2011 ISMP Medication Safety Self Assessment® for Hospitals

Funded by The Commonwealth Fund

ISMP
INSTITUTE FOR SAFE MEDICATION PRACTICES

Organizations That Have Endorsed the 2011 ISMP Medication Safety Self Assessment® for Hospitals

- American Association of Colleges of Nursing
- American Hospital Association
- American Nurses Association
- American Organization of Nurse Executives
- American Pharmacists Association
- American Society for Healthcare Risk Management
- American Society of Health-System Pharmacists
- American Society of Medication Safety Officers
- Amerinet
- Anesthesia Patient Safety Foundation
- Association of American Medical Colleges
- Child Health Corporation of America
- Federation of American Hospitals
- Health Care Improvement Foundation
- Health Research and Educational Trust
- Healthcare Information and Management Systems Society
- Institute for Healthcare Improvement
- The Joint Commission
- MedAssets
- National Patient Safety Foundation
- Pennsylvania Patient Safety Authority
- Premier
- University HealthSystem Consortium
- VHA

Dear Healthcare Provider:

The Institute for Safe Medication Practices (ISMP) is pleased to provide the nation's hospitals with the 2011 ISMP Medication Safety Self Assessment® for Hospitals. As with our 2000 and 2004 ISMP Medication Safety Self Assessments®, this project represents one of many initiatives created through a strategic partnership between ISMP, the American Hospital Association (AHA), and the Health Research and Educational Trust (HRET).

The 2011 tool will help you assess the safety of medication practices in your facility, identify opportunities for improvement, and compare your experiences with the aggregate experiences of demographically similar hospitals.

We have updated many items from the 2004 self assessment and have added new items, which represent new practices and processes that have evolved over the last 7 years that impact medication safety, new research findings about error prevention, and new technologies previously not widely available in 2004. To incorporate these new items into the 2011 assessment, we have removed several items from the 2004 assessment that the majority of hospitals indicated had been fully implemented either in some or all areas of their organization.

As with our past assessments, many key national organizations have endorsed the 2011 ISMP Medication Safety Self Assessment® for Hospitals and offered their ongoing support of this endeavor. Our endorsers' names and/or logos appear in this document and on our website.

Your organization's Chief Executive Officer (CEO) has received a letter from the president of AHA to introduce the 2011 self assessment and encourage your participation. ISMP, HRET, and the other endorsing organizations also encourage you to participate in this very important project by completing the 2011 self assessment as directed in the instructions and by submitting your findings anonymously to ISMP.

In addition to the usual high standard of confidentiality associated with any information submitted to ISMP, we would also like to remind participants that ISMP is a federally certified patient safety organization (PSO). If self-assessment information is collected within the hospital's *patient safety evaluation system* and submitted to ISMP as *patient safety work product*, the information is granted protection from discovery in connection with a federal, state, or local civil, administrative, or disciplinary proceeding. No contract with ISMP is required for this legal protection. Further guidelines regarding submitting information to ISMP as a PSO can be found on our website at: www.ismp.org/docs/PSOguidelines.pdf.

As with the data submitted by almost 1,700 hospitals in 2004, we will use the aggregate findings to plan curricula and other means of support to assist you in enhancing medication safety. Additionally, we plan to compare the aggregate data provided to ISMP in 2000, 2004, and 2011 to evaluate our nation's progress in medication safety over the last decade. While there is still much work to do, I am confident that we have come a long way together on this important journey.

Warm regards,

Michael R. Cohen, RPh, MS, ScD, FASHP
President
Institute for Safe Medication Practices

About the Institute for Safe Medication Practices (ISMP)

The Institute for Safe Medication Practices (ISMP) is the nation's only nonprofit, charitable organization devoted entirely to medication error prevention and safe medication use. ISMP is known and respected worldwide as the leading resource for independent and effective medication safety recommendations.

The Institute's strategies are based on up-to-the minute information gained from analysis of reports to the national, voluntary ISMP Medication Errors Reporting Program, onsite visits to individual healthcare organizations, and advice from outside advisory experts.

ISMP's highly effective initiatives, which are built upon system-based solutions, include: four medication safety newsletters for healthcare professionals and consumers that reach more than three million total readers; educational programs, including conferences on medication use issues; confidential consultation services to healthcare systems to proactively evaluate medication systems or analyze medication-related sentinel events; advocacy for the adoption of safe medication standards by accrediting bodies, manufacturers, policy makers, and regulatory agencies; independent research to identify and describe evidence-based safe medication practices; and a consumer website (www.consumermedsafety.org) that provides patients with access to free medication safety information and alerts.

ISMP works with healthcare practitioners and institutions, regulatory and accrediting agencies, consumers, professional organizations, the pharmaceutical industry, and others to accomplish its mission. It is a federally certified patient safety organization (PSO), providing legal protection and confidentiality for patient safety data and error reports it receives.

As an independent nonprofit organization, ISMP receives no advertising revenue and depends entirely on charitable donations, educational grants, newsletter subscriptions, and volunteer efforts to pursue its lifesaving work. For more information that will make a difference to patient safety, please visit ISMP online at: www.ismp.org.

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www.ismp.org

Acknowledgements

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ISMP, AHA, and HRET thank The Commonwealth Fund for its continued support of our efforts to improve medication safety in America's hospitals. The Commonwealth Fund provided financial support for the 2000 ISMP Medication Safety Self Assessment®, the 2004 ISMP Medication Safety Self Assessment® for Hospitals, and the 2011 ISMP Medication Safety Self Assessment® for Hospitals.

Advisory Panel

ISMP, AHA, and HRET thank the following members of our volunteer Advisory Panel, who helped inform the content of the 2011 ISMP Medication Safety Self Assessment® for Hospitals.

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We also thank the staff at ISMP, AHA, HRET, and other individuals who have contributed their time and effort to make the 2011 self assessment possible.

The 2011 ISMP Medication Safety Self Assessment® for Hospitals is designed to:

- Heighten awareness of distinguishing characteristics of a safe hospital medication system
- Create a new baseline in 2011 of hospital efforts to enhance medication safety
- Evaluate our nation's progress in medication safety over the last decade.

The self assessment is divided into ten key elements that significantly influence safe medication use. Each element is defined by one or more core characteristics that further define a safe medication use system. Each core characteristic contains individual self-assessment items to help you evaluate your success with achieving each core characteristic.

ISMP is not a standards setting organization. As such, the self-assessment items in this document are not purported to represent a minimum standard of practice and should not be considered as such. In fact, some of the self-assessment items represent innovative practices and system enhancements that are not widely implemented in most hospitals today. However, their value in reducing errors is grounded in scientific research and/or expert analysis of medication errors and their causes.

Key Definitions *(For purposes of this self assessment)*

Additional defined terms appear on pages 53, 54, and 55 of this document and are designated throughout the text in **BOLD, SMALL CAPITAL LETTERS**. In the online version of the assessment, these additional terms are highlighted in blue and are linked to their definition.

HIGH-ALERT MEDICATIONS (OR DRUGS)

Medications that bear a heightened risk of causing significant patient harm when they are used in error. Although mistakes may or may not be more common with these drugs, the consequences of an error are more devastating to patients. Examples of high-alert medications include heparin, warfarin, insulin, chemotherapy, potassium chloride for injection concentrate, opioids, neuromuscular blocking agents, antithrombotic agents, and adrenergic agonists. (A complete list can be found at: www.ismp.org/Tools/highalertmedications.pdf.)

IMPLEMENTED

Accomplished or achieved in practice, not just in policy: to carry into effect.

MEDICATION (OR DRUG)

Medication includes: prescription medications; sample medications; herbal remedies; vitamins; nutraceuticals; over-the-counter drugs; vaccines; diagnostic and contrast agents used on or administered to persons to diagnose, treat, or prevent disease or other abnormal conditions; radioactive medications; respiratory therapy treatments; parenteral nutrition; blood derivatives; intravenous solutions (plain, with electrolytes and/or drugs); and any product designated by the Food and Drug Administration (FDA) as a drug. The definition of medication does not include enteral nutrition solutions (which are considered food products), oxygen, and other medical gases.

PRACTITIONER

A licensed healthcare professional who is authorized within the institution to prescribe, dispense, or administer medications, such as a physician, physician assistant, nurse anesthetist, nurse practitioner, nurse, pharmacist, or respiratory therapist.

UNIT STOCK

Medications that are not labeled or stored for a specific patient and that are available outside the pharmacy. This would include medications stored in medication rooms, refrigerators, storage cabinets, and automated dispensing cabinets (ADCs), for potential administration to various patients.

Instructions for Conducting the Self Assessment

It is important for each hospital in a multihospital system to complete the self assessment individually.

1. **Establish an interdisciplinary team** consisting of, or similar to, the following:
   - CEO or senior vice president
   - Chief medical officer
   - Nurse executive
   - Director of pharmacy
   - Chief information officer
   - Clinical information technology specialist
   - Medication safety officer/manager
   - Risk management and quality improvement professionals
   - At least two staff nurses from different specialty areas
   - At least two staff pharmacists (one clinical and one distribution)
   - At least one active staff physician.

   Other hospital practitioners (e.g., respiratory therapists, CRNAs) and staff may need to join the core team for evaluation of certain sections of the self assessment. For example, you may want to invite an infection control practitioner to the meeting in which core characteristic #20—*Proven infection control practices are followed when storing, preparing, and administering medications*—is being discussed.

   Your team should be provided with sufficient time to complete the self assessment and be charged with the responsibility to evaluate, accurately and honestly, the current status of medication practices in your facility. Because medication use is a complex, interdisciplinary process, the value and accuracy of the self assessment is significantly reduced if it is completed by a single discipline involved in medication use. Based on participant feedback from our prior self assessments, we anticipate that it will take four team meetings of approximately 1 to 2 hours each to complete this self assessment.

2. **Read and review the self assessment in its entirety (including the directions) before beginning the assessment process.** The team leader may want to print a copy of the abbreviated version of the assessment tool and a copy of the Frequently Asked Questions (FAQs) associated with the self assessment. These can be accessed at: http://www.ismp.org/selfassessments/hospital/2011/pdfs.asp. Items with specific, related FAQs will be noted directly above the item number. You may want to provide each team member with either a hardcopy or electronic version of the self assessment and the FAQs for review before the first team meeting.

3. **Verify your demographic information.** Before the first team meeting, the team leader should review and verify the responses in this section with hospital administration as discussed in the FAQs. If you are completing the assessment as part of a collaborative that plans to aggregate the group's results, obtain your code from the collaborative and enter it into the space provided in question #17 of the demographics section.

4. **Convene the team.** During the evaluation process, ensure that each team member can view either a hardcopy or electronic version of the self assessment during the meeting. There are several options for completing the assessment.
   - ***Option 1:*** Print hardcopies of the abbreviated version of the self assessment to share with team members, manually complete the demographic information, and fill in your choice (A through E, or Not Applicable) for each self-assessment item. Submission of your information to ISMP, however, must be completed using the online self-assessment form.
   - ***Option 2:*** Download the abbreviated version of the self assessment to view with your team, complete the demographic information, and enter your choice (A through E, or Not Applicable) for each self-assessment item, while saving the document between meetings. Submission of your information to ISMP, however, must be completed using the online self-assessment form.
   - ***Option 3:*** Use the online self-assessment form to view at team meetings, complete the demographic information, and enter your choice (A through E, or Not Applicable) for each self-assessment item, while saving your password-protected document between meetings. *(Please see Step 8 [on page 8] for information regarding accessing the online self-assessment form and obtaining your password.)*

5. Discuss each core characteristic and evaluate the hospital's current success with implementing the self-assessment items within that core. As necessary, investigate and verify the level of implementation with other healthcare practitioners outside your team. When a consensus on the level of implementation for each self-assessment item has been reached, select the appropriate column (A through E, or Not Applicable), using the following scoring key and guidelines:

Scoring Key

- **A.** There has been no activity to implement this item.
- **B.** This item has been formally discussed and considered, but it has not been implemented.
- **C.** This item has been partially implemented in some or all areas of the organization
- **D.** This item is fully implemented in some areas of the organization.
- **E.** This item is fully implemented throughout the organization.

Organizations may want to consider assigning an individual to record any discussion generated around each self-assessment item and the rationale behind the selected choice. This information, meant for internal use only, can assist the team when reviewing scores for individual items or reassessing your organization at a later date. This will provide insight into why the choice selected for each self-assessment item had been chosen at that point in time.

Important Choice Selection Guidelines

For all self-assessment items: Unless otherwise stated, self-assessment items refer to medications prescribed, dispensed, and administered to all inpatients and outpatients typically seen in most hospitals, including patients admitted to the emergency department and ambulatory surgery/procedure units.

For self-assessment items with multiple components: Full implementation (choice of D or E) is evidenced only if all components are present in some or all areas of the organization. If only one or some of the components have been partially or fully implemented in some or all areas of the organization, self-assessment choices should not exceed level C.

For self-assessment items with two or three distinct components, each separated with the word "OR," and labeled (a) and (b), or (a), (b), and (c): Choose the one component within the item that is most relevant to your hospital, and select your choice (A through E, or Not Applicable) for only that one element.

For self assessment items with an option of "Not Applicable": Select "Not Applicable" only if your hospital meets the scoring guideline for that item.

6. Repeat the process outlined in Step 5 for all self-assessment items.

7. If you have questions, refer to the FAQs available on of our website: www.ismp.org/selfassessments/hospital/2011/FAQ.asp. The online self-assessment form has certain items directly linked to FAQ responses. Contact ISMP at selfassess@ismp.org or call (215) 947-7797 during usual business hours (Eastern Daylight-Saving Time) if you need additional assistance.

8. To submit your information to ISMP or to use *Option 3* to complete the assessment, go to www.ismp.org/selfassessments/hospital/2011/, which can also be accessed through the ISMP homepage (www.ismp.org), and click on the link to obtain a secure password. See page 9 for further information about obtaining a password, entering your information, and submitting your completed assessment to ISMP.

9. Once you have entered and submitted your information online, **you will be prompted to print a report of your entered information with a weighted score for each item, core characteristic, key element, and for the entire self assessment.** See page 9 for additional information on retrieving your results once you have submitted your information.

Submit your completed self assessment to ISMP by **August 31, 2011.**

Instructions for Entering and Submitting Information to ISMP

1. **To access the 2011 self-assessment webpage.** From any computer with Internet capability, go to: www.ismp.org/selfassessments/hospital/2011/ or the ISMP homepage (www.ismp.org) to access the 2011 ISMP Medication Safety Self Assessment for Hospitals® webpage. This webpage will provide all the links you need to print, download, and view the assessment, obtain your password, complete the self assessment, submit your information to ISMP, and to view your results.

2. **To obtain a password.** Once the assessment webpage has been accessed, click on the link in the second box to obtain a password. Next, click on the link in the 1st box for new users. You will then be given the option to provide an email address to be used only if necessary for password recovery, or you can proceed directly to the self assessment to obtain your password. You will be provided with a randomized, alphanumeric password that is generated by the web-based program. Please record your password, and keep it in a safe place. This password is required to:
   - Enter your information into the online self-assessment form
   - Save your entered information and return to the online form at a later time to complete the assessment
   - Submit your completed self assessment to ISMP
   - View a report of your self assessment with weighted scores once it has been submitted
   - View the Preliminary Aggregate Results workbook with comparative reports after the final submission date and the results have been tabulated in the fall of 2011.

   ISMP will NOT be able to identify hospitals that have entered and/or submitted information, as the passwords are generated by the web-based program and provided only to the hospital. If you provide an email address for notification of a forgotten password (optional), your email address will only be linked to your password, not to any information submitted to ISMP.

3. **To enter assessment information.** Enter your information into the secure, online form. At any point, while entering your information, you can save your entered information by clicking the "Save" button found at the bottom of the demographics section, following each key element, or at the end of the online form. To exit the online form, click on the "Sign Off" button found at the top of the page. **Please note: The assessment is a continuous (one page) form.** In order to return to your saved information, you will need to enter the password that you obtained as noted above in Step 2.

4. **To submit your completed assessment to ISMP.** Hospitals are encouraged to submit their completed self assessment anonymously to ISMP. ISMP will not be able to identify hospitals that have submitted their information, as the passwords used for entering and submitting information have been generated by the web-based program and provided only to the hospital.

   Once you have completed the online self-assessment form, click the "Submit" button found at the bottom of the online form to submit your completed self assessment to ISMP. The online form will immediately download your information into a secure database maintained solely by ISMP. **Please note: Once the "Submit" button has been clicked, you will no longer be able to make any changes to your information.**

5. **To generate your report.** After submitting your completed self assessment to ISMP, the program will prompt you to print a report of your submitted self assessment with numerical, weighted scores for each of the self-assessment items, subtotals for each of the core characteristics and key elements, and a total score for the entire self assessment. **Please note: The scored report will be approximately 30 pages in length and will contain all of the assessment items with your scores.** This report and your password should be maintained in a safe location and can be used later to compare your hospital's findings with aggregate data from other demographically similar hospitals.

   At any time after submitting your information to ISMP, you can enter your password to view, download, and/or print your 2011 self-assessment report. However, you will not be able to make any changes to the information you originally submitted. **Please note: Weighted scores are not visible on the online self-assessment form while entering your information. Hospitals can obtain their weighted scores only after they submit their completed self assessment to ISMP. Without weighted scores, hospitals will be unable to compare their experiences to other hospitals that are participating in this project.**

Explanation of Weighted Scores

To determine a weight for each self-assessment item, ISMP staff used a standard process to independently evaluate each item to determine its impact on patient safety and its ability to sustain improvement.

Therefore, the self-assessment items with the highest weight are those that:

- Target system design/redesign
- Do not rely heavily upon human memory, performance, and vigilance
- Demonstrate through scientific evidence that they are effective in reducing serious medication errors
- Solve several medication-error related problems at the same time
- Safeguard high-risk patient populations
- Prevent errors with high-alert medications that have the greatest potential to cause patient harm
- Simplify, standardize, or centralize complex, error-prone processes
- Create high-level system design barriers (e.g., forcing functions, failsafes) to prevent errors
- Create high-level system redundancies to capture errors before they reach patients
- Reduce tolerance of risk and increase incentives for making safe behavioral choices
- Make it hard for healthcare practitioners to do their job wrong, and easy for them to do it right
- Develop and sustain a culture of safety.

Most of the self-assessment items are weighted in a way that results in no numerical score (zero value) unless there is partial or full implementation (choice of C, D, or E) of the item. However, some items that require extensive planning have been assigned a weighted score for formally discussing the item (choice of B). Some of the self-assessment items are weighted in a way that results in no numerical score unless there is full implementation of the item throughout the organization.

Weighted scores have also been assigned to "Not Applicable" choices based on the degree of risk associated with not implementing the suggested error-reduction strategy (e.g., smart pump technology) or the degree of risk avoided by not treating a specific population (e.g., pediatrics) or administering a specific medication (e.g., chemotherapy).

Access to Comparative Reports

ISMP will prepare and publish on our website a **Preliminary Aggregate Results** workbook with comparative reports of the level of medication safety practices in US hospitals based on the data submitted. **Once the data collection period has ended in August 2011, hospitals that have submitted their completed self assessment to ISMP will be able to access these aggregate comparative reports using the same password they used when entering and submitting their information. This workbook should be available in the fall of 2011.** In addition, further analysis of the data will be completed, and the results will be submitted for publication in a peer-reviewed journal.

Security and Protection of Self-Assessment Information Submitted to ISMP

All information submitted to ISMP is maintained in a secure database maintained solely by ISMP. All information is submitted anonymously. Although demographic information is collected as part of the assessment process, ISMP will NOT be able to identify individual hospitals that have entered and/or submitted information. Further, the database does not allow viewing of demographic information associated with individual assessment information. All information is contextually de-identified, and the demographics are used only for aggregate data reports. Passwords required for submitting information to ISMP are generated by the web-based program and are provided only to the hospital.

In addition to the usual high standard of confidentiality associated with any information submitted to ISMP, we would also like to remind participants that ISMP is a federally certified patient safety organization (PSO). If self-assessment information is collected within the hospital's ***patient safety evaluation system*** and submitted to ISMP as ***patient safety work product***, the information is granted protection from discovery in connection with a federal, state, or local civil, administrative, or disciplinary proceeding. No contract with ISMP is required for this legal protection. Further guidelines regarding submitting information to ISMP as a PSO can be found on our website at: www.ismp.org/docs/PSOguidelines.pdf.

Demographics

All questions in the demographics section must be completed unless otherwise noted as optional. Please refer to the FAQs for assistance in answering these items.

1. Please select the one category that best describes the number of inpatient beds currently set up and staffed for use in your hospital.

- ☐ Fewer than 100 beds
- ☐ 100 to 299 beds
- ☐ 300 to 499 beds
- ☐ 500 beds and over

2. Please select the one category that best describes the type of organization that is responsible for establishing policy for the overall operation of your hospital.

- ☐ State or local government
- ☐ Non-government, not-for-profit
- ☐ Investor-owned, for-profit
- ☐ Military
  - To what branch of the service does your hospital belong?
    - ☐ Army
    - ☐ Navy
    - ☐ Air Force
- ☐ Veterans Affairs
- ☐ US Public Health Service
- ☐ Other: _____

3. Please select the one category that best describes the type of service that your hospital provides to the majority of its admissions.

- ☐ General medical and surgical
- ☐ Long Term Acute Care (LTAC)
- ☐ Specialty: Cardiology
- ☐ Specialty: Oncology
- ☐ Specialty: Orthopedic
- ☐ Specialty: Pediatric
- ☐ Specialty: Psychiatric
- ☐ Specialty: Rehabilitation
- ☐ Specialty: Women and Children
- ☐ Other: _____

4. Does your hospital also provide the following services?

- ☐ Yes
  - Select all that apply.
    - ☐ Oncology services (select even if chemotherapy is administered infrequently)
    - ☐ Pediatric services (select even if pediatric care is provided only in the emergency department and/or outpatient surgery)
    - ☐ Neonatal intensive care unit (select for any level of service)
    - ☐ Trauma services (select for any level of service)
    - ☐ Transplant services
    - ☐ Behavioral health
- ☐ No

5. Does your hospital have a *physician* residency-training program that has been approved by the Accreditation Council for Graduate Medical Education?

- ☐ Yes
  - In what setting is the physician residency-training program carried out?
    - ☐ Community teaching hospital
    - ☐ Academic medical center
- ☐ No

6. Does your hospital have a *pharmacy* residency-training program that has been accredited, or is pending accreditation, by the American Society of Health-System Pharmacists?

- ☐ Yes
  - How many pharmacy residents do you anticipate in your residency-training program during 2011-2012?
    - ☐ 1-2
    - ☐ 3-5
    - ☐ Greater than 5
- ☐ No

7. Does your hospital train students from an accredited program?

- ☐ Yes
  - Select all that apply.
    - ☐ Nursing
    - ☐ Pharmacy
    - ☐ Medical
    - ☐ Other: _____
- ☐ No

8. Is your hospital one of several hospitals in a healthcare system with common ownership and/or governance?

- ☐ Yes
  - How many hospitals comprise your health system?
    - ☐ 2-5
    - ☐ 6-10
    - ☐ More than 10
- ☐ No

9. Through which group/purchasing organization or alliance does your hospital purchase its medications?

- ☐ None
- ☐ Amerinet
- ☐ Cardinal Health
- ☐ Department of Defense
- ☐ HealthTrust Purchasing Group
- ☐ HCA
- ☐ MedAssets/Broadlane
- ☐ Premier
- ☐ Purchasing Alliance for Clinical Therapeutics (PACT)
- ☐ Veterans Affairs
- ☐ VHA/Novation
- ☐ UHC/Novation
- ☐ Other: _____

10. Please select the <u>one category</u> that best describes the location of your hospital.

- ☐ Urban
- ☐ Rural
  - Is your hospital a critical access hospital?
    - ☐ Yes
    - ☐ No

11. How are pharmacy services managed in your organization?

- ☐ Internally
- ☐ Externally

12. Please tell us where you are located.

_____

US State/Territory, US Military Foreign, or Non-US Country

13. Has your organization completed an ISMP Medication Safety Self Assessment® for Hospitals in the past?

- ☐ Yes
  - Did you submit your results to ISMP during the 2004 data collection period?
    - ☐ Yes
    - ☐ No
    - ☐ Unknown
- ☐ No
- ☐ Unknown

14. Does your organization employ or contract hospitalists?

- ☐ Yes
  - Select coverage.
    - ☐ Part-time coverage
    - ☐ Full-time coverage (24/7)
- ☐ No

15. Does your organization employ a full-time or part-time clinical informatics practitioner dedicated to medication-related technology?

- ☐ Yes
- ☐ No

16. Does your organization employ a full-time or part-time medication safety officer/manager (i.e., an individual dedicated to medication safety)?

- ☐ Yes
- ☐ No

17. If you are part of a collaborative and have a code to segregate your information, please insert it below. (optional)

_____

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

I. PATIENT INFORMATION

Core Characteristic #1

Essential patient information is obtained, readily available in useful form, and considered when prescribing, dispensing, and administering medications, and when monitoring the effects of medications.

		A	B	C	D	E
1	*Prescribers* and *nurses* can easily and electronically access *inpatient* laboratory values while working in their respective clinical locations.					
2	*Pharmacists* can easily and electronically access *inpatient* laboratory values while working in their respective clinical locations.					
3	*Prescribers* and *nurses* can easily and electronically access *outpatient* laboratory values while working in their respective clinical locations.					
4	*Pharmacists* can easily and electronically access *outpatient* laboratory values while working in their respective clinical locations.					
5	Recent inpatient and outpatient laboratory values are automatically displayed on **COMPUTER ORDER ENTRY SYSTEM** screens for medications that typically require dose adjustments based on pending laboratory results (e.g., if warfarin is ordered, the most recent INR is displayed).					
6	An active computer surveillance system (e.g., data-monitoring software) is used to monitor available data sources to optimize therapy and identify patients at risk of harm related to medication therapy (e.g., decreased platelet count in a patient receiving heparin, resistant bacteria to current antibiotic therapy), and to notify practitioners of intervention opportunities in real time as soon as the information is available.					
7	The information technology system maintains (for at least 5 years) ongoing patient profiles with basic demographic information (including allergies) and drug therapy records for each episode of care, which are readily accessible to practitioners when a patient is readmitted. *Scoring guideline: Do not choose level D or E if information is purged more frequently than every 5 years.*					
8	Inpatient and outpatient **COMPUTER ORDER ENTRY SYSTEMS** are linked so that comprehensive patient information is available to practitioners wherever (inpatient or outpatient) the patient receives care in the hospital system.					
9	A nurse, pharmacist, or prescriber verifies that any patient allergy information entered into the information technology system is clinically accurate, and that the names of allergens are spelled correctly and properly coded to allow for clinical decision support screening.					

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

I. PATIENT INFORMATION (continued)

		A	B	C	D	E
10	Information technology systems require verification of archived allergy information that auto-populates an allergy field from a prior admission and/or the patient's ambulatory record.					
11	Medication orders cannot be entered into the **COMPUTER ORDER ENTRY SYSTEM** until the patient's allergies have been entered and coded (i.e., orders cannot be entered until the allergy field has been populated).					
12	**COMPUTER ORDER ENTRY SYSTEMS** automatically screen and detect drugs to which patients may be allergic (including cross allergies), provide a clear warning to staff during order entry, and require practitioners to enter an explanation to override the warning.					
13	**COMPUTER ORDER ENTRY SYSTEMS** have a tiered severity rating for allergies, based on the patient's reaction to the drug, which is used to limit alert fatigue from drug intolerances that are not true allergies.					
FAQ 14	Allergies are clearly visible on all patient-specific pages or screens of medication administration records (MARs), automated dispensing cabinets (ADCs), and **COMPUTER ORDER ENTRY SYSTEMS**.					
15	There is a defined process that specifies how to modify patient allergies and reactions in the medical record and who is permitted to make such changes.					
16	Patients who receive **MODERATE SEDATION**, patient-controlled analgesia (PCA), epidural narcotic infusions, or other IV opioids to treat pain are monitored for signs of oversedation at hospital defined frequencies by evaluating the patient's level of alertness and vital signs (including rate and quality of respirations).					
17	Enhanced monitoring beyond pulse oximetry (e.g., capnography, apnea alarms) is required for patients who receive PCA or other IV opioid infusions to treat pain whenever risk factors such as obesity or low body weight, sleep apnea, the use of basal infusions or concomitant medications that potentiate the effects of opioids, or conditions such as asthma exist, and/or when **NURSE-CONTROLLED ANALGESIA** is employed.					
18	Patient selection criteria for PCA have been established and are used, which exclude patients who will not be able to control the delivery of the medication themselves due to their level of consciousness, physiological condition, or limited comprehension. *Scoring guideline: Choose NOT APPLICABLE if you do not offer PCA in your hospital.*					
		NOT APPLICABLE				

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

I. PATIENT INFORMATION (continued)

		A	B	C	D	E
19	Only trained healthcare workers (not parents or other care providers) administer oral sedatives (e.g., midazolam, chloral hydrate) to children in preparation for a procedure (e.g., MRI), after the child has arrived at the facility to ensure proper monitoring of neurologic and respiratory status, and rapid access to resuscitation equipment in the event of respiratory depression. *Scoring guideline: Choose NOT APPLICABLE if care is not provided to pediatric patients, including in the emergency department (ED), outpatient surgery, or outpatient diagnostics.*					
					NOT APPLICABLE	
20a	Machine-readable coding (e.g., bar-coding) is used to verify patient identity during drug administration.					
OR	**OR**					
20b	Two patient identifiers (not the patient's room number or location) from the MAR (paper or electronic) or the original order are manually verified against the patient identification bracelet and/or when possible, with the patient, before medications are administered.					
21	Basic information (e.g., patient name, hospital unit location, medical record number, birth date, physician) is clear and easily visible on orders transmitted to the pharmacy via addressograph imprints or labels on paper copies, or is sent electronically.					
FAQ 22	Information about the patient's comorbid and/or chronic conditions (e.g., hypertension, diabetes, renal or liver impairment, pregnancy, lactation) is obtained, communicated to pharmacists, and available in the pharmacy computer system for reference.					
23	The hospital utilizes a surgical safety checklist (i.e., the World Health Organization [WHO] Surgical Safety Checklist or an adaptation) prior to surgical procedures to verify (at a minimum) patient identity, allergies, and preoperative antibiotics (when required).					
24	Medication orders cannot be entered into the **COMPUTER ORDER ENTRY SYSTEM** until the patient's weight has been entered (i.e., orders cannot be entered until the weight field has been populated).					
25	All weights and heights are measured and documented in written and electronic systems in metric units (i.e., grams or kilograms for weight, centimeters for height).					
26	Scales used to weigh patients only measure in metric units or default to metric units.					
27	All documented weights and heights in written and electronic systems are designated as actual, estimated by practitioners, or stated by patients.					

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

II. DRUG INFORMATION

Core Characteristic #2

Essential drug information is readily available in useful form and considered when prescribing, dispensing, and administering medications, and when monitoring the effects of medications.

		A	B	C	D	E
28	A complete drug history, including a current list of prescription and over-the-counter medications (with dose, frequency, route, time of last dose taken, indication), vitamins, herbal products, illicit drugs, and alcohol and tobacco use is obtained for every inpatient and outpatient upon admission or initial encounter (including during the pre-admission process).					
29	A process is in place in both inpatient and outpatient units (e.g., ED, ambulatory surgery, outpatient radiology) to obtain a list of the medications that the patient has been taking at home before admission or outpatient encounter and compare (reconcile) the list to the medications prescribed upon admission, during the encounter, upon transfer within the hospital, and upon discharge, to identify and resolve discrepancies (e.g., omissions, duplications, contraindications, unclear information).					
30	All drug reference texts, including commercially available charts and guidelines in the organization are checked annually; all outdated reference materials are removed from use and replaced as necessary. (Reference materials are outdated after 1 year of publication or whenever the next edition is available).					
31	Pharmacists and pharmacy technicians have easy access (e.g., on each computer terminal, electronic handheld devices) to user-friendly, up-to-date, computerized drug information systems, which include information on over-the-counter, herbal, and alternative medicines.					
32	Prescribers and other non-pharmacy practitioners have easy access (e.g., on each computer terminal, electronic handheld devices) to user-friendly, up-to-date, computerized drug information systems, which include information on over-the-counter, herbal, and alternative medicines.					
33	Standardized, organization-approved emergency drug dosing guidelines are available on adult and pediatric (e.g., Broselow system) code carts, and the information provided corresponds to the dosage forms and concentrations of drugs available in the code carts.					
FAQ 34	High-alert drugs used within the organization have been identified, high-leverage error-reduction strategies have been established for these drugs, and these have been communicated to all practitioners who prescribe, dispense, and administer the products, and/or monitor their effects.					

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

II. DRUG INFORMATION (continued)

		A	B	C	D	E
35	Current protocols, guidelines, dosing scales, and/or checklists for high-alert drugs (e.g., chemotherapy, anticoagulants, opioids, insulin) are readily accessible to prescribers, pharmacists, and nurses, and used when high-alert drugs are prescribed, dispensed, and administered.					
36	Equianalgesic dosing charts for oral, parenteral, and transdermal (e.g., fentaNYL patches) opioids have been established and are easily accessible to all practitioners when prescribing, dispensing, and administering opioids.					
37	Standards of practice have been established and are followed for the appropriate use of postoperative IV solutions used to hydrate pediatric patients, along with protocols to identify, treat, and monitor pediatric patients with hyponatremia, water intoxication, and/or syndrome of inappropriate antidiuretic hormone secretion (SIADH). *Scoring guideline: Choose NOT APPLICABLE if postoperative care is not provided to pediatric patients.*					
		NOT APPLICABLE				
38	A standardized pre- and post-procedure protocol for patients who require contrast media is used to screen patients for allergies, renal dysfunction, and contraindicated medications (e.g., metFORMIN-containing products, medications that must be avoided for several days before the procedure) *before* and *after* the procedure is performed, and appropriate measures (e.g., hydration with IV saline, postponement of procedure, use of nonionic contrast media, resumption of contraindicated medications after verification of normal renal function after procedure) are taken to reduce the risk of radiocontrast-induced nephrotoxicity or allergic response.					
39	All internally developed drug information tools (e.g., pocket references, drug information cards, standard order sets, protocols or checklists, patient drug education materials, compounding recipes) undergo a formal approval process before use, which includes review by a pharmacist and those who will be using the tool, and an annual evaluation to ensure accuracy.					
40	Minimum and **MAXIMUM DOSE** limits have been established for parenteral medications titrated to effect (e.g., insulin infusions, DOPamine, DOBUTamine), which when approached (fall below minimum doses or exceed **MAXIMUM DOSES**), require notification of the prescriber for further instructions.					
41	Information technology systems used in the hospital (e.g., pharmacy computer system, computerized prescriber order entry [CPOE] system, **SMART PUMP TECHNOLOGY**, automated compounding devices) are routinely tested to assure that **MAXIMUM DOSE** alerts are present for high-alert drugs, and alerts are built for those that are not present.					

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

II. DRUG INFORMATION (continued)

		A	B	C	D	E
42	**COMPUTER ORDER ENTRY SYSTEMS** perform dose range checks and warn practitioners about overdoses and underdoses for all high-alert drugs and for most other medications.					
43	**COMPUTER ORDER ENTRY SYSTEMS** require practitioners to enter an explanation upon overriding a serious alert (e.g., exceeding a **MAXIMUM DOSE** for a high-alert drug, a serious drug interaction, an allergy).					
44	A designated pharmacist routinely reviews, for quality improvement purposes, reports of selected **COMPUTER ORDER ENTRY SYSTEM** warnings (e.g., **MAXIMUM DOSE** alerts, serious drug interactions, allergy alerts) that are overridden.					
45	**COMPUTER ORDER ENTRY SYSTEMS** are periodically evaluated for clinically insignificant and false positive alerts, and action is taken to minimize alert fatigue.					
46	Drug information updates for information technology systems used in the hospital (e.g., pharmacy computer system, CPOE) are received from a database vendor and uploaded at least quarterly. *Scoring guideline: Do not choose level D or E if updates are received or uploaded less frequently than quarterly.*					
FAQ 47	Except in emergent lifesaving situations, all *inpatient* (including the post-anesthesia care unit [PACU]) drug orders are entered into a **COMPUTER ORDER ENTRY SYSTEM** and screened *electronically* against the patient's current clinical profile for allergies, contraindications, interactions, and appropriateness of doses before drugs are administered.					
FAQ 48	Except in emergent lifesaving situations, all *outpatient* (e.g., ED, ambulatory surgery, outpatient oncology) drug orders are entered into a **COMPUTER ORDER ENTRY SYSTEM** and screened *electronically* against the patient's current clinical profile for allergies, contraindications, interactions, and appropriateness of doses before drugs are administered.					
49	Pharmacists regularly (e.g., at least one 8-hour shift per 24 hours) work directly in *inpatient* care units performing clinical activities such as reviewing patient records and drug orders, attending interdisciplinary rounds, providing input into the selection and administration of drugs, educating patients, and monitoring the effects of medications on patients.					
50	Pharmacists regularly (e.g., at least one 8-hour shift per 24 hours of operation) work directly in *outpatient* care units (e.g., ED, ambulatory surgery, clinics) performing clinical activities such as reviewing patient records and drug orders, attending interdisciplinary rounds, providing input into the selection and administration of drugs, educating patients, and monitoring the effects of medications on patients.					

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

II. DRUG INFORMATION (continued)

Core Characteristic #3

A controlled drug formulary system is established to limit choice to essential drugs, minimize the number of drugs with which practitioners must be familiar, and provide adequate time for designing safe processes for the use of new drugs added to the formulary.

		A	B	C	D	E
51	The hospital formulary contains minimal duplication of therapeutically equivalent products.					
FAQ 52	Before a decision is made to add a drug to the formulary, the potential for error with that drug is investigated by searching the literature and performing an internal risk assessment that includes staff who are involved in the prescribing, storage, preparation, dispensing, and administration of the medication; and the results of this assessment are documented in the drug monograph submitted to the **PHARMACY AND THERAPEUTICS COMMITTEE** (or a similar voting body).					
FAQ 53	The hospital's ability to adequately monitor and manage the anticipated adverse effects of a medication is investigated and considered by the **PHARMACY AND THERAPEUTICS COMMITTEE** (or other interdisciplinary team), and addressed before adding the medication to the formulary.					
54	When drugs with heightened error potential are approved for addition to the formulary, safety enhancements such as standardized order sets, prescribing guidelines, check systems, reminders, administration guidelines, monitoring protocols, and/or limitations on use, administration, and storage of drugs are established and implemented before initial use.					
55	Ongoing hospital-wide surveillance for at least 6 months is initiated immediately after adding a drug to the formulary that has been identified as having heightened error potential to monitor compliance and success with established safeguards.					
56	**COMPUTER ORDER ENTRY SYSTEMS** are tested after adding a new drug to the formulary to verify that important clinical warnings (e.g., serious drug interactions, allergies, cross allergy alerts, **MAXIMUM DOSE** limits) are functional; and if a serious alert is not yet functional through the drug information system vendor, a temporary free text alert or similar mechanism is added so that it appears on the screen during order entry.					
57	A designated practitioner or team is assigned responsibility to search the literature to identify published reports of errors (including **CLOSE CALLS**) and adverse drug events (including adverse drug reactions), that may have been reported since formulary approval, and safety enhancements are established as necessary or the drug is removed from the formulary.					

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

II. DRUG INFORMATION (continued)

		A	B	C	D	E
FAQ 58	In non-urgent situations, formulary medications being considered for uncommon uses or in atypical doses are approved through a formal review process (e.g., **PHARMACY AND THERAPEUTICS COMMITTEE**) before prescribers order the drug.					
FAQ 59	In urgent situations, a timely informal process is in place for specified practitioner(s) to review formulary medications being considered for uncommon uses or in atypical doses before pharmacists dispense and/or nurses administer the drug.					
60	Non-formulary products are used only when therapeutically necessary and appropriate (e.g., a patient experiences an adverse effect to a formulary medication; use of an alternative, non-formulary medication during a drug shortage).					

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

III. COMMUNICATION OF DRUG ORDERS AND OTHER DRUG INFORMATION

Core Characteristic #4

Methods of communicating drug orders and other drug information are streamlined, standardized, and automated to minimize the risk for error.

		A	B	C	D	E
61	Prescribers enter medication orders into a computer system that is electronically **INTERFACED** with the pharmacy computer system. *Scoring guideline: Do not choose level D or E if prescribers enter orders into a computer system that is not electronically **INTERFACED** with the pharmacy computer system.*					
62a	**In hospitals WITH CPOE systems:** The system includes decision support and standardized order sets that guide the use of formulary drugs and established protocols.					
OR	**OR**					
62b	**In hospitals WITHOUT CPOE systems:** Preprinted order forms for commonly encountered disease states and procedures (e.g., preoperative and postoperative patients, inpatient critical care admissions, chemotherapy protocols) are used to guide the use of formulary drugs and established protocols.					
63	Standard order sets (electronic or preprinted) express IV and epidural infusion/medication doses in the standard concentration(s) used in the organization and in a manner (e.g., mg/kg, mcg/kg/min) and sequence that matches the entries on MARs and programming choices on infusion pumps (e.g., **SMART INFUSION PUMPS**, PCA pumps).					
64	Standard order sets (electronic or preprinted) for complex, compounded products (e.g., total parenteral nutrition [TPN]) list additives in the same sequence, dosing units (e.g., mg, mEq), and concentrations (e.g., mg/mL, mg/liter) as in the pharmacy order entry system and automated compounder order entry system.					
65	A list of prohibited, **ERROR-PRONE ABBREVIATIONS** (e.g., u, qd, MSO4) and unacceptable methods of expressing doses (e.g., by volume or number of tablets only instead of weight, using trailing zeros for whole number doses, not using a leading zero for doses less than one) is established for all communication of drug information and orders (including in handwritten or preprinted orders, MARs, chart notations, organization-developed drug references, and in electronic formats, including computer screens).					
66	Compliance with safe methods of communicating the drug name, dose, route, and frequency (e.g., on handwritten and preprinted orders, MARs, order entry screens, ADCs, computer-generated drug labels, drug storage bin labels) is monitored through quality improvement efforts.					

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

III. COMMUNICATION OF DRUG ORDERS AND OTHER DRUG INFORMATION (continued)

		A	B	C	D	E
67	Upon admission to the hospital or transfer to a different level of care within the hospital, complete orders for all drug therapy are provided. Orders to "resume the same medications" or to "take medications from home" are not accepted.					
68	Verbal (face-to-face) orders from prescribers who are onsite in the hospital are never accepted, except in emergencies or during sterile procedures where ungloving would be impractical.					
69	Verbal or telephone orders are never accepted for oral or parenteral chemotherapy, including chemotherapeutic agents used for non-oncologic indications (e.g., methotrexate used to treat rheumatoid arthritis). (Faxed and emailed orders are considered written orders. A verbal or telephone order to hold or discontinue chemotherapy is acceptable.) *Scoring guideline: Choose NOT APPLICABLE if chemotherapy (including oral agents) is never prescribed.*					
		NOT APPLICABLE				
70	When verbal or telephone orders must be taken, the practitioner receiving the order immediately transcribes the order and then reads it back to the prescriber for verification of telephone orders, or at a minimum, repeats it back for verification of verbal orders received during emergencies (e.g., codes) or during sterile procedures.					
71a	Electronic MARs that share a common database with the pharmacy system are used to guide and document medication administration.					
OR	**OR**					
71b	Computer-generated MARs that share a common database with the pharmacy system are used to guide and document medication administration.					
OR	**OR**					
71c	Handwritten MARs are used to guide and document medication administration.					
72	Current paper or electronic MARs or the original order are available during medication selection/preparation and at (or taken to) the patient's bedside (or anteroom for isolation patients) for reference during drug administration. Exception: Emergency lifesaving medication preparation and administration.					
73	Practitioners and other healthcare staff have a hospital-defined, clear and effective process to follow to resolve conflicts surrounding the safety of an order.					

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

III. COMMUNICATION OF DRUG ORDERS AND OTHER DRUG INFORMATION (continued)

		A	B	C	D	E
74	Upon inpatient admission to the hospital, all medications administered in the ED or in other outpatient settings (e.g., cardiac catheterization areas, radiology) are immediately communicated to the pharmacy and entered (or already available) in the pharmacy computer system in a manner that facilitates an automated alert for duplicate therapy or a drug interaction when medications prescribed upon admission are profiled.					
75	Prescribers have easy access to an electronic or computer-generated medication profile for each patient (which lists all current and recently discontinued medications), and they review this profile on a daily basis to verify the patient's drug therapy and as a reference when planning and prescribing the patient's discharge medications.					
76	Pharmacy interventions in response to a potentially harmful medication order are immediately communicated to the nurses who provide care to the patient to halt the potential administration of the medication from unit stock while awaiting clarification of the order.					
77	Practitioners utilize a formal standardized process (e.g., SBAR [situation, background, assessment, recommendation]) when reporting clinical information about a patient's condition to other practitioners during handoffs, patient transfers, critical conversations, and telephone calls.					

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

IV. DRUG LABELING, PACKAGING, AND NOMENCLATURE

Core Characteristic #5

Strategies are undertaken to minimize the possibility of errors with drug products that have similar or confusing manufacturer labeling/packaging and/or drug names that look and/or sound alike.

		A	B	C	D	E
78	The *ISMP Medication Safety Alert!*® and/or other current literature is regularly reviewed to identify drug labeling, packaging, and nomenclature problems, and action is taken to prevent errors with these drugs.					
79	The package and label of new drugs that are being considered for formulary addition or temporary use during a drug shortage are examined before use and compared to other formulary products to identify any potential for confusion.					
80	Products with look-alike drug names and packaging that are known by the hospital staff to be problematic are segregated and not stored alphabetically, and a system clearly redirects staff to where the products have been relocated.					
81	Look-alike drug names do not appear on the same computer screen when selecting a drug during order entry (even when **MNEMONICS** are used); or look-alike drug names are clearly distinguished in a way that differentiates them (e.g., use of **TALL MAN LETTERS**) if they appear sequentially on the same computer screen.					
82	Different manufacturers are sought for products with labels/packages that look like other products to help differentiate the labels/packages.					
83	Auxiliary warnings or other label enhancements (e.g., **TALL MAN LETTERS** to accentuate differences in look-alike drug name pairs) are used on packages and storage bins of drugs with problematic names, packages, and labels.					
84	Alerts are built into **COMPUTER ORDER ENTRY SYSTEMS** to remind practitioners about problematic drug names (including drugs with multiple suffixes such as XL, SR, ER, CD, LA), packaging, or labeling.					
85	All clinical staff involved in medication use, particularly frontline nurses, pharmacists, physicians, unit secretaries, and pharmacy technicians, are made aware of the organization's list of look- and/or sound-alike products, how the drug names were selected, how the list is updated, what it means, why it is important to patient safety, and the interventions required to reduce mix-ups.					
86	Prescribers include the clinical indication for all ambulatory prescriptions and inpatient drug orders to help distinguish those with look-alike names.					

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

IV. DRUG LABELING, PACKAGING, AND NOMENCLATURE (continued)

Core Characteristic #6

Readable labels that clearly identify drugs are on all drug containers, and drugs remain labeled up to the point of actual drug administration.

		A	B	C	D	E
87	All computer systems that print medication labels produce clear and distinctive labels free of **ERROR-PRONE ABBREVIATIONS** and nonessential information (e.g., computer **MNEMONICS** and other pharmacy codes).					
88	At a minimum, all medication containers (e.g., bowls, oral syringes, syringes of line flushes, vials and ampuls used to prepare medications on patient care units) taken to the bedside or interventional areas are labeled with at least the drug name and strength/concentration.					
89	There is a standard process to identify which compounded IV solutions (e.g., chemotherapy, pediatric infusions) with overfill must include the amount of overfill in the total volume expressed on the pharmacy label. *Scoring guideline: Choose NOT APPLICABLE if no compounded products contain overfill.*					**NOT APPLICABLE**
90	**UNIT DOSES** or **PATIENT-SPECIFIC DOSES** of oral medications remain in the manufacturer's (or pharmacy's) packaging up to the point of actual drug administration at the bedside (or anteroom for isolation patients) so a final check of the drug against the MAR can be accomplished. Exception: Medications that need to be crushed may be removed from the original packaging; however, this packaging should remain with the crushed product up until the point of administration.					
91	All medications, medication containers (including syringes, basins, or other vessels used to store drugs), and other solutions on and off the sterile field in perioperative and other procedural settings are labeled even when just one product/solution is present.					
92	Medications brought into the health facility by a patient or family member are not administered to the patient until an authorized prescriber has approved their use and a pharmacist (or other qualified practitioner when a pharmacist is unavailable) has visually inspected the medications and containers to verify the drugs' identity and proper labeling and packaging to guide safe drug administration.					
93	Syringes of medications prepared for use during anesthesia are labeled with the drug name, strength/concentration, and date of expiration or time of expiration if expiration occurs in less than 24 hours.					

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

IV. DRUG LABELING, PACKAGING, AND NOMENCLATURE (continued)

		A	B	C	D	E
94	Doses that require less than a full tablet (e.g., ½ or ¼ tablet, 1 ½ tablets) are repackaged by the pharmacy into **UNIT-DOSE** packages.					
95	The drug name (e.g., generic and/or brand name) on the labels of **PATIENT-SPECIFIC MEDICATIONS** or **UNIT DOSES** dispensed from the pharmacy can be matched with the corresponding drug name on the MAR, even when therapeutic substitutions are dispensed (e.g., the MAR and label reflect the therapeutic substitution; or the label on the therapeutic substitution lists the product for which it is being substituted).					

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

V. DRUG STANDARDIZATION, STORAGE, AND DISTRIBUTION

Core Characteristic #7

IV solutions, drug concentrations, doses, and administration times are standardized whenever possible.

		A	B	C	D	E
96	Concentrations for infusions of high-alert drugs such as morphine, heparin, insulin, and vasopressors used for adult patients are standardized to a single concentration that is used in at least 90% of the cases.					
97	Concentrations for infusions of high-alert drugs such as morphine, heparin, insulin, and vasopressors used for pediatric patients (including neonates) are standardized to a single concentration that is used in at least 90% of the cases. *Scoring guideline: Choose A or B if you use the **RULE OF 6** to prepare and administer pediatric solutions that contain high-alert drugs, since varying concentrations result when using this method. Choose NOT APPLICABLE if you do not treat any pediatric patients (including in the ED).*					
				NOT APPLICABLE		
FAQ 98	When more than one standardized concentration is needed for high-alert infusions (for adults or pediatrics), the organization uses consistent terminology (e.g., double strength, quadruple strength) and visual cues to identify and distinguish between the concentrations when communicating drug information (including labels, handwritten or preprinted orders, MARs, chart notations, and electronic formats, including computer screens).					
99	Commercially prepared, premixed IV solutions are used whenever they are available from the manufacturer.					
100	Standard times for scheduled drug administration have been established and are consistently used throughout the organization.					
101	Parameters (e.g., dosing windows) have been established, disseminated, and implemented to help nurses safely administer most medications at established standard times even if the initial dose was administered at a nonstandard time.					
102	Standard order sets (electronic or preprinted) are developed by gaining consensus among all prescribers who treat each condition/targeted patient population regarding the evidence-based clinical management to create a single order set for each condition/targeted patient population. (Practitioner-specific or single-group-specific order sets are allowed if only one practitioner/group provides care to patients with the specified condition.)					

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

V. DRUG STANDARDIZATION, STORAGE, AND DISTRIBUTION (continued)

Core Characteristic #8

Medications are provided to patient care units in a safe and secure manner and available for administration within a time frame that meets essential patient needs.

		A	B	C	D	E
103	Sufficient numbers of ADCs, depending on their intended use (e.g., limited narcotic and unit stock versus total drug distribution), are installed in areas that are easily accessible to staff and in close proximity to patients to ensure access without unreasonable wait times and to reduce workarounds. *Scoring guideline: Choose NOT APPLICABLE if your organization does not use ADCs.*					
				NOT APPLICABLE		
104	Nurses are notified whenever first dose or stat medications are delivered to the unit when they are not otherwise available on the unit (e.g., in an ADC).					
105	Discontinued **PATIENT-SPECIFIC MEDICATIONS** are appropriately secured and removed from patient supplies in a timely manner (e.g., upon the patient's discharge, discontinuation of the drug, or within 8 hours during the next scheduled pharmacy rounds to patient care units) to prevent accidental administration or borrowing of the medication for another patient.					
106	Turnaround times for order verification and/or drug delivery from the pharmacy are consistent with the time frames established by the hospital for emergent (stat), urgent (now), and routine medications.					
107	Antidotes and reversal agents for medications (e.g., methylene blue [methemoglobinemia from oral anesthetic sprays], naloxone [opioid toxicity], flumazenil [benzodiazepine toxicity], lipid emulsion [bupivacaine toxicity]) and accompanying guidelines for emergency use, are readily available near the point of use.					
108	A process has been established and is followed to: identify potential drug shortages; alert practitioners to the shortages; ration drugs in short supply for use with priority patients; select and use alternative products and doses; and educate practitioners about the safe use of alternative products (including warnings about **POTENTIAL ADVERSE EVENTS**).					
109	Electronic systems that document temperature ranges and provide immediate problem notification to an area staffed around the clock are used for refrigerators that store critical, temperature-sensitive medications (e.g., frozen vaccines, investigational drugs), and written procedures regarding how to handle any breach of a safe temperature range have been developed and are followed.					

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

V. DRUG STANDARDIZATION, STORAGE, AND DISTRIBUTION (continued)

Core Characteristic #9

Unit stock is restricted.

		A	B	C	D	E
110	**PATIENT-SPECIFIC DOSES** are dispensed for at least 90% of all injectable products (including saline and heparin flushes) for adult, pediatric, and neonatal patients.					
111	All oral solid medications are dispensed to patient care units in labeled, ready-to-use **UNIT DOSES**.					
112	All oral liquid medications are dispensed to patient care units (including neonatal, pediatric, and critical care units) in labeled, ready-to-use **PATIENT-SPECIFIC DOSES**.					
113	IV solutions that are unavailable commercially are prepared in the pharmacy unless needed in emergent lifesaving situations.					
114	Pharmacy fills all elastomeric pumps and prepares all IV solutions and irrigations needed in the operating room or procedural areas (including interventional radiology, cardiac catheterization areas), unless needed in emergent lifesaving situations.					
115	Drugs stocked in patient care units (including in ADCs) are carefully selected by considering the needs of each patient care unit, staff expertise and familiarity with specific drugs, the risk of error with each drug, and the age and diagnoses of typical patients being treated on the units, and unit stock is reviewed at least semiannually to determine low usage medications that may be eligible for removal from inventory.					
116	Drugs stocked in patient care units are available in the least number of doses, concentrations, and forms that will meet essential patient needs between replenishment (not to exceed 72 hours).					
117	Medications are not removed from inpatient (including PACU) unit stock (including ADCs) before a pharmacist reviews the specific patient order and screens the order for safety. Exception: Urgent or lifesaving situations where a delay would harm the patient.					
118	Medications are not removed from outpatient (including the ED, ambulatory surgery, outpatient oncology) unit stock (including ADCs) before a pharmacist reviews the specific patient order and screens the order for safety. Exception: Urgent or lifesaving situations where a delay would harm the patient.					

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

V. DRUG STANDARDIZATION, STORAGE, AND DISTRIBUTION (continued)

		A	B	C	D	E
119	If ADCs are used, override reports are routinely reviewed for those cabinets that are profiled, and a process (e.g., adjust stock, educate staff) is in place to decrease the frequency of inappropriate overrides. *Scoring guideline: Choose NOT APPLICABLE if your organization does not use any ADCs or any profiled ADCs.*					
		NOT APPLICABLE				
120	Pharmaceutical vendors and prescribers are prohibited from distributing drug samples in inpatient and outpatient areas, including EDs, ambulatory surgery/procedure units, and radiology.					
121	Neuromuscular blocking agents are only available in rapid sequence intubation (RSI) kits, operating rooms/PACU/anesthesia stock, or critical care units, and these drugs are sequestered from other unit stock medications (including those stocked in ADCs) with additional safeguards (e.g., auxiliary warnings, locked containers with lids, locked-lidded drawers in ADCs).					
122a	At least one pharmacist is physically present onsite 24 hours a day, 7 days a week.					
OR	**OR**					
122b	A pharmacist at a remote location is available for questions and to enter and screen medication orders before the drugs are removed from a night cabinet with a restricted formulary or dispensed from a remote location, and non-pharmacy personnel are prohibited from entering the pharmacy when it is closed. Exception to screening orders before drug administration: Emergent lifesaving situations.					
OR	**OR**					
122c	A night cabinet with a restricted formulary has been established for when the pharmacy is closed, and a pharmacist is on-call for questions and to come into the hospital if needed, and non-pharmacy personnel are prohibited from entering the pharmacy when it is closed.					
123a	Vials of concentrated forms of electrolytes (e.g., potassium chloride, potassium phosphate) that require dilution before IV use are not available as unit stock (including in ADCs) on any patient care units (including in operating room/anesthesia stock).					
OR	**OR**					
123b	Vials of concentrated electrolytes (e.g., 23.4% sodium chloride used to decrease intracranial pressure, potassium chloride used to stop the heart in cardiac surgery) are restricted to approved patient care units, stocked in limited quantities, segregated from other medications in secure storage areas, and accompanied by protocols for use and other safeguards (e.g., warning labels).					

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

V. DRUG STANDARDIZATION, STORAGE, AND DISTRIBUTION (continued)

		A	B	C	D	E
124	All large-volume bags and bottles (manufacturer and pharmacy-prepared) of irrigation solutions, organ storage solution, and sterile water (e.g., for inhalation, irrigation) are packaged, stored, and labeled in a way that clearly differentiates them from solutions that may be administered parenterally.					

Core Characteristic #10

Hazardous chemicals are safely sequestered from patients and not accessible in drug preparation areas.

125	Bulk chemicals in the pharmacy (for compounding) are routinely assessed, and those that are not regularly used or are considered dangerous are eliminated from stock.					
126	Bulk chemicals used in the pharmacy (for compounding) are labeled with contents, the date the product was first opened, and the manufacturer's expiration date. (If an expiration date is unavailable from the manufacturer, a 1-year expiration date is assigned.)					
127	Hazardous chemicals used in the pharmacy are stored on low shelves, rather than high shelves, to prevent accidental spillage on staff during retrieval.					
128	Containers of reagents used to test for fecal blood (e.g., Hemoccult, Seracult) or glucose control solution (reagents used with glucose monitors) are not present in drug storage or preparation areas, patient rooms, or patient bathrooms.					

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

VI. MEDICATION DEVICE ACQUISITION, USE, AND MONITORING

Core Characteristic #11

The potential for **HUMAN ERROR** is mitigated through careful procurement, maintenance, use, and standardization of devices used to prepare and deliver medications.

		A	B	C	D	E
129	At a minimum, risk management staff, pharmacists, and nurses are actively involved in all **MEDICATION DEVICE** purchasing and replacement decisions.					
130	Error potential for all new and replacement **MEDICATION DEVICES** is identified through a literature search and a **FAILURE MODE AND EFFECTS ANALYSIS (FMEA)**; and potentially harmful error potential is documented and addressed before a decision is made to purchase and use the device.					
131	The distal ends of all tubing are clearly labeled on patients who are receiving multiple solutions via various routes of administration (e.g., labeling of the distal end of bladder installations, IV, central venous, arterial, epidural, umbilical, and enteral tubing properly identifies relevant access sites).					
FAQ 132	With each new bag/bottle, or change in the rate of infusion of selected high-alert drugs and selected pediatric/neonatal parenteral solutions, one practitioner readies the solution for administration and a second practitioner and/or electronic technology (e.g., **SMART INFUSION PUMP** with dose checking capabilities, point-of-care bar-coding) independently verifies all of the following before starting the infusion: drug/solution, drug concentration, rate of infusion, patient, channel selection (for multiple channel pumps), and line attachment.					
133	Specially designed oral syringes, which cannot be connected to parenteral tubing, are available in the pharmacy and all patient care units, and are used for dispensing/administering oral/enteral liquid medications that are not available in commercially prepared **UNIT-DOSE** cups.					
134	An initial risk assessment has been performed to determine the various types of medical tubing, catheters, and fittings in use, identify the possibility for misconnections, assess the potential severity of misconnections, and address process changes that need to be made, and this assessment is updated prior to the purchase of any new medical tubing, catheters, and fittings.					
135	The types of syringe pumps used in the hospital are limited to two or less to maximize competency with their use. *Scoring guideline: Choose NOT APPLICABLE if you do not use syringe pumps in your hospital.*					
					NOT APPLICABLE	

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

VI. MEDICATION DEVICE ACQUISITION, USE, AND MONITORING (continued)

		A	B	C	D	E
136	The types of enteral infusion pumps used in the hospital are limited to two or less (adult and pediatric/neonatal pumps) and are different from other infusion devices used in the organization.					
137	Enteral feeding tubes have ports that only connect to oral syringes and catheter tip connectors; they do not have female Luer connectors. Exception: A Luer connector may be used for the inflation balloon that anchors some long-term use feeding devices.					
138	Only one type of epidural infusion pump is used and is different from general infusion devices used in the organization.					
139	The administration set used for epidural infusion pumps does not contain any access ports (Y connectors), can be distinguished from all other administration sets and medical tubing (e.g., a yellow stripe running the length of the tubing), and is not used for anything other than epidural infusions.					
140	Criteria have been established to determine which patient populations, specific medications, and rates of infusion require delivery of solutions via an electronic infusion control device.					
141	IV bolus doses of medications are not administered via a maintenance IV solution. Exception: An IV bolus dose may be delivered via a **SMART INFUSION PUMP** that allows programming of both the bolus dose and continuous infusion rate with separate dose limits for each configured as "hard stops," and then automatically switches to the continuous infusion rate once the bolus dose has been delivered.					
142	Practitioners, including agency staff, are educated about **MEDICATION DEVICES** (e.g., infusion pumps, automated compounding equipment) and associated protocols/guidelines; and competency with their use is verified before they are permitted to operate a device.					
143	General infusion pumps with **SMART PUMP TECHNOLOGY** with full functionality employed to intercept and prevent wrong dose/wrong infusion rate errors due to misprogramming the pump, miscalculation, or an inaccurately prescribed dose or infusion rate are in use in all hospital areas (including the ED, pediatrics, oncology, operating room).					

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

VI. MEDICATION DEVICE ACQUISITION, USE, AND MONITORING (continued)

		A	B	C	D	E
144	PCA and syringe infusion pumps with **SMART PUMP TECHNOLOGY** with full functionality employed to intercept and prevent wrong dose/wrong infusion rate errors due to misprogramming the pump, miscalculation, or an inaccurately prescribed dose or infusion rate are in use in all hospital areas (including the ED, pediatrics, oncology, operating room). *Scoring guideline: Choose NOT APPLICABLE if your organization does not have PCA and syringe infusion pumps.*					
		NOT APPLICABLE				
145	If **SMART PUMP TECHNOLOGY** is used, the percent of infusions with medications that are administered using full functionality of the safety software (i.e., drug library and dose-checking software) is monitored, and the findings are used to increase compliance. *Scoring guideline: Choose NOT APPLICABLE if your organization does not have **SMART PUMP TECHNOLOGY**.*					
		NOT APPLICABLE				
146	If **SMART PUMP TECHNOLOGY** is used, an interdisciplinary team, which includes pharmacists, nurses, and physician representatives, reviews data for soft and hard dose and volume limits that have been bypassed, and the findings are used to take action to reduce the number of bypassed clinically significant warnings or to modify dosing limits when necessary. *Scoring guideline: Choose NOT APPLICABLE if your organization does not have **SMART PUMP TECHNOLOGY**.*					
		NOT APPLICABLE				
147	If **SMART PUMP TECHNOLOGY** is used, an interdisciplinary team, which includes pharmacists, nurses, and physician representatives, develops and tests the drug library, and reviews and updates the library at least quarterly. *Scoring guideline: Choose NOT APPLICABLE if your organization does not have **SMART PUMP TECHNOLOGY**.*					
		NOT APPLICABLE				
148	If **SMART PUMP TECHNOLOGY** is used, the drug library is updated via wireless technology. *Scoring guideline: Choose NOT APPLICABLE if your organization does not have **SMART PUMP TECHNOLOGY**.*					
		NOT APPLICABLE				

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

VII. ENVIRONMENTAL FACTORS, WORKFLOW, AND STAFFING PATTERNS

Core Characteristic #12

Medications are prescribed, transcribed, prepared, dispensed, and administered within an efficient and safe workflow and in a physical environment that offers adequate space and lighting, and allows practitioners to remain focused on medication use without distractions.

		A	B	C	D	E
149	Lighting is adequate (illumination levels around 100 foot-candles) to clearly read labels and other important drug and patient information in pharmacies, patient unit medication rooms, patient rooms, and at ADCs.					
150	Workspaces where medications are prepared are orderly and free of clutter.					
151	Pharmacies and patient unit medication rooms (or areas) have adequate space for storage of drugs, IV solutions, and drug supplies.					
152	Medication preparation areas in the pharmacy and on patient care units are isolated and relatively free of distractions, interruptions, and noise (not greater than 50 decibels [dBA]).					
153	All phone calls to the pharmacy are triaged and forwarded to medication preparation and order entry areas only when necessary.					
154	Areas where drug orders are transcribed and/or entered into **COMPUTER ORDER ENTRY SYSTEMS** are isolated and relatively free of distractions, interruptions, and noise (not greater than 50 dBA).					
155	Medication refrigerators in patient care areas are of sufficient size to allow admixtures that require refrigeration to be stored in an organized manner.					
156	Nurses select medications for administration in medication rooms, at ADCs, or in other areas that are isolated and relatively free of distractions, interruptions, and noise (not greater than 50 dBA).					
157	Practitioners who administer medications prepare and/or select one patient's medications at a time, immediately before administering the medication.					
158	When new construction or renovation of an existing area where medications will be prescribed, dispensed, stored, or administered is planned, an interdisciplinary group of practicing staff involved in medication use is included in the decision-making process of the design of the area. *Scoring guideline: Choose NOT APPLICABLE if your organization has not built new space or renovated within the past 3 years.*					
						NOT APPLICABLE

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

VII. ENVIRONMENTAL FACTORS, WORKFLOW, AND STAFFING PATTERNS (continued)

Core Characteristic #13

The complement of qualified, well-rested practitioners matches the clinical workload without compromising patient safety.

		A	B	C	D	E
159	Medical students, medical residents, attending physicians, and other **LICENSED INDEPENDENT PRACTITIONERS** work no more than 24 consecutive hours, with planned protected sleep periods and naptime available. Exception: Isolated emergency situations outside of usual operations. *Scoring guideline: Choose NOT APPLICABLE if your hospital does not have medical students, medical residents, or employed prescribers.*					
		NOT APPLICABLE				
160	Practitioners involved in medication use (except medical students, medical residents, attending physicians, and other **LICENSED INDEPENDENT PRACTITIONERS**) work no more than 12 consecutive hours. Exception: Isolated emergency situations outside of usual operations.					
161	Practitioners involved in the medication process have at least 10 hours of rest between shifts worked. Exception: Isolated emergency situations outside of usual operations.					
162	Schedules and workload permit practitioners involved in the medication process to take at least one 15-minute break and one 30-minute break (for a meal) per 8 hours of work each day. Exception: Isolated emergency situations outside of usual operations.					
163	An effective back-up plan has been established for days when staffing is short due to illness, vacation, educational absences, and fluctuations in patient acuity and workload.					
FAQ 164	Pharmacists and pharmacy technicians believe that staffing patterns in their department are adequate to provide safe pharmaceutical care on most days.					
FAQ 165	Nurses believe that staffing patterns on their units are adequate to provide safe patient care on most days.					
166	The pharmacy department has an adequate complement of trained and dedicated personnel to meet the medication-related technology requirements (e.g., CPOE, ADCs, **SMART INFUSION PUMPS**, robotics, automated compounders, point-of-care bar-coding technology) of the department and organization.					

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

VII. ENVIRONMENTAL FACTORS, WORKFLOW, AND STAFFING PATTERNS (continued)

		A	B	C	D	E
167	The organization has an adequate complement of well-qualified and trained pharmacists to work in specialty areas or provide services to specialty populations (e.g., critical care, pediatric, neonatal, and oncology patients) that represent a substantial portion of the organization's patient population.					
168	The organization has an adequate complement of well-qualified and trained nurses to provide care to specialty populations (e.g., critical care, pediatric, neonatal, and oncology patients) that represent a substantial portion of the organization's patient population.					
169	Hospital or health-system plans for new and/or expanded clinical programs are well communicated to all affected practitioners, and appropriate consideration of resources is addressed prior to implementation so that the additional work volume will be met without compromising patient safety.					

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

VIII. STAFF COMPETENCY AND EDUCATION

Core Characteristic #14

Practitioners receive sufficient orientation to medication use and undergo baseline and annual competency evaluation of knowledge and skills related to safe medication practices.

		A	B	C	D	E
170	A defined time period for orientation and training of agency staff is required before they can work independently.					
171	All new staff participating in the medication use process, including agency staff, undergo baseline competency evaluation before working independently.					
172	During orientation and on a routine basis, staff participating in the medication use process, receive information about the hospital's actual error experiences as well as published errors that have occurred in other facilities; and they are educated about system-based strategies to reduce the risk of such errors.					
173	During orientation, nurses spend time in the pharmacy (and with clinical pharmacists) to become familiar with the order entry and/or verification process, drug preparation and dispensing, availability of drug information resources, ways to access these resources, and various medication safety initiatives.					
174	During orientation, pharmacists spend time in patient care units to become familiar with drug prescribing practices, unit stock storage conditions, medication administration procedures, and patient education processes.					
175	Pharmacists actively participate in the orientation process for new medical staff (including medical students, medical residents, and attending physicians).					
176	All prescribers, pharmacists, and nurses who work in specialty areas (e.g., critical care, pediatrics, oncology) undergo extensive training and/or obtain certification if available in that specialty before working independently.					
177	Nurses and pharmacists are not pulled from their typically assigned work areas to help in other areas without thorough orientation and ongoing training to maintain their skills and knowledge. Exception: Isolated emergency situations outside of usual operations.					

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

VIII. STAFF COMPETENCY AND EDUCATION (continued)

		A	B	C	D	E
178	The hospital only allows practitioners who are trained in the use of drugs causing **DEEP SEDATION**, qualified to rescue patients from general anesthesia or severe respiratory depression, and not simultaneously involved in a procedure, to administer medications which could lead to **DEEP SEDATION** (e.g., propofol, ketamine, etomidate) of non-ventilated patients. (Advanced cardiac life support [ACLS] certification alone is not sufficient.)					
179	A qualified nurse or **LICENSED INDEPENDENT PRACTITIONER** accompanies patients to radiology or other diagnostic departments if they have a hospital-defined high-alert medication infusing intravenously or by the epidural route of administration, and a defined handoff process, including verbal communication and verification of the infusing high-alert medication, occurs between the accompanying practitioner and the qualified receiving staff member.					
180	Those who train new staff have a reduced workload to accomplish the goals of orientation safely and thoroughly.					
181	The length of time for orientating new nurses and pharmacists is individualized and based on an ongoing assessment of their needs.					
182	The hospital information technology department/staff includes personnel with specialty training in clinical informatics (not just general computing support for hardware and software) who are knowledgeable about applications in medication systems, and who are readily available for assistance in the development, application, and troubleshooting of these systems.					
183	The organization provides formal teamwork training (e.g., TeamSTEPPS) to all staff that incorporates elements of information sharing, conflict resolution, communication and teamwork skills, and clarification of team roles and responsibilities.					

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

VIII. STAFF COMPETENCY AND EDUCATION
(continued)

Core Characteristic #15

Practitioners involved in medication use are provided with ongoing education about medication error prevention and the safe use of drugs that have the greatest potential to cause harm if misused.

		A	B	C	D	E
184	Practitioners are educated about new drugs added to the formulary and associated protocols/guidelines and restrictions before the drugs are used in the hospital.					
185	Pharmacists routinely provide nurses and other practitioners who administer medications with important information about non-formulary drugs before dispensing the products to patient care areas for administration.					
186	Practitioners receive ongoing information about medication errors occurring within the organization, error-prone conditions, errors occurring in other healthcare facilities, and strategies to prevent such errors.					
187	Facilities that serve as clinical sites for medical, pharmacy, nursing, and other professional students, meet with students prior to each rotation and/or supervising faculty at the beginning of each rotation period to review key medication-related procedures, specific error-prone conditions that may exist during the rotation, and the organization's list of high-alert medications and associated error-reduction strategies. *Scoring guideline: Choose NOT APPLICABLE, if your organization does not serve as a clinical site for healthcare professional students.*					
				NOT APPLICABLE		
188	Practitioners are provided with the necessary support and time to attend internal and external education programs related to medication use.					
189	Practitioners are trained in the clinical and administrative procedures for responding to a serious medication error.					
190	When errors occur, educational efforts are widespread among all practitioners who could make a similar error, rather than remedial and directed at only those practitioners who were involved in an error.					
191	Pharmacists provide at least four educational programs per year to nurses, pharmacists, and prescribers on important drug *safety* issues.					
192	Simulations of error-prone conditions (e.g., problematic medication packages and labels, mock transcription/order entry of problematic orders) and/or role-playing (e.g., to teach effective communication skills, inquiry skills, conflict resolution) are used as methodologies to orient and educate practitioners and other staff about medication/patient safety.					

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

VIII. STAFF COMPETENCY AND EDUCATION (continued)

		A	B	C	D	E
193	**HUMAN FACTORS** and the principles of error reduction (e.g., standardization, use of constraints, redundancy for critical functions) are introduced during practitioner orientation, and used as the foundation for an annual mandatory educational program for all practitioners involved in the medication use process.					
194	Senior leaders, management, and frontline staff receive formal training in identifying risk within the system and incorporating high-leverage error-reduction strategies to help eliminate the risk.					

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

IX. PATIENT EDUCATION

Core Characteristic #16

Patients are included as active partners in their care through education about their medications and ways to avert errors.

		A	B	C	D	E
195	Patients are educated routinely upon admission to assist healthcare professionals with proper identification by showing staff their identification bracelet (or other form of identification) and stating their names clearly before medications (and other treatments) are administered.					
196	Physicians and other prescribers routinely educate patients about recommended drug therapy before the patient receives an initial dose.					
197	During each drug administration, nurses routinely provide patients and/or families with the name of the drug, the general purpose of the drug, and the prescribed dose, and during initial drug administration, nurses also provide information on important side effects.					
198	Patients are provided with up-to-date, written information at an 8th grade reading level (or lower) in their primary language about drugs that are prescribed at discharge, or a trained translator or language line is utilized to provide important oral and/or written information about drugs that are prescribed at discharge.					
199	Patients are encouraged to ask questions about the medications they are receiving.					
200	In hospitals with a rapid-response team (RRT), patients/family members are encouraged to summon the team to the bedside for a full evaluation when they fear that something is seriously wrong with the patient and have expressed their concerns without an adequate response. *Scoring guideline: Choose NOT APPLICABLE if your hospital does not have a RRT.*					
		NOT APPLICABLE				
201	Practitioners fully investigate and resolve all patient/family concerns or questions about a medication prior to prescribing, dispensing, and/or administering it.					
202	Criteria have been established (e.g., selected high-alert drugs, high-risk patient populations) to trigger an automatic consultation with a pharmacist for patient education.					
203	Pharmacists or prescribers design drug administration schedules that consider the patient's lifestyle and minimize the number of times per day that medications must be taken for patients at high-risk for non-adherence with medications prescribed at discharge.					

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

IX. PATIENT EDUCATION (continued)

		A	B	C	D	E
204	Patients are informed about the potential for error with drugs that have been known to be problematic (e.g., methotrexate prescribed weekly for arthritis, frequently changing warfarin doses) and are provided with strategies to help prevent such an occurrence after discharge.					
205	Patients are instructed on when and whom to call for concerns or questions about their drug therapy after discharge.					
206	Patients are educated about the importance of keeping an up-to-date list of all medications they take at home, to carry the list with them at all times, and to show the list to healthcare practitioners during each medical encounter.					
207	The organization develops and conducts at least one annual community educational program or other proactive public health effort designed to improve safe use of medications in the community.					

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

X. QUALITY PROCESSES AND RISK MANAGEMENT

Core Characteristic #17

A safety-supportive **JUST CULTURE** and model of shared accountability for safe **SYSTEM DESIGN** and making safe **BEHAVIORAL CHOICES** is in place and supported by management, senior administration, and the Board of Trustees/Directors.

		A	B	C	D	E
208	Hospital leaders and managers have received formal education on establishing and/or maintaining a fair and just safety culture (e.g., **JUST CULTURE**).					
209	No disciplinary action is taken against a practitioner for making a **HUMAN ERROR**.					
210	The organization anticipates **AT-RISK BEHAVIORS** and proactively takes steps to encourage safe **BEHAVIORAL CHOICES** and discourage **AT-RISK BEHAVIORS**.					
211	Hospital leaders and managers **COACH** staff who engage in **AT-RISK BEHAVIORS** involving patient safety to assist them in making safer **BEHAVIORAL CHOICES** in the future.					
212	Organizational actions toward staff involved in **HUMAN ERROR**, **AT-RISK BEHAVIORS**, or **RECKLESS BEHAVIORS** are consistent, irrespective of the severity of harm that occurs (including no harm).					
213	Hospital staff (including administrative staff) job descriptions and performance evaluations, hospital position statements, and medical staff bylaws include specific accountability standards related to patient/medication safety (e.g., accountability for **BEHAVIORAL CHOICES** in response to the risks they see; willingness to speak up about safety issues and ask for help when needed; ability to work well within teams; to follow the safety literature) that do not include the absence of errors or a numeric error threshold; and these standards are supported by the senior leaders and human resources staff.					
214	Error prevention strategies focus on **SYSTEM DESIGN** enhancements that prevent harmful errors and management of safe **BEHAVIORAL CHOICES** of all hospital staff.					
215	Practitioners and other staff report and openly discuss errors without embarrassment or fear of reprisal from the hospital/organization. *Scoring guideline: If possible, choose A through E based on staff surveys as noted in item 220.*					
216	All medication errors, as defined by hospital policy, that reach the patient, regardless of the level of harm that results, are honestly disclosed to patients/families in a timely manner.					

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

X. QUALITY PROCESSES AND RISK MANAGEMENT (continued)

		A	B	C	D	E
217	Error rates are not determined or calculated from practitioner error reports and are not used for internal (unit-to-unit) and/or external (hospital-to-hospital) comparison.					
218	Hospital administration and management provide positive incentives for individuals to report errors.					
219	Units with a high error reporting rate are praised for detecting and reporting errors.					
220	Practitioners are anonymously surveyed at least annually to assess the organization's safety culture.					
221	Practitioners and other staff involved in serious errors that cause patient harm are emotionally supported by leadership and their colleagues and provided with ongoing support through an employee assistance program or other crisis intervention strategies.					
222	There is a visible commitment to patient safety within the organization that is evident in the behaviors of hospital leaders and managers.					
223	Clinical leaders who exhibit patient safety behaviors serve as models throughout the organization at the patient care, department, and administrative levels to encourage peer-to-peer role modeling and mentorship of patient safety behaviors.					
224	The Board of Trustees/Directors actively demonstrates its commitment to patient safety (and safe medication practices) by approving a safety plan, rewarding practitioner error reporting, approving **SYSTEM DESIGN** enhancements, including technology, that are likely to reduce errors, and incorporating patient safety and quality as a routine and significant component of each board meeting.					
225	Specific medication safety objectives (e.g., reduce harm from errors with high-alert drugs; improve medication error detection, reporting, and use of the information) are included in the hospital's strategic plans, directly communicated to all staff, and celebrated (acknowledged in a positive manner) when met.					
226	One or more trained practitioners are employed specifically to enhance detection of medication errors, oversee analysis of their causes, and coordinate an effective error-reduction plan (0.5 or 1 full-time equivalent qualified practitioner is employed for this purpose alone).					
227	Patient safety is articulated in the organization's mission and/or vision statements.					

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

X. QUALITY PROCESSES AND RISK MANAGEMENT (continued)

		A	B	C	D	E
228	Senior leaders (administrative staff, board members when possible) participate in frequent, structured visits (e.g., **WALKROUNDS™**) to patient care units, the pharmacy, and laboratories to talk to frontline staff about safety and quality issues, learn first-hand about day-to-day challenges that staff face when providing care and services, and show their support for staff-reported errors.					
229	Mid-level managers receive formal training on ways to effectively evaluate practitioner competency and performance, supervise and mentor practitioner's clinical skills, **COACH AT-RISK BEHAVIORS**, and handle difficult practitioner behavior without allowing the presence or absence of medical errors to be a factor.					

Core Characteristic #18

Practitioners are stimulated to detect and report adverse events, errors (including **CLOSE CALLS**), hazards, and observed **AT-RISK BEHAVIORS**, and interdisciplinary teams regularly analyze these reports as well as reports of errors that have occurred in other organizations to mitigate future risks.

230	A clear definition and examples of medication errors and hazardous situations that should be reported have been established and disseminated to practitioners.					
231	Practitioners report both hazardous situations that could lead to an error and actual errors, including **CLOSE CALLS**.					
232	Trusted nurse, pharmacist, and physician representatives facilitate periodic, announced, focus groups of frontline practitioners for "off the record" discussions to learn about perceived problems and risks with the medication use system.					
233	The entire medication use process is analyzed at least annually (e.g., using a **PROACTIVE RISK ASSESSMENT** tool such as this self assessment) to identify potential risk factors for medication errors.					
234	A convened interdisciplinary team, which includes at a minimum, risk management/quality improvement professionals, pharmacists, nurses, physicians, clinical information technology staff, and hospital leadership, meets at least monthly to review internal medication error/hazard reports, sentinel events, and other medication safety data, to identify the system-based causes of error, and to facilitate the implementation of **SYSTEM DESIGN** enhancements that make it difficult or impossible for practitioners to err.					

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
D	Fully implemented in some areas
E	Fully implemented throughout

X. QUALITY PROCESSES AND RISK MANAGEMENT (continued)

		A	B	C	D	E
235	Practitioners who have been directly involved in a serious or potentially serious medication error participate in a **ROOT CAUSE ANALYSIS (RCA)** of that error and assist with the development of **SYSTEM DESIGN** enhancements to reduce the potential for future errors.					
236	During event investigation (e.g., RCA), once risks have been identified, the focus of the initial analysis of the event is widened to analyze the same or similar risks throughout the organization and among other care processes, and interventions extend beyond addressing the immediate risks involved in the event.					
237	When an event involves staff who cut corners, breached a policy, and/or did not follow a procedure, the conditions that led to these **AT-RISK BEHAVIORS** are investigated to uncover system-based incentives that encourage the behavior and/or system-based disincentives that discourage safe behaviors.					
238	When an event involves **HUMAN ERROR**, an investigation is undertaken to uncover any preexisting performance shaping factors (e.g., task complexity, workflow, time availability/urgency, experience, training, fatigue, stress) and other environmental conditions, **SYSTEM DESIGN** attributes, **BEHAVIORAL CHOICES**, or equipment design flaws that allowed the error to happen and reach the patient.					
239	Work systems and processes are designed or redesigned to reduce safety risks in response to reported hazards, **CLOSE CALLS**, or errors that reach the patient but do not cause harm, without waiting for a significant event or patient harm.					
240	A convened interdisciplinary team routinely analyzes and uses published error experiences from other organizations to assess the organization's vulnerability to similar errors and proactively target improvements in the medication use process.					
241	In addition to practitioner reporting systems, computer markers or triggers for selected drug orders (such as antidotes) and laboratory tests (such as aPTT greater than 100) are used to enhance detection of **POTENTIAL ADVERSE DRUG EVENTS** (both medication errors and adverse drug reactions).					
242	Drug selection, preparation, and labeling errors identified during routine checking processes are reported and collected for the purpose of identifying **SYSTEM DESIGN** issues and developing error prevention strategies.					

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X. QUALITY PROCESSES AND RISK MANAGEMENT (continued)

		A	B	C	D	E
243	Prescribing errors that are detected by pharmacists and nurses are recorded, analyzed, and used in conjunction with medical staff quality improvement activities for **SYSTEM REDESIGN** (e.g., establishing drug/dosing protocols, standardized ordering, pharmacy dose consultation, prescriber awareness, and education).					
244	Prescribers, pharmacists, and nurses are provided with regular feedback about reported errors, hazardous situations, and error-reduction strategies that are being implemented.					
245	A convened interdisciplinary team routinely evaluates the literature for new technologies and successful evidence-based practices that have been effective in reducing error in other organizations to determine if the new technology and/or practice should be implemented in their organization.					
246	Patient representatives from the community are invited to participate in patient safety committees or informal ad-hoc meetings to solicit regular input on medication safety issues and expand the community's awareness of the culture of safety in the organization.					
FAQ 247	An effective means of measuring medication safety (e.g., random chart review using triggers, tracking risk priority numbers from **FMEAs**, observational methods of error detection, measuring compliance with new medication protocols, drug use evaluations), which does not rely on practitioner-reported data, has been designed and implemented to uncover system-based problems and to demonstrate sustained improvement after implementation of risk reduction strategies.					
248	Hospital leadership actively engages in dialogue about the untoward consequences of intimidation and deals effectively with reported and observed disruptive behaviors of this nature to lessen the hierarchal structures that make it difficult or uncomfortable for people to raise concerns regardless of education, experience, or rank.					

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X. QUALITY PROCESSES AND RISK MANAGEMENT (continued)

Core Characteristic #19

Redundancies that support a system of **INDEPENDENT DOUBLE CHECKS** or an automated verification process are used for vulnerable parts of the medication system to detect and correct serious errors before they reach patients.

		A	B	C	D	E
249	Prescribers' orders include the mg/kg (or other appropriate unit of measure, such as mcg/kg) dose for pediatric patients, as defined by the hospital (e.g., pediatric patients less than 40 kg), along with the **PATIENT-SPECIFIC DOSE** for drugs that have a published pediatric mg/kg (or other appropriate unit of measure) dosing guideline. *Scoring guideline: Choose NOT APPLICABLE if care is not provided to pediatric patients, including in the ED.*					
				NOT APPLICABLE		
250	Prescribers' orders include the **PATIENT-SPECIFIC DOSE** and the mg/kg, mg/m², units/m², area under the curve, or other dosing method used to calculate the **PATIENT-SPECIFIC DOSE** with all chemotherapy drug orders. *Scoring guideline: Choose NOT APPLICABLE if chemotherapy is never prescribed.*					
				NOT APPLICABLE		
251	If a mg/kg (or other appropriate unit of measure, such as mcg/kg) dose is listed in a drug order for a pediatric patient, a pharmacist verifies that it is correct, and documents (e.g., with initials or electronically) a double check of the prescriber's calculated dose (or it is performed electronically) before preparing and dispensing the drug. *Scoring guideline: Choose NOT APPLICABLE if care is not provided to pediatric patients, including in the ED.*					
				NOT APPLICABLE		
252	A pharmacist verifies that the dosing method used to calculate the **PATIENT-SPECIFIC DOSE** (e.g., mg/m², area under the curve) listed with a chemotherapy order is correct according to the protocol or treatment plan, and then conducts and documents (e.g., with initials or electronically) a double check of the prescriber's calculated dose (or it is performed electronically) before preparing and dispensing the drug. *Scoring guideline: Choose NOT APPLICABLE if chemotherapy is never prescribed.*					
				NOT APPLICABLE		
253	A nurse documents (e.g., with initials or electronically) an **INDEPENDENT DOUBLE CHECK** of the prescriber's calculated dose for pediatric drug orders before administering the drug. *Scoring guideline: Choose NOT APPLICABLE if care is not provided to pediatric patients, including in the ED.*					
				NOT APPLICABLE		
254	A nurse documents (e.g., with initials or electronically) an **INDEPENDENT DOUBLE CHECK** of the prescriber's calculated dose for chemotherapy according to the protocol or treatment plan before administering the drug. *Scoring guideline: Choose NOT APPLICABLE if chemotherapy is never prescribed.*					
				NOT APPLICABLE		

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B	Considered, but not implemented
C	Partially implemented in some or all areas
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X. QUALITY PROCESSES AND RISK MANAGEMENT (continued)

		A	B	C	D	E
255	The base solution and all additives (including the drug, dose, volume drawn into each syringe, diluents, actual drug containers) for pediatric/neonatal parenteral admixtures are **INDEPENDENTLY DOUBLE CHECKED** by a pharmacist or a nurse (even if initially prepared by a pharmacist) and documented (e.g., with initials or electronically) before compounding the admixtures. *Scoring guideline: Choose NOT APPLICABLE if care is not provided to pediatric patients, including in the ED.*					
		NOT APPLICABLE				
256	The base solution and all additives (including the drug, dose, volume drawn into each syringe, diluents, actual drug containers) for chemotherapy admixtures are **INDEPENDENTLY DOUBLE CHECKED** by a pharmacist or a nurse (even if initially prepared by a pharmacist) and documented (e.g., with initials or electronically) before compounding the admixtures. *Scoring guideline: Choose NOT APPLICABLE if chemotherapy is never prescribed.*					
		NOT APPLICABLE				
257	When selected high-alert drugs (as defined by the hospital) are removed from unit stock (including ADCs), both the drug and the dose are **INDEPENDENTLY DOUBLE CHECKED** by another practitioner and documented before administration.					
258a	Some form of end product testing (e.g., refractometer, weighing, lab confirmation) of complex intravenous admixtures (e.g., TPNs, cardioplegic solutions, pediatric electrolyte solutions) is used to check the contents before the pharmacy dispenses the solution.					
OR	**OR**					
258b	All complex solutions are outsourced to a company that provides documentation of end product testing.					
259	Machine-readable coding (e.g., bar-coding) is used to verify drug selection prior to dispensing drugs (includes robotic dispensing).					
260	Machine-readable coding (e.g., bar-coding) is used at the point of care to verify drug selection prior to administering medications.					
261	If bar-coding at the point-of-care is used for drug administration, an interdisciplinary team reviews metrics from the system, including the percent of medications with a readable barcode, scanning compliance rates, and bypassed or acknowledged alerts, and any barriers associated with using the technology are addressed to maximize the safe use of the system. *Scoring guideline: Choose NOT APPLICABLE if your organization does not use bar-coding at the point-of-care for drug administration.*					
		NOT APPLICABLE				

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
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E	Fully implemented throughout

X. QUALITY PROCESSES AND RISK MANAGEMENT (continued)

		A	B	C	D	E
262a	**In hospitals <u>WITH</u> automated compounders:** Machine-readable coding (e.g., bar-coding) is used to verify all base solutions and additives attached to automated IV admixture compounders.					
OR	**OR**					
262b	**In hospitals <u>WITHOUT</u> automated compounders <u>OR WITHOUT</u> machine-readable coding for automated compounders:** At least a pharmacist and one other qualified pharmacy staff member verify and document the base solution and all additives (actual drug and amount drawn into each syringe) used in TPNs and/or cardioplegic solutions before compounding the solution. *Scoring guideline: Choose NOT APPLICABLE if your organization outsources all TPNs and cardioplegic solutions or does not dispense either of these products.*					
		NOT APPLICABLE				
263	The organization has an effective, interdisciplinary rapid-response team (RRT) so that any healthcare worker can summon the team to a patient's bedside for a full evaluation when established RRT activation criteria have been met and/or he or she fears that something is seriously wrong with the patient.					
FAQ 264	Medication orders entered into the pharmacy system are **INDEPENDENTLY DOUBLE CHECKED** for transcription accuracy before the medication is administered. *Scoring guideline: Choose NOT APPLICABLE if no transcription is required because all orders are entered by prescribers into a CPOE system that is fully integrated or **INTERFACED** with the pharmacy system.*					
		NOT APPLICABLE				

A	No activity to implement
B	Considered, but not implemented
C	Partially implemented in some or all areas
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X. QUALITY PROCESSES AND RISK MANAGEMENT (continued)

Core Characteristic #20

Proven infection control practices are followed when storing, preparing, and administering medications.

		A	B	C	D	E
265	Standards in the USP General Chapter <797> Pharmaceutical Compounding—Sterile Preparations (found in the United States Pharmacopeia–National Formulary [USP–NF]) are followed in all areas where IV admixture occurs.					
266	In the pharmacy and throughout the hospital, staff members use appropriate hand hygiene procedures and standardized aseptic technique prior to preparing any injectable product (e.g., IM, IV push, IV admixture).					
267	In patient care areas, multiple-dose vials are not used for saline and heparin flush solutions, or local anesthetics. Exception: Local anesthetics used in the operating room that are restricted to a single patient procedure.					
268	Containers of eye or ear drops are not used for more than one patient.					
269	A single syringe is never used for multiple patients, even if the needle is changed in between patients.					
270	Pen devices that contain multiple doses of medication (e.g., insulin pens) are dispensed for individual patients and are never used as unit stock for multiple patients, even if the needle is changed between patients or the medication is withdrawn from the pen cartridge with a sterile syringe.					

Definitions *(For purposes of the 2011 ISMP Medication Safety Self Assessment® for Hospitals)*

AT-RISK BEHAVIOR
A **BEHAVIORAL CHOICE** that increases risk where risk is not recognized or is mistakenly believed to be justified. Examples of common **AT-RISK BEHAVIORS** include: bypassing a duplicate therapy alert during order entry without due consideration; technology work-arounds; removing more than one patient's medications from an automated dispensing cabinet prior to administration; written orders or documentation that include **ERROR-PRONE ABBREVIATIONS**.

BEHAVIORAL CHOICE
Refers to *intentional* acts that are undertaken by the free exercise of one's judgment. Unlike **HUMAN ERROR**, which is *unintentional* behavior, **BEHAVIORAL CHOICE** represents the purposeful behavior we intentionally employ while engaging in our day-to-day activities.

CLOSE CALL
An error that took place but was captured before reaching the patient. For example, penicillin was ordered for a patient allergic to the drug; however, the pharmacist was alerted to the allergy during computer order entry, the prescriber was called, and the penicillin was not dispensed or administered to the patient. Or the wrong drug was dispensed by pharmacy, and a nurse caught the error before it was administered to the patient.

COACH
A supportive discussion among staff (peer-to-peer or manager-to-workers) intended to: 1) help staff see the risks associated with their **BEHAVIORAL CHOICES** that were not seen or were misread as being insignificant or justifiable, 2) learn the incentives that encourage these **AT-RISK BEHAVIORS**, and 3) help staff make safer **BEHAVIORAL CHOICES** in the future.

COMPUTER ORDER ENTRY SYSTEM
Refers to any computer system into which medical orders are entered, including pharmacy computer systems into which pharmacy staff enter or validate medication orders, as well as computerized prescriber order entry (CPOE) systems into which medical staff enter medication orders.

DEEP SEDATION
An induced state of sedation characterized by depressed consciousness such that the patient is unable to continuously and independently maintain a patent airway and respiratory rate, and experiences a partial loss of protective reflexes and ability to respond to verbal commands or physical stimulation.

ERROR-PRONE ABBREVIATIONS
Certain medical abbreviations, symbols, and dose designations that are considered "dangerous" and have often contributed to serious medication errors. A complete list can be found at: www.ismp.org/Tools/errorproneabbreviations.pdf.

FAILURE MODE AND EFFECTS ANALYSIS (FMEA)
A **PROACTIVE RISK ASSESSMENT** method based on the simultaneous analysis of possible failure modes, their consequences, and associated risk factors. Also referred to as Failure Mode Effects and Criticality Analysis (FMECA) and Healthcare Failure Mode and Effects Analysis (HFMEA).

HUMAN ERROR
Inadvertently doing other than what should have been done; a mental slip, lapse, or mistake such as miscalculating a dose, forgetting to dilute a medication, or transposing the doses of two antibiotics while prescribing the medications. **HUMAN ERRORS** are unintentional acts, not a **BEHAVIORAL CHOICE**.

HUMAN FACTORS
The study of the interrelationships between humans, the tools they use, and the environment in which they work and live.

INDEPENDENT DOUBLE CHECK
A procedure in which two individuals, preferably two licensed practitioners, separately check each component of the work process. An example would be one person calculating a medication dose for a specific patient and a second individual independently performing the same calculation (not just verifying the calculation) and matching results.

INTERFACED
A direct link between two information systems such that the information from one system is immediately available to the user of the second system and integrated into the system in a way that supports clinical decision making (e.g., **INTERFACING** the laboratory and pharmacy computer systems would immediately provide corresponding laboratory data to the pharmacist while he/she is entering or reviewing a specific medication order). This may or may not include a bi-directional **INTERFACE** of the two systems to allow communication in both directions.

JUST CULTURE
Refers to a safety-supportive model of shared accountability where healthcare institutions are accountable for the systems they design, for supporting the safe behavior choices of patients, visitors, and staff, and for responding to staff behaviors in a fair and just manner. In turn, staff are accountable for the quality of their **BEHAVIORAL CHOICES (HUMAN ERROR** is not a **BEHAVIORAL CHOICE**) and for reporting their errors and system vulnerabilities.

LICENSED INDEPENDENT PRACTITIONER
An individual permitted by law and by the organization to provide care, treatment, and services without direct supervision.

MAXIMUM DOSE
The dose of a medication that represents the upper limit that is normally found in the literature and/or manufacturer recommendations. **MAXIMUM DOSES** may vary according to age, weight, or diagnosis.

MEDICATION DEVICE
Equipment such as infusion pumps, implantable pumps, syringes, pen devices that contain medication (e.g., EPINEPHrine, insulin), tubing, patient-controlled analgesia pumps, automated compounding devices, robotics, and other related devices that are used for medication preparation, dispensing, and administration.

MNEMONICS
A limited number of letters and/or numbers that are used to represent a specific medication (e.g., ASA80 may represent aspirin 80 mg tablets).

MODERATE SEDATION
An induced state of sedation characterized by a minimally depressed consciousness such that the patient is able to continuously and independently maintain a patent airway and respiratory rate, retain protective reflexes, and remain responsive to verbal commands and physical stimulation.

NURSE-CONTROLLED ANALGESIA
The intermittent dosing of a patient-controlled analgesia pump or device performed by a nurse or other licensed practitioner rather than the patient. This practice should only be performed by nursing protocol when patients are capable of requesting a dose of medication within the prescribed limits, but not capable of performing the function themselves.

PATIENT-SPECIFIC MEDICATION (OR DOSE)
A ready-to-administer **PATIENT-SPECIFIC DOSE** of medication that exactly matches the dose ordered by the prescriber. This may or may not correspond to the manufacturer **UNIT-DOSE** package. (See **UNIT DOSE**.)

PHARMACY AND THERAPEUTICS COMMITTEE
An interdisciplinary committee that convenes on a scheduled basis, or when necessary, to review the safety, use, efficacy, and monitoring of medications that will be available for use in the hospital. The committee also sets policy and procedures, on behalf of the medical staff and hospital administration, on the safety of the entire medication use process.

POTENTIAL ADVERSE DRUG EVENTS
Conditions associated with drug therapy that could lead to patient harm, or an incident related to drug therapy with the potential for harm. An example is a patient who received penicillin despite a known allergy to penicillin, but did not have a reaction. Included in this category are potentially harmful errors that have been intercepted before reaching the patient as well as those that have reached the patient.

POTENTIAL ADVERSE EVENTS
Conditions that could lead to patient harm, or an incident related to the medical management of the patient with the potential for harm. An example is a patient who fell in the bathroom but did not sustain an injury. Included in this category are potentially harmful errors that have been intercepted before reaching the patient as well as those that have reached the patient.

PROACTIVE RISK ASSESSMENT
The process of identifying and systematically analyzing the risk and hazards embedded in the process and structure of care to prevent adverse events from occurring. Knowing where the risk and hazards are helps to inform the design, planning, and development of appropriate interventions that will eliminate or minimize risk and hazards before patient injuries occur.

RECKLESS BEHAVIOR
A **BEHAVIORAL CHOICE** to consciously disregard a substantial and unjustifiable risk. The person engaging in **RECKLESS BEHAVIOR**: 1) always perceives the risk he/she is taking, 2) understands that the risk is substantial, 3) does not mistakenly believe the risk is justified, 4) behaves intentionally, 5) knows others are not engaging in the same behavior, and 6) is unable to justify his/her behavior through an objective risk-benefit analysis. Examples include: reusing a dropped surgical instrument knowing that the action could result in a serious hospital-acquired infection, and working while under the influence of alcohol.

ROOT CAUSE ANALYSIS (RCA)
A retrospective process for identifying the most basic or causal factor(s) that underlies the occurrence or possible occurrence of an adverse event.

RULE OF 6
A formula, originally designed for pediatric emergencies, in which the amount of drug to add to a set volume of solution and the rate of infusion are calculated using the following guidelines: 6 x weight in kilograms (kg) equals the amount of drug in milligrams (mg) that should be added to 100 mL of solution. The infusion volume in mL per hour then equals the mcg/kg/minute dose ordered. For example, a drug ordered at 10 mcg/kg/minute would equal an infusion rate of 10 mL per hour using the **RULE OF 6**.

SMART INFUSION PUMP/SMART PUMP TECHNOLOGY
An infusion pump with computer software that is, at a minimum, capable of alerting the user to unsafe dose limits and programming errors if standard concentrations and dose limits have been programmed into the pump's library.

SYSTEM DESIGN/REDESIGN
Refers to the design/redesign of processes, procedures, equipment, **INTERFACES**, overall structure, and the environment or conditions under which staff work, for the purpose of satisfying specific requirements, such as patient safety. The design of a system dictates how reliable it is in terms of satisfying specific requirements.

TALL MAN LETTERS
Refers to the use of mixed case letters to help draw attention to the dissimilarities of certain look-alike drug name pairs. A list of look-alike drug names with recommended **TALL MAN LETTERS** can be found at: www.ismp.org/Tools/tallmanletters.pdf.

UNIT DOSE
A single package that contains one dose of a medication intended for one patient (e.g., a package with one tablet, one single-use vial of parenteral medication, 5 mL container holding one dose of liquid medication). (See **PATIENT-SPECIFIC MEDICATION**.)

WALKROUNDS™
A formal process in which a core group, including senior executives, conducts weekly visits to different areas of the hospital to ask specific questions about adverse events or **CLOSE CALLS** and about the factors or systems issues that lead to these events. (Frankel A, Graydon-Baker E, Neppl C, et al. Patient safety leadership WalkRounds™. *Jt Comm J Qual Safety*. 2003;29:16-26.)


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of Colleges of Nursing


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The American Organization of Nurse Executives


American Pharmacists Association
Improving medication use. Advancing patient care.
APhA


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Building Partnerships For Better Health Care


HRET
HEALTH RESEARCH &
EDUCATIONAL TRUST
In Partnership with AHA


HIMSS


INSTITUTE FOR
HEALTHCARE
IMPROVEMENT


The Joint Commission


MedAssets


NPSF
National Patient Safety Foundation®


PATIENT
SAFETY
AUTHORITY


PREMIER


UHC


VHA
Results are just the beginning