure Ulcer Initiative is designed to work with hospitals to improve the identification of patients at risk for pressure ulcers by implementing a standardized assessment and staging tool and through consistent documentation.

The following tables provide specific evidence-based practices for preventing pressure ulcers. NYSPPF encourages hospitals to consider these strategies when developing and implementing improvement activities.

#### Gap Analysis for Best Practices to Prevent Pressure Ulcers

KEY PROCESS STEPS	EVIDENCE-BASED PRACTICES	CURRENT STATUS	INTERVENTIONS FOR CONSIDERATION
<b>Admission</b>	Conduct high-risk skin assessment.		
	Standardize interventions based on risk.		
<b>During Hospital Stay</b>	Reassess patient at least once every 24 hours utilizing full body inspection.		
	Skin care management.		
	Optimize hydration and nutrition.		
	Minimize pressure.		
	Engage and educate patient and caregiver.		
<b>At Discharge</b>	Educate patient and caregiver for post-hospital care management.		

<sup>18</sup> Institute for Healthcare Improvement. "How-to Guide: *Prevent Pressure Ulcers*." Cambridge, MA (2011). Available at [www.ihl.org](http://www.ihl.org).

<sup>19</sup> AHRQ. "Preventing Pressure Ulcers in Hospitals: A Toolkit for Improving Quality of Care." Available at <http://www.ahrq.gov/research/ltr/pressureulcertoolkit/>.

Principles and Improvement Strategies for Consideration

EVIDENCE-BASED PRACTICES	PRINCIPLES AND IMPROVEMENT STRATEGIES FOR CONSIDERATION
<p><b>High-Risk Skin Assessment</b></p> <ul style="list-style-type: none"> <li>• <b>On Admission</b></li> <li>• <b>At Least Daily</b></li> </ul>	<ul style="list-style-type: none"> <li>• Utilize an age-appropriate, validated standard tool for the skin and risk assessment. The most widely used is the Braden Scale. Others include: Norton, Gosnell, Knoll, and Waterlow scales.</li> <li>• Complete a full body inspection with special attention to pressure points such as sacrum, ischium, trochanter, heels, elbows, and the back of the head. Also check for ports, patches (For example: fentanyl, smoker patch), tracheostomy site, indwelling urinary catheters, and stomas (For example: colostomy or ileostomy).</li> <li>• Complete high-risk skin assessment at least daily or with change of conditions (For example: surgery, fall, medication).</li> <li>• Utilize visual cues and reminders for staff in white board and the patient plan of care.</li> <li>• Use cameras to photograph and document present-on-admission or other skin issues.</li> <li>• Consider all bed-bound and chair-bound persons, or those with functional limitations (palliative care or hospice patients, spinal cord injury, handicapped, or other high-risk factors) to be at risk.</li> <li>• Ensure that staff performing comprehensive skin assessments:             <ul style="list-style-type: none"> <li>• wash hands before and after the skin assessment, and use gloves.</li> <li>• make sure the patient is comfortable.</li> <li>• minimize exposure of body parts while conducting the skin assessment.</li> <li>• ask for assistance when turning the patient to examine the patient’s backside, with a particular focus on the sacrum.</li> <li>• look at the skin underneath any devices such as oxygen tubing, indwelling urinary catheter, etc.</li> <li>• make sure to remove compression stockings to check the skin underneath.</li> </ul> </li> </ul>
<p><b>Standardize Interventions Based on Risk</b></p>	<ul style="list-style-type: none"> <li>• Implement a standardized approach for documenting the assessment, including any reminders, with a checklist or standardized computer screens with drop-down prompts with key descriptors of the five components of a minimal skin assessment.</li> <li>• Implement pressure ulcer prevention educational programs that are structured, organized, comprehensive, and directed at all levels of health care providers, patients, family, and caregivers.</li> <li>• Develop a risk-based individualized plan of care to reduce the risk of pressure ulcers and to identify pressure ulcers early.</li> <li>• Develop wound, ostomy, and continence (WOC) nurse champions on each unit with protocols for appropriate referral and consultation to wound care specialists.</li> </ul>

EVIDENCE-BASED PRACTICES	PRINCIPLES AND IMPROVEMENT STRATEGIES FOR CONSIDERATION
<p><b>Standardize Interventions Based on Risk</b> <i>(continued)</i></p>	<ul style="list-style-type: none"> <li>Utilize WOC nurse or nurse champion to assess and recommend wound care on all patients admitted with or who develop pressure ulcers.</li> <li>Implement standardized pressure ulcer prevention protocols and equipment.</li> <li>Implement standardized order sets and protocols treating pressure ulcers.</li> </ul>
<p><b>Skin Care Management</b></p>	<p>Protect and monitor the condition of the skin to prevent pressure ulcers and stop stage I ulcers before they worsen:</p> <ul style="list-style-type: none"> <li>Use topical agents that hydrate the skin and form a moisture barrier to reduce skin damage. Set specific time-frames or create reminder systems to reposition patients, including repositioning as part of hourly rounding protocols.</li> <li>3 P's—Pain/Potty/Position-Pressure. Offer toileting often, fluids as appropriate, positioning, and reassess for wet skin.</li> <li>Consider stage I pressure ulcer a vital sign.</li> <li>Use under-pads that wick moisture away from skin and provide a quick-drying surface.</li> <li>Ensure skin care supplies are readily available for each patient.             <ul style="list-style-type: none"> <li>Individualize bathing frequency.</li> <li>Use a mild cleansing agent.</li> <li>Avoid hot water and excessive rubbing.</li> <li>Use lotion after bathing.</li> <li>Avoid using a thick paste as a cleansing/moisture barrier (staff tend to use the paste when stool is present, resulting in skin injury as the paste is not easily removed).</li> </ul> </li> <li>Urinary or bowel incontinence should be closely managed to prevent moisture and bacterial exposure to the skin.</li> <li>Utilize continuous skin assessment including:             <ul style="list-style-type: none"> <li>When applying oxygen, check the ears for pressure areas from the tubing.</li> <li>If the patient is on bed rest, look at the back of the head during repositioning.</li> <li>When auscultating lung sounds or turning the patient, inspect the shoulders, back, and sacral and coccyx region.</li> <li>When checking bowel sounds look into skin folds.</li> <li>When positioning pillows under calves, check the heels and feet (using a hand-held mirror makes this easier).</li> <li>When checking IV sites, check the arms and elbows.</li> <li>Examine the skin under equipment with routine removal (For example: TENS units, restraints, splints, oxygen tubing, endotracheal tubes).</li> <li>Each time a patient is lifted or bedside care is provided is an opportunity to examine exposed skin, especially on bony prominences.</li> </ul> </li> </ul>

EVIDENCE-BASED PRACTICES	PRINCIPLES AND IMPROVEMENT STRATEGIES FOR CONSIDERATION
<p><b>Optimize Hydration and Nutrition</b></p>	<ul style="list-style-type: none"> <li>• Consider an automatic registered dietician consult if the patient is assessed as high-risk.</li> <li>• Assess weight, food, fluid intake, and laboratory data.</li> <li>• Consider standardizing a prealbumin level in high-risk patients or for high-risk and medical conditions.</li> <li>• Inquire about and grant patients’ food and liquid preferences to enhance hydration and nutrition.</li> <li>• Provide nutritional supplements if not contraindicated.</li> <li>• Provide visual cues, such as using a different color water container so all staff and families will know to encourage hydration.</li> <li>• Assist the patient with meals and encourage snacks as appropriate.</li> <li>• Consistently document the amount of nutritional and fluid intake.</li> <li>• Offer fluids every time the patient is turned.</li> </ul>
<p><b>Minimize Pressure</b></p>	<ul style="list-style-type: none"> <li>• Implement early activity, exercise, and mobility protocols.</li> <li>• Establish frequent repositioning schedule and use of pressure-redistribution surfaces.</li> <li>• Use visual or musical cues (For example: a turning clock, bells, or alarms) at the nurse’s station as a reminder to turn and reposition the patient.</li> <li>• Establish rules for which side should be down at specific times.             <ul style="list-style-type: none"> <li>• For example: even hours on the right side, odd hours on the left side.</li> </ul> </li> <li>• Ensure pressure-reducing equipment is available at all times.             <ul style="list-style-type: none"> <li>• For example: pillows, beds, heel protectors, foam wedges for positioning, etc.</li> </ul> </li> <li>• Use a device that elevates the heels and prevents external rotation.</li> <li>• Use special beds, mattresses, pillows, and blankets to redistribute the potential pressure areas.</li> <li>• Use breathable glide sheets that can stay in place.</li> <li>• Use lifting devices to prevent shearing or friction.</li> <li>• Use ceiling lifts to encourage mobility and movement while preventing work-related injuries.</li> <li>• Pay special attention to areas where the patient lacks sensation to feel pain or has had a breakdown in the past, or if epidural or spinal pain medications are being administered.</li> <li>• Place at-risk persons on pressure-redistributing mattress and chair cushion surfaces.</li> <li>• Avoid using donut-type devices and sheepskin for pressure redistribution.</li> <li>• Use pressure-redistributing devices in the operating room for individuals assessed to be at high risk for pressure ulcer development.</li> <li>• Use pillows or foam wedges to keep bony prominences, such as knees and ankles, from direct contact with each other.</li> <li>• Pad skin subjected to device-related pressure and inspect regularly.</li> </ul>

EVIDENCE-BASED PRACTICES	PRINCIPLES AND IMPROVEMENT STRATEGIES FOR CONSIDERATION
<p><b>Minimize Pressure</b> (<i>continued</i>)</p>	<ul style="list-style-type: none"> <li>• Use devices that eliminate pressure on the heels. For short-term use with cooperative patients, place pillows under the calf to raise the heels off of the bed. Place heel suspension boots for long-term use.</li> <li>• Avoid positioning directly on the trochanter when using the side-lying position—use the 30° lateral inclined position.</li> <li>• Maintain the head of the bed at or below 30°, or at the lowest degree of elevation consistent with the patient’s medical condition.</li> <li>• Institute a rehabilitation program to maintain or improve mobility and activity status via walkers, mobility aides, or formal therapy.</li> </ul> <p>Wheelchair-bound patients:</p> <ul style="list-style-type: none"> <li>• Reposition patient who is wheelchair-bound frequently. Patient should reposition self every 15 minutes or be repositioned by staff every hour.</li> <li>• Patients who are wheelchair-bound should have the appropriate cushions or gel pads that can relieve pressure and ensure that the patient is appropriately positioned in the chair.</li> <li>• Consider postural alignment, distribution of weight, balance and stability, and pressure redistribution when positioning persons in chairs or wheel chairs.</li> <li>• Use a written repositioning schedule.</li> </ul>
<p><b>Patient and Caregiver Engagement and Education</b></p>	<ul style="list-style-type: none"> <li>• Engage and teach patients and caregivers to turn, position, and manage skin. Expand the education to other related prevention techniques and include teach-backs.</li> <li>• Nurse or therapy-based functional maintenance or improvement education can be considered. <ul style="list-style-type: none"> <li>• <b>For example:</b> teach chair-bound persons who are able to shift weight every 15 minutes.</li> </ul> </li> <li>• Teach prevention and management practices to prepare the patient for post-hospital care management, including: <ul style="list-style-type: none"> <li>• Etiology of and risk factors for pressure ulcers.</li> <li>• Skin assessment.</li> <li>• Selection and use of pressure-reducing surfaces.</li> <li>• Nutritional interventions.</li> <li>• Bowel and bladder management.</li> <li>• Tactics effective for the patient’s unique skin care needs.</li> <li>• Demonstration of positioning to decrease risk of tissue breakdown.</li> </ul> </li> <li>• When engaging and educating patient and caregiver about post-hospital management, ensure inclusion of provisions that meet patient and lifestyle.</li> </ul>

### Venous Thromboembolism (VTE)

Pulmonary embolism resulting from deep vein thrombosis (DVT)—collectively referred to as VTE—is a serious and life-threatening diagnosis. This hospital-acquired condition affects hospitalized and non-hospitalized patients, can go unnoticed, and may result in long-term complications for surviving patients. Universally, all patients (medical and surgical) possess risk factors for VTE.

Organizations with physician-led initiatives that included standardized processes based on risk assessments have been successful in decreasing the incidence of VTE in hospitalized patients. Ongoing tracking and trending of measures, continuous

education and improvement, and reliable processes that include real-time alerts and feedback to clinicians also helped. Patients and caregivers should also be involved in the identification, prevention, and close management of medication regimes.

The NYSPFP VTE Initiative is designed to assist hospitals to implement standardized processes for the adoption of best practices to prevent VTE and to ultimately reduce the number of VTE events. The following tables provide specific evidence-based practices for preventing VTE. NYSPFP encourages hospitals to consider these strategies when developing and implementing improvement activities.

#### Gap Analysis for Best Practices to Prevent VTE

KEY PROCESS STEPS	EVIDENCE-BASED PRACTICES	CURRENT STATUS	INTERVENTIONS FOR CONSIDERATION
<b>Admission</b>	Perform high-risk VTE assessment within 24 hours of admission.		
	Standardize interventions based on risk.		
<b>During Hospital Stay</b>	Establish frequency of ongoing risk assessment.		
	Standardize interventions based on risk.		
	Standardize order sets for pharmacologic or mechanical prophylaxis.		
	Patient and caregiver engagement and education.		
<b>At Discharge</b>	Patient and family education for post hospital care management with emphasis on anticoagulation therapy.		

EVIDENCE-BASED PRACTICES	PRINCIPLES AND IMPROVEMENT STRATEGIES FOR CONSIDERATION
<b>Risk Assessment</b>	<ul style="list-style-type: none"> <li>• Adopt an evidence-based VTE risk assessment screening tool.</li> <li>• Assess every patient upon admission using the VTE risk assessment screening tool.</li> <li>• Develop mechanisms to ensure risk screening takes place for all admitted patients.</li> </ul>
<b>Standardize Interventions Based on Risk</b>	<ul style="list-style-type: none"> <li>• Develop a three-bucket risk assessment (low, moderate, and high risk) with appropriate standardized prophylactic protocols based on current recommendations from the American College of Chest Physicians.</li> <li>• Consider the hospital’s population, quality data, and patient risk for developing VTE when ordering Warfarin, Coumadin, Lovenox, etc.</li> <li>• Develop critical alert value protocols for immediate intervention.</li> <li>• Monitor lab values for unintended consequences of pharmacologic prophylaxis.</li> <li>• Provide the physician and pharmacist with the following for safe prophylaxis: date, time, weight, height, CBC, prothrombin time, serum creatinine.</li> <li>• Assess proper use of mechanical prophylaxis.</li> <li>• Provide ongoing patient education on signs and symptoms of adverse anticoagulation reactions, including:                         <ul style="list-style-type: none"> <li>• Drug-to-drug and drug-to-food interactions.</li> <li>• How to track signs and symptoms (<i>For example:</i> keep a journal).</li> </ul> </li> <li>• Conduct safe hand-offs.                         <ul style="list-style-type: none"> <li>• <i>For example:</i> Use Ticket to Ride during shift change to transfer a patient who is on high alert medication or at risk for VTE.</li> </ul> </li> </ul>
<b>Ongoing Risk Assessment</b>	<ul style="list-style-type: none"> <li>• Monitor changes in condition, drugs, or food that would impact the risk assessment or interventions.</li> <li>• Conduct interdisciplinary rounds, including assessment of VTE risk level and intervention.</li> </ul>
<b>Standard Order Sets for Prophylaxis</b>	<ul style="list-style-type: none"> <li>• Develop standard written order sets that link the risk assessment to the choice of prophylaxis.</li> <li>• Identify relative and absolute contraindications to utilizing the standard prophylaxis protocol and include those options in the standard order set.</li> <li>• Allow for “opt-out” capabilities as clinically indicated.</li> </ul> <p>Pharmaceutical Prophylaxis</p> <ul style="list-style-type: none"> <li>• Use protocols for dosing and monitoring.</li> <li>• Standardize concentrations and minimize dosing options when possible.</li> <li>• Monitor and measure timeliness of medication administration.</li> <li>• Consider high risk of drug-drug and drug-food interactions.</li> </ul>

EVIDENCE-BASED PRACTICES	PRINCIPLES AND IMPROVEMENT STRATEGIES FOR CONSIDERATION
<p><b>Standard Order Sets for Prophylaxis (<i>continued</i>)</b></p>	<p>Mechanical Prophylaxis</p> <ul style="list-style-type: none"> <li>• Consider the adoption of standing order or protocol to administer mechanical prophylaxis.</li> <li>• Consider implementing mechanical protocols that include compression stockings and pneumatic compression devices.</li> <li>• Develop activity protocols, such as range of motion, out of bed, ambulation.</li> </ul>
<p><b>Patient and Caregiver Engagement and Education</b></p>	<ul style="list-style-type: none"> <li>• Educate patients and caregivers about prevention strategies and early signs and symptoms of VTE.</li> <li>• Encourage full activity based on patient status.</li> <li>• Provide education (using teach-back) on prevention techniques and signs and symptoms management, including adverse drug reactions.</li> <li>• Encourage caregiver(s) to assist with activity, ambulation, and range of motion.</li> <li>• Provide written, clear, simple, and visual VTE discharge instructions to patients and caregivers.</li> <li>• Educate patient and caregivers, using teach-backs, on VTE and medications management during the transition home and for ongoing maintenance, including, but not limited to:             <ul style="list-style-type: none"> <li>• medication titration;</li> <li>• lab testing;</li> <li>• drug-drug and drug-food interactions; and</li> <li>• the need for close monitoring.</li> </ul> </li> </ul>

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