ISMP Medication Safety Self Assessment® for Perioperative Settings

Assess

Measure

Improve

Document Progress

ISMP
Institute for Safe Medication Practices
An ECRI Affiliate

Contents

Invitation to Participate

Dear Healthcare Provider,

The Institute for Safe Medication Practices (ISMP) is pleased to provide our nation's healthcare providers with the **ISMP Medication Safety Self Assessment® for Perioperative Settings**. This tool, funded by the US Food and Drug Administration (FDA), offers hospitals, freestanding ambulatory surgery centers, and other facilities that perform outpatient medical and/or surgical procedures a unique opportunity to assess the safety of systems and practices associated with medication use in the perioperative setting.

The assessment items were assembled by ISMP working with an expert Advisory Group to ensure that the systems and practices most critical to perioperative medication safety were included and achievable in many healthcare facilities. As with our past ISMP Medication Safety Self Assessment® tools, many key organizations have endorsed or supported the **ISMP Medication Safety Self Assessment® for Perioperative Settings** and offered their ongoing support of this important endeavor. Our endorsers' names appear on **page 7**, and their logos appear on the back page and on our website.

Healthcare facilities that complete the assessment will be able to identify specific challenges and opportunities for improvement as well as track their experiences over time. Use of the self assessment will also help providers document compliance with risk assessments and performance improvement requirements from various state and federal regulatory agencies, such as The Joint Commission and the Centers for Medicare & Medicaid Services. Healthcare facilities that submit their assessment findings to ISMP anonymously via a secure internet portal by **April 30, 2021**, will also be able to obtain weighted scores for each item based on their effectiveness in reducing the risk of perioperative medication errors, as well as access aggregate data to compare their individual experiences to the aggregate experiences of demographically similar healthcare providers.

As with the data submitted by thousands of healthcare providers in response to our prior ISMP Medication Safety Self Assessment® tools, we will use the aggregate findings to develop tools and plan curricula and other means of support to assist you in enhancing perioperative medication safety. Additionally, an analysis of the aggregate results will be submitted for publication in a professional journal to detail our nation's baseline efforts to prevent patient harm from medication errors in the perioperative setting.

ISMP, FDA, and the endorsing organizations encourage you to participate in this very important endeavor by completing the self assessment as directed in the instructions and by submitting your findings anonymously to ISMP. We welcome the opportunity to work with you as you assess the safe use of perioperative medications in your organization!

Warm regards,

Michael R. Cohen, RPh, MS, ScD (hon), DPS (hon), FASHP
President
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Funding Source

This project has been funded by the US Food and Drug Administration (FDA) under contract # 75F40119C10120. All materials associated with this project represent the position of ISMP and not necessarily that of the FDA.

PRA Burden Statement

According to the Paperwork Reduction Act (PRA) of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid Office of Management and Budget (OMB) control/number. The valid OMB control/number for this information collection is 0910-0847 and the expiration date is 12/31/2022. The time required to determine eligibility to use the assessment is estimated to average 2 minutes per person, and the time required for small teams to complete this information collection is estimated to be 8.54 hours for Ambulatory Surgical Centers and 25.67 hours for Hospitals.

Security of Information

Security of Participant Information

Your participant information will remain secure to the extent permitted by law, and your personal identifying information will not be included in any reports.

Security of Self-Assessment Findings Submitted to ISMP

All information submitted to ISMP is stored in a secure database maintained solely by ISMP. All information is submitted anonymously, and organizations can expect the usual high standard of confidentiality associated with any information submitted to ISMP.

Although demographic information is collected as part of the assessment process, ISMP will NOT be able to identify individual facilities that have entered and/or submitted information. Furthermore, the ISMP 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. Usernames and passwords required for submitting information to ISMP are created by the facilities and can be as non-descriptive as desired by the organizations. For additional information, see the **Instructions for Entering and Submitting Information to ISMP** beginning on **page 13**.

Purpose

The **ISMP Medication Safety Self Assessment® for Perioperative Settings** is designed to:

- Heighten healthcare providers' awareness of best practices associated with safe medication systems in the perioperative setting
- Assist healthcare providers with identifying and prioritizing gaps in perioperative medication systems to avoid patient harm
- Analyze the current state of medication safety in perioperative settings and the challenges healthcare providers face in implementing best practices
- Create a baseline measure of national perioperative medication safety efforts

The self assessment is divided into ten Key Elements that significantly influence safe perioperative medication use. Each Key Element is defined by one or more Core Characteristics that further define a safe perioperative 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 perioperative settings today. However, their value in reducing errors is grounded in scientific research and/or expert analysis of medication errors and their causes in the perioperative setting.

Audience (Eligibility to Participate)

The **ISMP Medication Safety Self Assessment® for Perioperative Settings** is intended to help healthcare providers assess their current status and measure their progress in implementing best practices associated with perioperative medication safety. The tool is specifically intended for use by:

- Hospitals that perform inpatient and/or outpatient medical and/or surgical procedures
- Freestanding ambulatory surgery centers, including those dedicated to gastrointestinal/endoscopy procedures
- Other facilities that perform outpatient medical and/or surgical procedures

Scope

Unless otherwise stated, the assessment items in the tool pertain to the perioperative processes, staff, equipment, technology, environment of care, and/or medications associated with medical and/or surgical procedures and the patients who undergo them. For the purpose of this assessment, a medical and/or surgical procedure is defined as any procedure performed on a patient by a licensed healthcare practitioner that requires **MODERATE SEDATION, DEEP SEDATION, MONITORED ANESTHESIA CARE (MAC), REGIONAL ANESTHESIA,** and/or **GENERAL ANESTHESIA,** including diagnostic and **INVASIVE PROCEDURES*** that meet this definition. Excluded from this assessment are procedures that require minimal sedation—a drug-induced state that does NOT affect the patient's airway reflexes, ventilatory and cardiovascular functions, or their ability to respond to verbal commands. Also excluded from this assessment is the care of patients after they are discharged home or transferred out of the perioperative setting, usually to an inpatient hospital bed.

***Terms in **BOLD, SMALL CAPITAL LETTERS** are defined terms that can be found in the **Glossary** (**page 70**).

Detailed instructions for conducting the assessment can be found starting on page 10.

Acknowledgements

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ISMP thanks the following members of our voluntary Advisory Group, who helped inform the content of the **ISMP Medication Safety Self Assessment® for Perioperative Settings**.

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- American Association for Accreditation of Ambulatory Surgery Facilities (AAAASF)
- American Association of Nurse Anesthetists (AANA)
- American Society for Health Care Risk Management (ASHRM)
- American Society of Health-System Pharmacists (ASHP)
- Anesthesia Patient Safety Foundation (APSF)
- Association of periOperative Registered Nurses (AORN)
- Children's Hospitals' Solutions for Patient Safety (CHSPS)
- ECRI
- Infusion Nurses Society (INS)
- Institute for Healthcare Improvement (IHI)
- National Association of Healthcare Quality (NAHQ)

Key Definitions (for the purposes of this self assessment)

Caregiver: A family member, friend, or other person not providing patient care on behalf of the healthcare facility, who is assisting the patient with medication administration, particularly in the home, or monitoring the patient's adherence to instructions.

Close call: An error that was detected and corrected before it reached the patient.

Guideline: Recommendations that provide acceptable practices and options, including drug therapy, for managing a particular procedure or treatment for a specific diagnosis or condition, which can be used to assist in clinical decision making and adapted to the patient's specific needs.

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 insulin, opioids, neuromuscular blocking agents, anticoagulants, and many others. A complete list of high-alert medications used in the acute care setting (also appropriate for outpatient perioperative care settings) can be found at: www.ismp.org/node/103.

Medical and/or surgical procedure: Any medical and/or surgical procedure performed on a patient by a licensed healthcare practitioner that requires **MODERATE SEDATION**, **DEEP SEDATION**, **MAC**, **REGIONAL ANESTHESIA**, and/or **GENERAL ANESTHESIA**, including diagnostic and **INVASIVE PROCEDURES** that meet this definition.

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; IV solutions (plain, with electrolytes and/or drugs); and any product designated by the US 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; cannabis; and illicit drugs unless explicitly stated.

Neonate (or neonatal): A newborn infant up to and including 1 month old.

Order set: Standardized list or template of logically grouped medical orders used to treat specific clinical situations (e.g., a specific diagnosis, a specific drug therapy), which follow pre-established clinical guidelines based on evidence-based best practices. The use of order sets can decrease variation in care; enhance compliance with recommended treatment guidelines; promote complete, unambiguous, and accurate orders; reduce the risk of prescribing errors; and improve patient outcomes.

Pediatric: An infant older than 1 month to children and adolescents up to young adulthood.

Perioperative: The preoperative, intraoperative, and postoperative phases of a medical and/or surgical procedure, extending from the time a patient is prepared for a procedure until he or she is discharged home after the procedure or transferred out of the perioperative setting, usually to an inpatient bed.

Practitioner: A licensed healthcare professional who is authorized within the institution to prescribe, dispense, or administer medications, such as a physician, physician assistant, CRNA, anesthesiologist assistant, nurse practitioner, nurse (including circulating nurse, scrub nurse), perfusionist, pharmacist, or respiratory therapist.

Protocol: A defined, standard regimen intended to be followed for managing a particular procedure, drug therapy, or treatment for a specific diagnosis or condition, which often includes medication precautions and dosing instructions, supportive treatments, and patient monitoring.

ADDITIONAL GLOSSARY TERMS

Additional defined terms can be found in the **Glossary** (**page 70**) and are designated throughout the text in **BOLD**, **SMALL CAPITAL LETTERS**. In the online version of the assessment, these additional terms are linked to their definitions when they appear in a demographic question or self-assessment item.

Key Abbreviations

ACLS
Advanced cardiovascular life support

ADC
Automated dispensing cabinet (also known as automated dispensing device or machine)

ASC
Ambulatory surgery center

CPOE
COMPUTERIZED PRESCRIBER ORDER ENTRY

CRNA
Certified registered nurse anesthetist

EHR
Electronic health record (or electronic medical record)

FAQ
Frequently asked question

IM
Intramuscular(ly)

IV
Intravenous(ly)

MAC
MONITORED ANESTHESIA CARE

MAR
Medication administration record

NPO
Nothing by mouth (nil per os)

PALS
Pediatric advanced life support

PCA
Patient-controlled analgesia

PCEA
Patient-controlled epidural analgesia

PRN
As needed (pro re nata)

Instructions for Conducting the Self Assessment

It is important that each facility within a multifacility system complete the self assessment individually. FAQ

1. Establish a team

Establish a core interdisciplinary team consisting of, or similar to, the following:

- Senior facility leader/administrator and/or chief nurse leader
- One or two surgeons/physicians who perform medical and/or surgical procedures under sedation
- One or two **ANESTHESIA PROVIDERS** (anesthesiologist, CRNA)
- One or two frontline perioperative nurses (e.g., preoperative/**POST-ANESTHESIA CARE UNIT** nurse, circulating nurse, scrub nurse)

If applicable to the healthcare setting, the core team might also include:

- **ANESTHESIA PERSONNEL** (e.g., anesthesia assistant, anesthesia technician)
- Other frontline perioperative staff (e.g., surgical assistant, anesthesia assistant)
- Director of pharmacy or director of pharmacy operations
- Staff pharmacist (from **OPERATING ROOM** satellite, if applicable)
- Clinical information technology specialist
- Medication safety or patient safety officer/manager
- Risk management and quality improvement professional

During pilot testing of the assessment, ASCs typically created teams comprising 2 to 3 practitioners, and hospitals typically created teams comprising 3 to 8 practitioners (largely dependent on the size of the facility). Because the assessment should be based on what actually occurs, not what is found in current policies or what should occur, the team should include front-line staff who use medications in the perioperative setting. For example, if assessing items related to **MODERATE SEDATION**, you will need to include nurses, pharmacists (if applicable), **ANESTHESIA PROVIDERS**, and other physicians with experience using these medications for that purpose on the assessment team. Focusing on a systems-based approach to identifying deficiencies, rather than blaming individuals for not following a policy, provides an opportunity for leaders in the perioperative setting to demonstrate that they understand and practice the principles of a **JUST CULTURE**. By participating on the team, members agree to the responsibility to evaluate, accurately and honestly, the status of perioperative medication systems and 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.

Choose a team leader from among the core team and a second individual to record responses. The entire team should actively participate in the collaborative completion of the demographic questions and evaluation of the assessment items. Set up approximately three 1.5 hour meetings for ASCs and four 1.5 hour meetings for hospitals to accomplish all tasks. During each meeting, the team should be provided with sufficient time to complete the demographic questions or a defined section of the self-assessment items.

2. Provide assessment items, definitions, and FAQs to all team members

Read and review the self-assessment directions, key definitions and abbreviations, the glossary, demographic questions, assessment items, and the FAQs before beginning the assessment process. The team leader may want to provide each team member with access to the **ISMP Medication Safety Self Assessment® for Perioperative Settings** workbook and FAQs for review prior to the first team meeting, which can be accessed at: www.ismp.org/node/18027.

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Instructions for Conducting the Self Assessment continued

3. Choose an option for completing the assessment

There are three options for completing the assessment.

Option 1: Use the online self-assessment form to view the demographic questions and applicable self-assessment section(s) at team meetings. Answer each demographic question, and select your choice (A through E, or Not Applicable) for each self-assessment item, while saving your entered information between meetings. (Please see Step 1 **on page 13** for information regarding accessing the online self-assessment form and creating an account with a username and password.) **Please note:** The demographic questions need to be answered and submitted to ISMP to gain access to the online assessment tool.

Option 2: Print hardcopies of the demographic questions and self-assessment items to share with team members, and during team meetings, manually answer each demographic question and fill in your choice (A through E, or Not Applicable) for each self-assessment item. Submission of your information to ISMP can occur at a later time using the online self-assessment form.

Option 3: Download an Excel file containing all the demographic questions and assessment items to share with team members. During team meetings, answer each demographic question, and select your choice (A through E, or Not Applicable) for each self assessment item, while saving your entered information between meetings.

4. Collect demographic information

Before the first team meeting, the team leader may need to gather and verify some of the responses to the demographic questions. These can be reviewed and confirmed with team members at the first meeting.

5. Convene the first team meeting to review the assessment process and answer the demographic questions

For the first team meeting, convene the members to review the overall timeline and assessment process, become familiar with the assessment tool, and answer the demographic questions. We anticipate that this first meeting will take approximately 1.5 hours.

6. Convene subsequent team meetings to conduct the self assessment

To conduct the assessment, convene the team, discuss each assessment item, and evaluate your facility's success with implementation of the item. As necessary, allow team members to investigate and verify the level of implementation of certain items 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 choice (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 for some or all patients, orders, drugs, or staff.
D	This item is fully implemented for some patients, orders, drugs, or staff.
E	This item is fully implemented for all patients, orders, drugs, or staff.

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Instructions for Conducting the Self Assessment continued

Important Choice Selection Guidelines

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

For self-assessment items with multiple subparts labeled in lowercase, sequential letters (a, b, c, and so on): Select a choice (A through E, or Not Applicable) for each of the items separately.

For self-assessment items with two or three distinct components, each separated with the word "OR," and labeled a and b (and c in some cases): Choose the one component within the item that is most relevant to your facility, 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 facility meets the "Not Applicable" scoring guideline for that item.

If you have questions about the assessment item, assessment process, or scoring, refer to the FAQs available on the ISMP website: www.ismp.org/node/18027. The online self-assessment form has certain items directly linked to FAQ responses. If you need additional assistance, contact ISMP at: selfassess@ismp.org, or submit a question using either the "Contact Us" link on the ISMP website or the "Need help?" link found on the online self-assessment form.

Consider assigning an individual to record any discussion generated around each self-assessment item and the rationale behind the selected choice. This information will not be collected and is meant for internal use only but can be very useful to the team when reviewing scores for individual items or reassessing your organization later. Such notation will provide insight into why a certain response was made to a self-assessment item at that point in time.

Convene the appropriate team members as long as necessary to complete the assessment as described above. The number of meetings needed to complete the entire assessment will vary depending on the length and frequency of each meeting, and whether team members have familiarized themselves with the tool. However, pilot testing of the tool identified an average of six 1.5-hour meetings to complete the assessment once team members are familiar with the process and have answered the demographic questions.

7. Submit your information to ISMP

To submit your information to ISMP or to use Option 1 to complete the assessment, go to: https://ismpassessments.org/periop/, which can also be accessed through the ISMP website at: www.ismp.org/node/18027. See the next page for further information about creating a username and password, entering your information, submitting your completed assessment to ISMP, and accessing your results.

Submit your self-assessment findings to ISMP by April 30, 2021.

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Instructions for Entering and Submitting Information to ISMP

1. Create a new user account for the online self-assessment form

To enter and view your assessment results, and to submit your findings to ISMP, only one individual from your facility's core team will need to create a free account. To create a new account, go to: https://ismpassessments.org/periop/, which can also be accessed through the ISMP website at: www.ismp.org/node/18027, and click on the "Create new account" link. The team member creating the account for your organization will be prompted to create a username and password, as well as to select the one category that best describes your facility (see **page 16** for the category options). There will also be an option to provide an email address that can be used if necessary to reset your password. If your facility is part of a participating health system or collaborative that plans to analyze its aggregate data internally, please enter your assigned health system- or collaborative-specific code (or codes if participating in more than one) in the provided field(s) under your facility's account.

Please note: An email address is not required when setting up an account; however, because ISMP does not ask for any information that could be used to identify a specific facility's assessment, a user's account and assessment results can only be retrieved with an email address that is linked to the account (in the event of a forgotten username and/or password), or with the account username (in the event of a forgotten password if no email address was provided).

At any point following the creation of the account, you can access your facility's account by going to: https://ismpassessments.org/periop/ and entering your facility's username and password. If you have forgotten your password, and an email address was entered when creating the account, click on the "Lost my password" link. For retrieval of your username (if an email address was provided) or your password (if an email address was not provided, but you have your username), please contact ISMP. To exit the online form at any point, click on the "Log out" button found in the top right-hand corner of the webpage.

Your organization's account will allow you to:

- Enter your information into the online self-assessment form
- Save your entered information and return to the online form at a later time
- Submit information to ISMP
- View a report of how your organization answered each general demographic question
- View a report of how your organization answered the self-assessment items in each Key Element, along with your facility's weighted score for each item, subtotals of weighted scores for each Key Element and Core Characteristic, and the total weighted score for the full assessment
- View the Preliminary Aggregate Results workbook after the final submission date and once the results have been tabulated near the end of the second quarter of 2021

2. Complete and submit the general demographic questions

Once a new user account has been created, access the secure online form by clicking on the "Start Assessment" button. Based on the facility category selected when creating your account, you will be directed to the demographic questions that are applicable to your practice setting. Complete the demographic questions and save your entered information by clicking on the "Save" button found at the bottom of the demographics section.

If you have completed all of the demographic questions and are ready to submit, click on the "Preview before submitting" button found at the bottom of the demographics section, which will allow you to review your responses before submitting to ISMP. If you have not completed all of the questions, the system will alert you to those that have not yet been completed. All demographic questions must be answered to submit your information and move to the self-assessment items.

Please note: You will not be able to access the assessment items until you have submitted your facility's demographic information. Once you submit your demographic information, you will not be able to change any of your selected answers to the demographic questions.

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Instructions for Entering and Submitting Information to ISMP continued

3. Complete the self-assessment items

Once your organization has submitted its answers for the demographic questions, you will be directed to complete the self-assessment items. Follow the directions below to navigate through the online assessment and submit your responses to ISMP.

Navigation and Data Submission

To begin, click on the "Start/Resume Assessment" button. To save your organization's answer for an assessment item and to advance to the next item, click on the "Save and continue" button found below each self-assessment item. If you need to end a session and resume completing the assessment at a later time, you will still need to click on the "Save and continue" button in order to save the last item that has been answered.

Once you have answered the last item in the assessment, click on the "Save and continue button." You will then be queried to verify that you do want to submit your results to ISMP. Close the pop-up window and click on the "Save and continue" button again to continue with your submission. If you are not ready to submit, you can either use the "Back" button to make any changes or you can log out. All self-assessment items must be answered to submit your information to ISMP.

Please note: Once you submit the demographics and/or self-assessment items, you will not be able to change any of your selected answers.

4. Generate and view your reports with weighted scores

After submitting the results of the assessment to ISMP, you will automatically be directed to a report containing:

- Your organization's answer choice for each assessment item
- Your organization's numerical score and maximum weighted score for each assessment item
- Your organization's total score and the maximum possible score for each Key Element and Core Characteristic
- Your organization's total score and the maximum possible score for the entire assessment

Please note: This report can be used to later compare your facility's findings with aggregate data from other demographically similar facilities. Please keep your username and password in a secure location, as you will be able to access your report at any time by logging into your online account.

At any point, once the self assessment has been submitted to ISMP, you can access your facility's demographic answers and assessment results by clicking on "My account" in the top right-hand corner of the webpage.

Weighted scores are not visible on the online self-assessment form while entering your information. Organizations can obtain their weighted scores only after they submit their completed self assessment to ISMP. Without weighted scores, facilities will be unable to compare their experiences to other demographically similar facilities that are participating in this study.

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. Weighted scores range from zero to 16 points,

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Instructions for Entering and Submitting Information to ISMP continued

depending on whether the assessment item reflects a best practice that has low-leverage (maximum value of 6 points), medium-leverage (maximum value of 10 points), or **HIGH-LEVERAGE RISK-REDUCTION STRATEGIES** (maximum value of 16 points).

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
- Empirically demonstrate 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 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 practitioner 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 **JUST CULTURE**

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, a few of the 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 INFUSION PUMP TECHNOLOGY** implementation) or the degree of risk avoided by not treating a specific population (e.g., pediatrics).

Access to Comparative Reports

ISMP will prepare and publish a Preliminary Aggregate Results workbook which will contain comparative reports of the perioperative medication safety practices in US facilities based on the data submitted. Once the data collection period has ended in 2021, facilities that have submitted information to ISMP will be able to access these aggregate comparative reports by accessing their account that was used to enter and submit their self-assessment information at: https://ismpassessments.org/periop/. This workbook should be available near the end of the second quarter of 2021. In addition, further analysis of the data will be completed, and the results will be submitted for publication in a peer reviewed journal.

Demographics

⚠ **All questions in the demographics section must be completed.**

Please select the <u>one category</u> that best describes the facility completing this assessment.

- ☐ **Hospital** that performs inpatient and/or outpatient medical and/or surgical procedures
- ☐ **Freestanding ASC** not physically connected to a hospital, irrespective of ownership and licensure, including free-standing ASCs dedicated to specialty procedures (e.g., gastrointestinal/endoscopy procedures, interventional radiology, ophthalmic procedures, pain management procedures, fertility procedures)
- ☐ **Other facility** that performs outpatient medical and/or surgical procedures (please specify): _____

For **hospitals**, please complete the **General Demographics for Hospitals**.

For **freestanding ASCs** and other **outpatient facilities** that perform medical and/or surgical procedures, please complete the **General Demographics for Freestanding Ambulatory Facilities**.

☑ General Demographics for Hospitals

About the Hospital

1) Please select the <u>one category</u> that best describes the number of inpatient beds currently staffed for use in your hospital, based on the average inpatient census.

- ☐ Up to 25 beds
  - **Is your hospital a critical access hospital (CAH)? Please see the following for criteria that must be met for a hospital to be designated as a CAH: www.ismp.org/ext/447.**
    - ☐ Yes
    - ☐ No
- ☐ 26 to 99 beds
- ☐ 100 to 299 beds
- ☐ 300 to 499 beds
- ☐ 500 beds and over

2) Please select the <u>one category</u> that best describes the location of your hospital (based on the US Census Bureau and Office of Management and Budget classifications)**.**

- ☐ Urban (urbanized, metropolitan area with a total population of 50,000 people or more)
- ☐ Rural (micropolitan, urban cluster, or rural area with a total population of fewer than 50,000 people)

3) Please select the <u>one category</u> that best describes the type of organization that is responsible for establishing policy for the overall operation of your hospital.

- ☐ Non-government, not-for-profit
- ☐ Investor-owned, for-profit
- ☐ Government, non-federal
  - **Type?**
    - ☐ State
    - ☐ County

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General Demographics for Hospitals continued

- ☐ City
- ☐ City-county
- ☐ Hospital district or authority
- ☐ Other

☐ Government, federal
- **Type?**
  - ☐ Military
  - ☐ Public Health Service (including Indian Health Service)
  - ☐ Veterans Affairs
  - ☐ Department of Justice
  - ☐ Other

4) Please select the <u>one category</u> that best describes the patient population served by your hospital.

☐ Only pediatric and/or neonatal patients
☐ Only adult patients
☐ Combination of adult and pediatric and/or neonatal patients

5) Please select the <u>one category</u> that best describes the <u>primary type of service</u> (multi-specialty or specialty) that your hospital provides to <u>most of its patients</u>.

☐ Multi-specialty hospital
- **Type of multi-specialty?** (select one)
  - ☐ Medical and surgical procedures
  - ☐ Medical procedures
  - ☐ Surgical procedures

☐ Specialty hospital
- **Type of specialty?** (select one)
  - ☐ Cardiology
  - ☐ Eye, ear, nose, and/or throat
  - ☐ Obstetrics and/or gynecology
  - ☐ Oncology
  - ☐ Orthopedics
  - ☐ Women and children
  - ☐ Other (please specify): _____

6) Is your hospital part of a multihospital healthcare system with two or more hospitals owned, leased, sponsored, or managed by a central organization?

☐ Yes
- **How many hospitals comprise your health system?**
  - ☐ 2 to 5
  - ☐ 6 to 10
  - ☐ 11 to 30
  - ☐ 31 or more

☐ No

7) Please indicate if your hospital is located in the US/US territory, at a US military foreign site, or in a non-US country.

☐ US/US territory
- **Please specify the state or territory in which your hospital is located.** _____

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General Demographics for Hospitals continued

- ☐ US military foreign site
- ☐ Non-US country
  - **Please specify the non-US country in which your hospital is located.** _____

8) Does your hospital offer onsite training in the perioperative setting for professional students/residents/fellows from an accredited program? FAQ

- ☐ Yes
  - **Select all that apply**
    - ☐ Nursing students (registered nurse [RN] or licensed practical nurse [LPN] students)
    - ☐ Student registered nurse anesthetists
    - ☐ Advanced practice nursing students
    - ☐ Midwife students
    - ☐ Physician assistant students
    - ☐ Emergency medical technician and/or paramedic students
    - ☐ Pharmacy students
    - ☐ Pharmacy residents
    - ☐ Pharmacy technician students
    - ☐ Medical students
    - ☐ Medical/surgical residents/fellows
    - ☐ Anesthesia residents/fellows
    - ☐ Anesthesiologist assistant students
    - ☐ Surgical technician students
    - ☐ Radiology assistant students
    - ☐ Other students/residents/fellows who are involved in the perioperative **MEDICATION-USE PROCESS** (please specify): _____
- ☐ No

9) Is one or more part-time or full-time MEDICATION SAFETY OFFICER (i.e., an individual dedicated to medication safety) employed by or otherwise assigned to your hospital?

- ☐ Yes
- ☐ No

10) In addition to the central pharmacy, is there at least one satellite pharmacy located and operated in (or close to) the perioperative area that prepares and dispenses medications as needed for patients?

- ☐ Yes
  - **Does at least one perioperative satellite pharmacy remain open throughout the normal hours of operation during which the majority of scheduled (not emergent) medical and/or surgical procedures are performed?**
    - ☐ Yes
    - ☐ No
- ☐ No

Medical and/or Surgical Procedures

11) Please select the one category that best describes the total number of OPERATING ROOMS (ORs) for use in your hospital (including ORs in all surgical suites and satellite ORs used for inpatient and outpatient procedures).

- ☐ There are no **OPERATING ROOMS** in our facility

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General Demographics for Hospitals continued

- ☐ 1 to 3
- ☐ 4 to 9
- ☐ 10 to 19
- ☐ 20 to 39
- ☐ 40 to 59
- ☐ 60 to 79
- ☐ 80 or more

12) Please select the <u>one category</u> that best describes the total number of PROCEDURE ROOMS for use in your facility.

- ☐ There are no **PROCEDURE ROOMS** in our facility
- ☐ 1 to 3
- ☐ 4 to 9
- ☐ 10 to 19
- ☐ 20 to 39
- ☐ 40 to 59
- ☐ 60 to 79
- ☐ 80 or more

13) Please select the <u>one category</u> that best describes the total number of medical and/or surgical procedures (inpatient and outpatient) performed in OPERATING ROOMS in your hospital <u>during the year 2019</u>. FAQ

- ☐ There are no **OPERATING ROOMS** in our facility
- ☐ Unknown
- ☐ Fewer than 1,000
- ☐ 1,000 to 4,999
- ☐ 5,000 to 9,999
- ☐ 10,000 to 19,999
- ☐ 20,000 to 29,999
- ☐ 30,000 to 39,999
- ☐ 40,000 to 49,999
- ☐ 50,000 or more

14) Please select the <u>one category</u> that best describes the total number of medical and/or surgical procedures (inpatient and outpatient) performed outside of OPERATING ROOMS (e.g., endoscopies and other procedures performed in PROCEDURE ROOMS, radiology/nuclear medicine procedures requiring sedation) in your hospital <u>during the year 2019</u>. FAQ

- ☐ Unknown
- ☐ Zero
- ☐ 1,000 to 4,999
- ☐ 5,000 to 9,999
- ☐ 10,000 to 19,999
- ☐ 20,000 to 29,999
- ☐ 30,000 to 39,999
- ☐ 40,000 to 49,999
- ☐ 50,000 or more

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General Demographics for Hospitals continued

15) Please select the types of procedures your hospital has conducted during the year 2019 (select all that apply based on medical and/or surgical procedures performed during this timeframe). FAQ

- ☐ Bariatric
- ☐ Cardiothoracic/lung
- ☐ Cardiovascular
- ☐ Colorectal
- ☐ Electroconvulsive therapy (ECT)
- ☐ Endoscopy (e.g., gastrointestinal, bronchoscopy, cystoscopy)
- ☐ Gastroenterology
- ☐ General surgery
- ☐ Gynecology
- ☐ Hepatobiliary
- ☐ Interventional radiology/sedating radiology and nuclear medicine procedures
- ☐ Neurosurgery
- ☐ Neurosurgery spine/orthopedics spine
- ☐ Obstetrics
- ☐ Ophthalmology
- ☐ Oral/maxillofacial
- ☐ Organ harvesting
- ☐ Orthopedics
- ☐ Otorhinolaryngology
- ☐ Pain management
- ☐ Plastics (cosmetic, reconstructive)/burn wound care
- ☐ Podiatry foot/ankle
- ☐ Transplant
- ☐ Trauma/acute care surgery
- ☐ Urology
- ☐ Vascular

Anesthesia Services

16) Please select the one category that best describes your primary staffing model for delivering MAC, DEEP SEDATION, REGIONAL ANESTHESIA, and/or GENERAL ANESTHESIA. FAQ

- ☐ Delivered by anesthesiologists only
- ☐ Delivered by CRNAs (independently) only
- ☐ Delivered by **ANESTHESIA PROVIDER** teams
  - **Please select the one category that best describes the team composition.**
    - ☐ Predominantly anesthesiologists
    - ☐ An even mix of anesthesiologists and anesthesiologist assistants (1:1 ratio)
    - ☐ Predominantly CRNAs
    - ☐ An even mix of anesthesiologists and CRNAs (1:1 ratio)
    - ☐ A mix of anesthesiologists, anesthesiologist assistants, and CRNAs
- ☐ Delivered by **NON-ANESTHESIOLOGIST SEDATION PRACTITIONERS**
- ☐ Other (please specify): _____

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General Demographics for Hospitals continued

17) Please select your staffing model(s) for delivering MODERATE SEDATION (select all that apply). FAQ

- ☐ Delivered by anesthesiologists
- ☐ Delivered by CRNAs (independently)
- ☐ Delivered by **ANESTHESIA PROVIDER** teams
  - **Please select the one category that best describes the team composition.**
    - ☐ Predominantly anesthesiologists
    - ☐ An even mix of anesthesiologists and anesthesiologist assistants (1:1 ratio)
    - ☐ Predominantly CRNAs
    - ☐ An even mix of anesthesiologists and CRNAs (1:1 ratio)
    - ☐ A mix of anesthesiologists, anesthesiologist assistants, and CRNAs
- ☐ Delivered by **NON-ANESTHESIOLOGIST SEDATION PRACTITIONERS**
- ☐ Other (please specify): _____

18) Where do ANESTHESIA PROVIDERS and/or NON-ANESTHESIOLOGIST SEDATION PRACTITIONERS obtain the NON-CONTROLLED MEDICATIONS they administer to patients in the following locations (select all that apply)?

a. In OPERATING ROOMS

- ☐ There are no **OPERATING ROOMS** in our facility
- ☐ Non-automated shelving unit, cabinet, or drawer in the **OPERATING ROOM**
- ☐ Anesthesia workroom/supply area
- ☐ Anesthesia kit, tray, or cart stocked or prepared by pharmacy (used independently of an ADC)
- ☐ Anesthesia kit, tray, or cart stocked or prepared by **ANESTHESIA PERSONNEL** (used independently of an ADC)
- ☐ Dedicated anesthesia refrigerator
- ☐ Refrigerator used by multiple disciplines (e.g., nurses, **ANESTHESIA PROVIDERS**)
- ☐ Central pharmacy deliveries/pick-ups immediately prior to or during a procedure
- ☐ Perioperative satellite pharmacy deliveries/pick-ups immediately prior to or during a procedure
- ☐ **ANESTHESIA PROVIDERS** and/or **NON-ANESTHESIOLOGIST SEDATION PRACTITIONERS** bring their own medications obtained from outside of the facility
- ☐ ADC(s) located in a **SEMI-RESTRICTED AREA(S)**
- ☐ ADC(s) located in the **OPERATING ROOM**
  - **Does each OPERATING ROOM have its own ADC?**
    - ☐ Yes
    - ☐ No

b. In PROCEDURE ROOMS

- ☐ There are no **PROCEDURE ROOMS** in our facility
- ☐ Non-automated shelving unit, cabinet, or drawer in the **PROCEDURE ROOM**
- ☐ Anesthesia workroom/supply area
- ☐ Anesthesia kit, tray, or cart stocked or prepared by pharmacy (used independently of an ADC)
- ☐ Anesthesia kit, tray, or cart stocked or prepared by **ANESTHESIA PERSONNEL** (used independently of an ADC)
- ☐ Dedicated anesthesia refrigerator
- ☐ Refrigerator used by multiple disciplines (e.g., nurses, **ANESTHESIA PROVIDERS**)
- ☐ Central pharmacy deliveries/pick-ups immediately prior to or during a procedure
- ☐ Perioperative satellite pharmacy deliveries/pick-ups immediately prior to or during a procedure
- ☐ **ANESTHESIA PROVIDERS** and/or **NON-ANESTHESIOLOGIST SEDATION PRACTITIONERS** bring their own medications obtained from outside of the facility
- ☐ ADC(s) located in a **SEMI-RESTRICTED AREA(S)**
- ☐ ADC(s) located in the **PROCEDURE ROOM**
  - **Does each PROCEDURE ROOM have its own ADC?**

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General Demographics for Hospitals continued

- ☐ Yes
- ☐ No

19) Where do ANESTHESIA PROVIDERS and/or NON-ANESTHESIOLOGIST SEDATION PRACTITIONERS obtain the CONTROLLED MEDICATIONS they administer to patients in the following locations (select all that apply)?

a. In OPERATING ROOMS

- ☐ There are no **OPERATING ROOMS** in our facility
- ☐ Non-automated shelving unit, cabinet, or drawer in the **OPERATING ROOM**
- ☐ Anesthesia workroom/supply area
- ☐ Anesthesia kit, tray, or cart stocked or prepared by pharmacy (used independently of an ADC)
- ☐ Anesthesia kit, tray, or cart stocked or prepared by **ANESTHESIA PERSONNEL** (used independently of an ADC)
- ☐ Dedicated anesthesia refrigerator
- ☐ Refrigerator used by multiple disciplines (e.g., nurses, **ANESTHESIA PROVIDERS**)
- ☐ Central pharmacy deliveries/pick-ups immediately prior to or during a procedure
- ☐ Perioperative satellite pharmacy deliveries/pick-ups immediately prior to or during a procedure
- ☐ **ANESTHESIA PROVIDERS** and/or **NON-ANESTHESIOLOGIST SEDATION PRACTITIONERS** bring their own medications obtained from outside of the facility
- ☐ ADC(s) located in a **SEMI-RESTRICTED AREA(S)**
- ☐ ADC(s) located in the **OPERATING ROOM**
  - **Does each OPERATING ROOM have its own ADC?**
    - ☐ Yes
    - ☐ No

b. In PROCEDURE ROOMS

- ☐ There are no **PROCEDURE ROOMS** in our facility
- ☐ Non-automated shelving unit, cabinet, or drawer in the **PROCEDURE ROOM**
- ☐ Anesthesia workroom/supply area
- ☐ Anesthesia kit, tray, or cart stocked or prepared by pharmacy (used independently of an ADC)
- ☐ Anesthesia kit, tray, or cart stocked or prepared by **ANESTHESIA PERSONNEL** (used independently of an ADC)
- ☐ Dedicated anesthesia refrigerator
- ☐ Refrigerator used by multiple disciplines (e.g., nurses, **ANESTHESIA PROVIDERS**)
- ☐ Central pharmacy deliveries/pick-ups immediately prior to or during a procedure
- ☐ Perioperative satellite pharmacy deliveries/pick-ups immediately prior to or during a procedure
- ☐ **ANESTHESIA PROVIDERS** and/or **NON-ANESTHESIOLOGIST SEDATION PRACTITIONERS** bring their own medications obtained from outside of the facility
- ☐ ADC(s) located in a **SEMI-RESTRICTED AREA(S)**
- ☐ ADC(s) located in the **PROCEDURE ROOM**
  - **Does each PROCEDURE ROOM have its own ADC?**
    - ☐ Yes
    - ☐ No

Available Technology

20) Which of the following technologies are available in perioperative areas?

a. EHRs

- ☐ Yes
  - **Where are EHRs available? (select all that apply)**
    - ☐ **PREOPERATIVE HOLDING AREAS**

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General Demographics for Hospitals continued

- ☐ **Operating rooms** (to document intraoperative anesthesia care)
- ☐ **Operating rooms** (to document intraoperative non-anesthesia care)
- ☐ **Procedure rooms** (to document intraprocedural anesthesia care)
- ☐ **Procedure rooms** (to document intraprocedural non-anesthesia care)
- ☐ **Post-anesthesia care units**

☐ No

b. CPOE that is integrated with the EHR

☐ Yes
- **Where is integrated CPOE available? (select all that apply)**
  - ☐ **Preoperative holding areas**
  - ☐ **Operating rooms**
  - ☐ **Procedure rooms**
  - ☐ **Post-anesthesia care units**

☐ No

c. CPOE that is NOT integrated with the EHR

☐ Yes
- **Where is non-integrated CPOE available? (select all that apply)**
  - ☐ **Preoperative holding areas**
  - ☐ **Operating rooms**
  - ☐ **Procedure rooms**
  - ☐ **Post-anesthesia care units**

☐ No

d. Barcode scanning technology available for use prior to medication administration

☐ Yes
- **Where is barcode scanning technology available for use prior to medication administration? (select all that apply)**
  - ☐ **Preoperative holding areas**
  - ☐ **Operating rooms**
  - ☐ **Procedure rooms**
  - ☐ **Post-anesthesia care units**

☐ No

e. Smart infusion pumps with dose error-reduction system (DERS) for IV medications and/or fluids

☐ Yes
- **Where are smart infusion pumps with DERS available for IV medications and/or fluids? (select all that apply)**
  - ☐ **Preoperative holding areas**
  - ☐ **Operating rooms**
  - ☐ **Procedure rooms**
  - ☐ **Post-anesthesia care units**

☐ No

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f. Smart infusion pumps with dose error-reduction systems (DERS) for epidural and/or intrathecal medications and/or fluids

- ☐ Yes
  - **Where are smart infusion pumps with DERS available for epidural and/or intrathecal medications and/or fluids? (select all that apply)**
    - ☐ **Preoperative holding areas**
    - ☐ **Operating rooms**
    - ☐ **Procedure rooms**
    - ☐ **Post-anesthesia care units**
- ☐ No
  - **Select the <u>one category</u> that best describes your hospital.**
    - ☐ We do not administer epidural and/or intrathecal medications and/or fluids at all
    - ☐ We administer epidural and/or intrathecal medications and/or fluids but do not use **smart infusion pumps** with **DERS** for this purpose
    - ☐ We only administer epidural and/or intrathecal medications manually via syringe and do not use **smart infusion pumps** with **DERS** for this purpose

g. End-tidal carbon dioxide ($ETCO_2$) monitoring (capnography)

- ☐ Yes
  - **Where is end-tidal carbon dioxide ($ETCO_2$) monitoring (capnography) available? (select all that apply)**
    - ☐ **Preoperative holding areas**
    - ☐ **Operating rooms**
    - ☐ **Procedure rooms**
    - ☐ **Post-anesthesia care units**
- ☐ No

☑ General Demographics for Freestanding Ambulatory Facilities

About the Facility

1) **Please select the <u>one category</u> that best describes the average number of patient visits in the <u>previous month</u> to your facility.** (Visits are considered "admissions," which are defined as completion of registration upon entry into the ambulatory facility.)

   - ☐ Less than 100
   - ☐ 100 to 499
   - ☐ 500 to 999
   - ☐ 1,000 to 1,499
   - ☐ 1,500 and over

2) **Please select the <u>one category</u> that best describes the location of your facility** (based on the US Census Bureau and Office of Management and Budget classifications).

   - ☐ Urban (urbanized, metropolitan area with a total population of 50,000 people or more)
   - ☐ Rural (micropolitan, urban cluster, or rural area with a total population of fewer than 50,000 people)

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General Demographics for Freestanding Ambulatory Facilities continued

3) Please select the <u>one category</u> that best describes the type of organization that is responsible for establishing policy for the overall operation of your facility.

- ☐ Investor-owned, for-profit
  - **Type?**
    - ☐ Physician ownership
    - ☐ Corporate ownership
    - ☐ Hospital ownership
    - ☐ Combination (e.g., physician/hospital, physician/corporate)
- ☐ Non-government, not-for-profit
  - **Type?**
    - ☐ Physician ownership
    - ☐ Corporate ownership
    - ☐ Hospital ownership
    - ☐ Combination (e.g., physician/hospital, physician/corporate)
- ☐ Government, non-federal
  - **Type?**
    - ☐ State
    - ☐ County
    - ☐ City
    - ☐ City-county
    - ☐ Other
- ☐ Government, federal
  - **Type?**
    - ☐ Military
    - ☐ Public Health Service (including Indian Health Service)
    - ☐ Veterans Affairs
    - ☐ Department of Justice
    - ☐ Other

4) Please select the <u>one category</u> that best describes the patient population served by your facility.

- ☐ Only pediatric patients
- ☐ Only adult patients
- ☐ Combination of adult and pediatric patients

5) Is your facility part of a larger healthcare system with two or more healthcare facilities owned, leased, sponsored, or managed by a central organization?

- ☐ Yes
  - **How many facilities comprise your health system?**
    - ☐ 2 to 5
    - ☐ 6 to 10
    - ☐ 11 to 30
    - ☐ 31 or more
- ☐ No

6) Please indicate if your facility is located in the US/US territory, at a US military foreign site, or in a non-US country.

- ☐ US/US territory
  - **Please specify the state or territory in which your facility is located.** _____

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General Demographics for Freestanding Ambulatory Facilities continued

- ☐ US military foreign site
- ☐ Non-US country
  - **Please specify the non-US country in which your facility is located.** _____

7) Does your facility offer onsite training in the perioperative setting for professional students/residents/fellows from an accredited program? FAQ

- ☐ Yes
  - **Select all that apply**
    - ☐ Nursing students (registered nurse [RN] or licensed practical nurse [LPN] students)
    - ☐ Student registered nurse anesthetists
    - ☐ Advanced practice nursing students
    - ☐ Midwife students
    - ☐ Physician assistant students
    - ☐ Emergency medical technician and/or paramedic students
    - ☐ Pharmacy students
    - ☐ Pharmacy residents
    - ☐ Pharmacy technician students
    - ☐ Medical students
    - ☐ Medical/surgical residents/fellows
    - ☐ Anesthesia residents/fellows
    - ☐ Anesthesiologist assistant students
    - ☐ Surgical technician students
    - ☐ Radiology assistant students
    - ☐ Other students/residents/fellows who are involved in the perioperative **MEDICATION-USE PROCESS** (please specify): _____
- ☐ No

8) Is one or more part-time or full-time MEDICATION SAFETY OFFICER (i.e., an individual dedicated to medication safety) employed by or otherwise assigned to your facility?

- ☐ Yes
- ☐ No

9) How are medications/solutions provided to your facility? (select all that apply)

- ☐ Through an onsite pharmacy within the facility
- ☐ Through an offsite pharmacy that is part of the same health system
- ☐ Through an offsite pharmacy that is owned and governed separately from the facility
- ☐ Through a wholesaler that ships ordered medications/solutions directly to the facility
- ☐ Through the **ANESTHESIA PROVIDERS** and/or **NON-ANESTHESIOLOGIST SEDATION PRACTITIONERS** who bring their own medications obtained from outside of the facility

10) Is a licensed pharmacist physically present onsite during all hours of operation?

- ☐ Yes
- ☐ No
  - **Select the one category that best describes your facility.**
    - ☐ A pharmacist is onsite for some, but not all, hours of operation (e.g., some hours daily, weekly, or monthly)
    - ☐ A pharmacist is never onsite during the hours of operation

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General Demographics for Freestanding Ambulatory Facilities continued

Medical and/or Surgical Procedures

11) Please select the one category that best describes the total number of OPERATING ROOMS in your facility.

- ☐ There are no **OPERATING ROOMS** in our facility
- ☐ 1 to 3
- ☐ 4 to 9
- ☐ 10 to 19
- ☐ 20 to 29
- ☐ 30 or more

12) Please select the one category that best describes the total number of PROCEDURE ROOMS for use in your facility.

- ☐ There are no **PROCEDURE ROOMS** in our facility
- ☐ 1 to 3
- ☐ 4 to 9
- ☐ 10 to 19
- ☐ 20 to 29
- ☐ 30 or more

13) Please select the one category that best describes the total number of medical and/or surgical procedures performed in your facility during the year 2019. FAQ

- ☐ Unknown
- ☐ Fewer than 1,000
- ☐ 1,000 to 4,999
- ☐ 5,000 to 9,999
- ☐ 10,000 to 19,999
- ☐ 20,000 to 29,999
- ☐ 30,000 to 39,999
- ☐ 40,000 to 49,999
- ☐ 50,000 or more

14) Please select the types of procedures your facility has conducted during the year 2019 (select all that apply based on medical and/or surgical procedures performed during this timeframe). FAQ

- ☐ Bariatric
- ☐ Cardiothoracic/lung
- ☐ Cardiovascular
- ☐ Colorectal
- ☐ Dental
- ☐ Electroconvulsive therapy (ECT)
- ☐ Endoscopy (e.g., gastrointestinal, bronchoscopy, cystoscopy)
- ☐ Gastroenterology
- ☐ General surgery
- ☐ Gynecology/fertility
- ☐ Hepatobiliary
- ☐ Interventional radiology/sedating radiology and nuclear medicine procedures
- ☐ Neurosurgery
- ☐ Neurosurgery spine/orthopedics spine

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General Demographics for Freestanding Ambulatory Facilities continued

- ☐ Obstetrics
- ☐ Ophthalmology
- ☐ Oral/maxillofacial
- ☐ Orthopedics
- ☐ Otorhinolaryngology
- ☐ Pain management
- ☐ Plastics (cosmetic, reconstructive)/burn wound care
- ☐ Podiatry foot/ankle
- ☐ Urology
- ☐ Vascular

Anesthesia Services

15) Please select the one category that best describes your primary staffing model for delivering MAC, DEEP SEDATION, REGIONAL ANESTHESIA, and/or GENERAL ANESTHESIA. FAQ

- ☐ We do not deliver **MAC**, **DEEP SEDATION**, **REGIONAL ANESTHESIA**, and/or **GENERAL ANESTHESIA**
- ☐ Delivered by anesthesiologists only
- ☐ Delivered by CRNAs (independently) only
- ☐ Delivered by **ANESTHESIA PROVIDER** teams
  - **Please select the one category that best describes the team composition.**
    - ☐ Predominantly anesthesiologists
    - ☐ An even mix of anesthesiologists and anesthesiologist assistants (1:1 ratio)
    - ☐ Predominantly CRNAs
    - ☐ An even mix of anesthesiologists and CRNAs (1:1 ratio)
    - ☐ A mix of anesthesiologists, anesthesiologist assistants, and CRNAs
- ☐ Delivered by **NON-ANESTHESIOLOGIST SEDATION PRACTITIONERS**
- ☐ Other (please specify): _____

16) Please select your staffing model(s) for delivering MODERATE SEDATION (select all that apply). FAQ

- ☐ Delivered by anesthesiologists
- ☐ Delivered by CRNAs (independently)
- ☐ Delivered by **ANESTHESIA PROVIDER** teams
  - **Please select the one category that best describes the team composition.**
    - ☐ Predominantly anesthesiologists
    - ☐ An even mix of anesthesiologists and anesthesiologist assistants (1:1 ratio)
    - ☐ Predominantly CRNAs
    - ☐ An even mix of anesthesiologists and CRNAs (1:1 ratio)
    - ☐ A mix of anesthesiologists, anesthesiologist assistants, and CRNAs
- ☐ Delivered by **NON-ANESTHESIOLOGIST SEDATION PRACTITIONERS**
- ☐ Other (please specify): _____

17) Where do ANESTHESIA PROVIDERS and/or NON-ANESTHESIOLOGIST SEDATION PRACTITIONERS obtain the NON-CONTROLLED MEDICATIONS they administer to patients in OPERATING ROOMS and/or PROCEDURE ROOMS? (select all that apply)

- ☐ Non-automated shelving unit, cabinet, or drawer in the **OPERATING ROOM** and/or **PROCEDURE ROOM**
- ☐ Anesthesia workroom/supply area
- ☐ Anesthesia kit, tray, or cart stocked or prepared by pharmacy (used independently of an ADC)
- ☐ Anesthesia kit, tray, or cart stocked or prepared by **ANESTHESIA PERSONNEL** (used independently of an ADC)

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General Demographics for Freestanding Ambulatory Facilities continued

- ☐ Dedicated anesthesia refrigerator
- ☐ Refrigerator used by multiple disciplines (e.g., nurses, **ANESTHESIA PROVIDERS**)
- ☐ Internal pharmacy deliveries/pick-ups immediately prior to or during a procedure
- ☐ **ANESTHESIA PROVIDERS** and/or **NON-ANESTHESIOLOGIST SEDATION PRACTITIONERS** bring their own medications obtained from outside of the facility
- ☐ ADC(s) located in a **SEMI-RESTRICTED AREA(S)**
- ☐ ADC(s) located in the **OPERATING ROOM** and/or **PROCEDURE ROOM**
  - **Does each OPERATING ROOM and/or PROCEDURE ROOM have its own ADC?**
    - ☐ Yes
    - ☐ No

18) Where do ANESTHESIA PROVIDERS and/or NON-ANESTHESIOLOGIST SEDATION PRACTITIONERS obtain the CONTROLLED MEDICATIONS they administer to patients in OPERATING ROOMS and/or PROCEDURE ROOMS? (select all that apply)

- ☐ Non-automated shelving unit, cabinet, or drawer in the **OPERATING ROOM** and/or **PROCEDURE ROOM**
- ☐ Anesthesia workroom/supply area
- ☐ Anesthesia kit, tray, or cart stocked or prepared by pharmacy (used independently of an ADC)
- ☐ Anesthesia kit, tray, or cart stocked or prepared by **ANESTHESIA PERSONNEL** (used independently of an ADC)
- ☐ Dedicated anesthesia refrigerator
- ☐ Refrigerator used by multiple disciplines (e.g., nurses, **ANESTHESIA PROVIDERS**)
- ☐ Internal pharmacy deliveries/pick-ups immediately prior to or during a procedure
- ☐ **ANESTHESIA PROVIDERS** and/or **NON-ANESTHESIOLOGIST SEDATION PRACTITIONERS** bring their own medications obtained from outside of the facility
- ☐ ADC(s) located in a **SEMI-RESTRICTED AREA(S)**
- ☐ ADC(s) located in the **OPERATING ROOM** and/or **PROCEDURE ROOM**
  - **Does each OPERATING ROOM and/or PROCEDURE ROOM have its own ADC?**
    - ☐ Yes
    - ☐ No

Available Technology

19) Which of the following technologies are available in perioperative areas?

a. EHR

- ☐ Yes
  - **Where are EHRs available? (select all that apply)**
    - ☐ **PREOPERATIVE HOLDING AREAS**
    - ☐ **OPERATING ROOMS** and/or **PROCEDURE ROOMS** (to document intraoperative/intraprocedural anesthesia care)
    - ☐ **OPERATING ROOMS** and/or **PROCEDURE ROOMS** (to document intraoperative/intraprocedural non-anesthesia care)
    - ☐ **POST-ANESTHESIA CARE UNITS**
- ☐ No

b. CPOE that is integrated with the EHR

- ☐ Yes
  - **Where is integrated CPOE available? (select all that apply)**
    - ☐ **PREOPERATIVE HOLDING AREAS**
    - ☐ **OPERATING ROOMS** and/or **PROCEDURE ROOMS**
    - ☐ **POST-ANESTHESIA CARE UNITS**
- ☐ No

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General Demographics for Freestanding Ambulatory Facilities continued

c. CPOE that is NOT integrated with the EHR

- ☐ Yes
  - **Where is non-integrated CPOE available? (select all that apply)**
    - ☐ **PREOPERATIVE HOLDING AREAS**
    - ☐ **OPERATING ROOMS** and/or **PROCEDURE ROOMS**
    - ☐ **POST-ANESTHESIA CARE UNITS**
- ☐ No

d. BARCODE SCANNING technology available for use prior to medication administration

- ☐ Yes
  - **Where is BARCODE SCANNING technology available for use prior to medication administration? (select all that apply)**
    - ☐ **PREOPERATIVE HOLDING AREAS**
    - ☐ **OPERATING ROOMS** and/or **PROCEDURE ROOMS**
    - ☐ **POST-ANESTHESIA CARE UNITS**
- ☐ No

e. SMART INFUSION PUMPS with DOSE ERROR-REDUCTION SYSTEMS (DERS) for IV medications and fluids

- ☐ Yes
  - **Where are SMART INFUSION PUMPS with DERS available for IV medications and fluids? (select all that apply)**
    - ☐ **PREOPERATIVE HOLDING AREAS**
    - ☐ **OPERATING ROOMS** and/or **PROCEDURE ROOMS**
    - ☐ **POST-ANESTHESIA CARE UNITS**
- ☐ No

f. SMART INFUSION PUMPS with DOSE ERROR-REDUCTION SYSTEM (DERS) for epidural and/or intrathecal medications and/or fluids

- ☐ Yes
  - **Where are SMART INFUSION PUMPS with DERS available for epidural and/or intrathecal medications and/or fluids? (select all that apply)**
    - ☐ **PREOPERATIVE HOLDING AREAS**
    - ☐ **OPERATING ROOMS** and/or **PROCEDURE ROOMS**
    - ☐ **POST-ANESTHESIA CARE UNITS**
- ☐ No
  - **Select the <u>one category</u> that best describes your facility.**
    - ☐ We do not administer epidural and/or intrathecal medications and/or fluids at all
    - ☐ We administer epidural and/or intrathecal medications and/or fluids but do not use **SMART INFUSION PUMPS** with **DERS** for this purpose
    - ☐ We only administer epidural and/or intrathecal medications manually via syringe and do not use **SMART INFUSION PUMPS** with **DERS** for this purpose

g. END-TIDAL CARBON DIOXIDE ($ETCO_2$) MONITORING (CAPNOGRAPHY)

- ☐ Yes
  - **Where is END-TIDAL CARBON DIOXIDE ($ETCO_2$) MONITORING (CAPNOGRAPHY) available? (select all that apply)**
    - ☐ **PREOPERATIVE HOLDING AREAS**
    - ☐ **OPERATING ROOMS** and/or **PROCEDURE ROOMS**
    - ☐ **POST-ANESTHESIA CARE UNITS**
- ☐ No

Self-Assessment Items

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 for some or all patients, orders, drugs, or staff.
D	This item is fully implemented for some patients, orders, drugs, or staff.
E	This item is fully implemented for all patients, orders, drugs, or staff.

Key Element I: Patient Information

		A	B	C	D	E
Core Characteristic # 1 *Essential patient information is obtained, readily available in useful form, and considered when prescribing, dispensing, and administering perioperative medications, and when monitoring the effects of these medications.*						
1	A computer-generated identification bracelet is verified for correctness using two unique patient identifiers and placed on the patient prior to medication administration and/or the medical and/or surgical procedure.					
2	A complete (home) medication list, including each prescription and over-the-counter medication's name, purpose, dose, frequency, route of administration, and time last taken, is collected and/or verified with patients before they undergo a medical and/or surgical procedure; **and** the medication list is documented in a single, standard location in the EHR or medical record.					
3	Practitioners collecting each patient's preoperative or preprocedure (home) medication list use regularly updated, scripted questions or prompts to help identify all medications and substances that may not be readily identified by patients, including: vitamins, herbal products (including teas), topical products, otic and ophthalmic medications, immunosuppressants, patches, inhalers, depot injections, drug-eluting implantable devices, vaping products, cannabis, illicit drugs, and alcohol and tobacco use.					
FAQ 4	Medications taken at home by the patient before the medical and/or surgical procedure are reconciled with the list of medications prescribed at the time of admission/encounter, upon transfer within the facility (e.g., from the **POST-ANESTHESIA CARE UNIT** to an inpatient unit), and upon discharge after outpatient surgery; **and** any identified discrepancies (e.g., omissions, duplications, contraindications, unclear information) are resolved.					
5	Adverse drug reactions distinguished as either allergies or **DRUG INTOLERANCES**, along with the specific reactions (if known) to each, are collected and/or verified with each patient before the medical and/or surgical procedure, **and** are listed in a standardized, clearly visible location on all drug-related pages or screens of the EHR or medical record, preoperative or preprocedure checklists, anesthesia record, and order screens/forms.					
FAQ 6	All patient allergy information entered into the EHR or medical record is properly coded to allow for clinical decision support allergy screening. ***Scoring guideline:*** *Do not score higher than B if allergy information is not entered into an EHR, or if allergy information is entered into an EHR but clinical decision support (electronic allergy screening) does not occur.*					
7	Information related to patient allergies, **DRUG INTOLERANCES**, and specific reactions (if known) is readily visible (e.g., in the EHR, on **OPERATING ROOM** whiteboards) to all practitioners during the medical and/or surgical procedure.					

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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 for some or all patients, orders, drugs, or staff.
D	This item is fully implemented for some patients, orders, drugs, or staff.
E	This item is fully implemented for all patients, orders, drugs, or staff.

Key Element I: Patient Information (continued)

		A	B	C	D	E
8	If an adverse drug reaction (e.g., **DRUG INTOLERANCE**, allergic reaction) or specific challenge (e.g., difficult intubation) occurs during a medical and/or surgical procedure, the patient and/or caregiver is informed about the reaction and/or challenge, and educated about the importance of sharing this information with their healthcare providers.					
FAQ 9	A standard process based on established definitions is used to determine if an adult patient is **OPIOID-NAÏVE** or **OPIOID-TOLERANT** and whether the patient is a **HIGH-RISK PATIENT** for respiratory depression; **and** this information is documented in a designated location in the EHR or medical record and used to establish a therapeutic and monitoring plan for patients undergoing a medical and/or surgical procedure. ***Scoring guideline:*** *Choose Not Applicable only if adult patients never undergo medical and/or surgical procedures in your facility.*	NOT APPLICABLE				
10	A standard process based on an established definition is used to determine if a pediatric patient is a **HIGH-RISK PATIENT** for respiratory depression; **and** this information is documented in a designated location in the EHR or medical record and used to establish a therapeutic and monitoring plan for patients undergoing a medical and/or surgical procedure. ***Scoring guideline:*** *Choose Not Applicable only if pediatric patients never undergo medical and/or surgical procedures in your facility.*	NOT APPLICABLE				
FAQ 11	On the day of the procedure, patient weights measured only in *metric* units (i.e., grams or kilograms) are obtained for all patients undergoing a medical and/or surgical procedure. ***Exception****: Stated, estimated, or historical weights are only acceptable in emergencies.*					
12	Computer information system screens, **MEDICATION DELIVERY DEVICE** screens (e.g., **SMART INFUSION PUMPS**), printouts, and preprinted order forms prompt for and display the patient's weight in *metric* units only.					
13	Patient selection criteria are followed for PCA and/or PCEA therapy, which exclude patients who cannot control medication delivery themselves due to their level of consciousness, physiological condition, or limited cognitive ability and comprehension. ***Scoring guideline:*** *Choose Not Applicable only if PCA and/or PCEA is never offered in your facility.*	NOT APPLICABLE				
14	Before administering local anesthetics, patients are screened to identify an increased risk of local anesthetic systemic toxicity (e.g., infants less than 6 months old, small patient size, advanced age, cardiac conditions, metabolic disease, liver disease, acidosis, medications that inhibit sodium channels [e.g., lidocaine, flecainide, bretylium, phenytoin, procainamide]); **and** any identified increase in toxicity risk is considered when planning local anesthetic use.					

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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 for some or all patients, orders, drugs, or staff.
D	This item is fully implemented for some patients, orders, drugs, or staff.
E	This item is fully implemented for all patients, orders, drugs, or staff.

Key Element I: Patient Information (continued)

		A	B	C	D	E
FAQ 15	For patients with type 1 or type 2 diabetes mellitus, blood glucose is monitored at least once within 4 hours before a medical and/or surgical procedure, at least once during a procedure that lasts 2 hours or more, and at least once within 2 hours after the procedure.					
16	Continuous electronic monitoring of both oxygenation (e.g., pulse oximetry) **and** adequacy of ventilation (e.g., **END-TIDAL CARBON DIOXIDE [$ETCO_2$] MONITORING [CAPNOGRAPHY]**) is required during a medical and/or surgical procedure for patients who are receiving **MODERATE SEDATION, DEEP SEDATION, MAC, REGIONAL ANESTHESIA** (with a local anesthetic and an opioid), and/or **GENERAL ANESTHESIA**. ***Scoring guideline:*** *Do not score higher than C if patients are only monitored for oxygenation (e.g., pulse oximetry) or adequacy of ventilation (e.g., **END-TIDAL CARBON DIOXIDE [$ETCO_2$] MONITORING [CAPNOGRAPHY]**), rather than both.*					
17	Continuous electronic monitoring of both oxygenation (e.g., pulse oximetry) **and** adequacy of ventilation (e.g., **END-TIDAL CARBON DIOXIDE [$ETCO_2$] MONITORING [CAPNOGRAPHY]**) is required postoperatively or postprocedurally for patients who have received **MODERATE SEDATION, DEEP SEDATION, MAC, REGIONAL ANESTHESIA** (with a local anesthetic and an opioid), and/or **GENERAL ANESTHESIA** until facility-defined parameters for recovery have been reached. ***Scoring guideline:*** *Do not score higher than C if patients are only monitored for oxygenation (e.g., pulse oximetry) or adequacy of ventilation (e.g., **END-TIDAL CARBON DIOXIDE [$ETCO_2$] MONITORING [CAPNOGRAPHY]**), rather than both.*					
FAQ 18	Continuous electronic monitoring of both oxygenation (e.g., pulse oximetry) **and** adequacy of ventilation (e.g., **END-TIDAL CARBON DIOXIDE [$ETCO_2$] MONITORING [CAPNOGRAPHY]**) is required for patients in the perioperative setting who are receiving continuous or intermittent IV or neuraxial opioids (including PCA or PCEA). ***Scoring guideline:*** *Do not score higher than C if patients are only monitored for oxygenation (e.g., pulse oximetry) or adequacy of ventilation (e.g., **END-TIDAL CARBON DIOXIDE [$ETCO_2$] MONITORING [CAPNOGRAPHY]**), rather than both. Choose Not Applicable only if patients never receive IV or neuraxial opioids in your facility.*					NOT APPLICABLE
19	Postoperative and postprocedural patients receiving continuous or intermittent IV or neuraxial opioids (including PCA or PCEA) are monitored at facility-defined frequencies for the following: level of sedation using a sedation scale; pain score; and vital signs (including rate, depth, and quality of respirations). ***Scoring guideline:*** *Choose Not Applicable only if patients never receive IV or neuraxial opioids in your facility.*					NOT APPLICABLE

continued on page 34

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 for some or all patients, orders, drugs, or staff.
D	This item is fully implemented for some patients, orders, drugs, or staff.
E	This item is fully implemented for all patients, orders, drugs, or staff.

Key Element I: Patient Information (continued)

		A	B	C	D	E
20	Continuous electronic monitoring of both oxygenation (e.g., pulse oximetry) **and** adequacy of ventilation (e.g., **END-TIDAL CARBON DIOXIDE [$ETCO_2$] MONITORING [CAPNOGRAPHY]**) is required for patients in the perioperative setting who are receiving **REGIONAL ANESTHESIA** (e.g., interscalene block) with a local anesthetic and an opioid. ***Scoring guideline:*** *Do not score higher than C if patients are only monitored for oxygenation (e.g., pulse oximetry) or adequacy of ventilation (e.g., **END-TIDAL CARBON DIOXIDE [$ETCO_2$] MONITORING [CAPNOGRAPHY]**), rather than both. Choose Not Applicable only if patients never receive **REGIONAL ANESTHESIA** with a local anesthetic and an opioid in your facility.*					NOT APPLICABLE
21	Postoperative and postprocedural patients receiving **REGIONAL ANESTHESIA** (e.g., interscalene block) with a local anesthetic and an opioid are monitored at facility-defined frequencies for the following: level of sedation using a sedation scale; mental and neurological status; pain score; degree of motor or sensory block (if applicable); and vital signs (including rate, depth, and quality of respirations). ***Scoring guideline:*** *Choose Not Applicable only if patients never receive **REGIONAL ANESTHESIA** with a local anesthetic and an opioid in your facility.*					NOT APPLICABLE
22	Patients who receive a local anesthetic into a body part (e.g., knee, elbow, shoulder, gums) involved in a medical and/or surgical procedure are monitored for at least 30 minutes after injection for signs of an adverse reaction, even when the local anesthetic dose is small; atypically administered (e.g., subcutaneous, mucosal, topical); administered by a surgeon, podiatrist, or dentist; or after recent tourniquet deflation.					
23	After a medical and/or surgical procedure, patients who have received **MODERATE SEDATION, DEEP SEDATION, MAC, REGIONAL ANESTHESIA** with an opioid, and/or **GENERAL ANESTHESIA** are monitored in a recovery area staffed with practitioners who are trained to monitor and recover sedated patients.					
24	Predefined criteria for adults (e.g., Aldrete Scoring System, Post-Anesthetic Discharge Scoring System), and for neonates and/or pediatric patients if applicable (e.g., ability to remain awake for at least 20 minutes in a quiet environment), are used to determine when a patient has approached a pre-sedation state and can be discharged from the facility or no longer requires postprocedural recovery monitoring.					
25	A longer period of monitoring beyond meeting predefined criteria (see item # 24) is required for patients who have received a long-acting sedative, a reversal agent in the **POST-ANESTHESIA CARE UNIT** and/or other recovery area, and/or have an anatomical airway problem or underlying medical condition that might compromise blood pressure or ventilation (e.g., sleep-disordered breathing), or if the ability of the responsible adult to observe the patient after discharge is limited.					

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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 for some or all patients, orders, drugs, or staff.
D	This item is fully implemented for some patients, orders, drugs, or staff.
E	This item is fully implemented for all patients, orders, drugs, or staff.

Key Element II: Drug Information

		A	B	C	D	E
Core Characteristic # 2 *Essential drug information is readily available in useful form and considered when prescribing, dispensing, and administering perioperative medications, and when monitoring the effects of these medications.*						
26	Medication-related reference materials (e.g., commercially available and facility-prepared charts, guidelines, protocols, policies) used in the perioperative setting are approved by an appropriate interdisciplinary committee (e.g., pharmacy and therapeutics); do not include **ERROR-PRONE ABBREVIATIONS**, including drug name abbreviations (e.g., AT II, AT III, epi); **and** medication-related reference materials are updated at least annually (commercially available materials are updated when the next edition/version becomes available).					
27	Equianalgesic dosing guidance for converting to and from oral, parenteral, and transdermal opioids has been reviewed and approved by a pain management specialist and/or an interdisciplinary committee (e.g., pharmacy and therapeutics); **and** the guidance is easily accessible to all practitioners when prescribing, dispensing/selecting, and administering perioperative opioids.					
28	Cumulative doses of organization-defined analgesics with safe **MAXIMUM DOSE** limits that should not be exceeded (e.g., daily acetaminophen limit, ketorolac 5 day limit) are tracked and visible to all practitioners when prescribing, verifying, dispensing/selecting, and administering medications, including doses administered intraoperatively.					
29	When same-day surgery patients are discharged with prescriptions or instructions to continue taking organization-defined analgesics limited by safe cumulative doses, prescriptions and instructions reflect the prescriber's awareness of doses administered prior to discharge, and patients are warned to not exceed safe limits.					
30	Safe dosage ranges, including **MAXIMUM DOSES**, have been established **and** are followed for local anesthetics and take into consideration patient-related factors such as age and organ dysfunction (e.g., renal impairment, liver impairment), which may influence the effect and the pharmacokinetics of the local anesthetic.					
31	Safe dosage ranges, including **MAXIMUM DOSES**, have been established **and** are followed for perioperative IV push doses and/or infusions of high-alert medications such as morphine, heparin, insulin, vasopressors, and neuromuscular blocking agents, and take into consideration patient-related factors such as age and organ dysfunction (e.g., renal impairment, liver impairment), which may influence the effect and the pharmacokinetics of the medications.					

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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 for some or all patients, orders, drugs, or staff.
D	This item is fully implemented for some patients, orders, drugs, or staff.
E	This item is fully implemented for all patients, orders, drugs, or staff.

Key Element II: Drug Information (continued)

		A	B	C	D	E
32	Safe dosage ranges, including **MAXIMUM DOSES**, have been established **and** are followed for **NEURAXIAL ANESTHESIA** and/or epidural injections, and take into consideration patient-related factors such as age and organ dysfunction (e.g., renal impairment, liver impairment), which may influence the effect and the pharmacokinetics of the medications. ***Scoring guideline:*** *Choose Not Applicable only if patients never receive* ***NEURAXIAL ANESTHESIA*** *and/or epidural injections.*	NOT APPLICABLE				
33	Standard policies, protocols, guidelines, and/or order sets have been established **and** are followed for postprocedural and/or postoperative IV solutions used to hydrate patients (adult, pediatric, and/or neonatal patients, as applicable) that acknowledge the importance of maintenance solutions with sodium chloride to prevent hyponatremia.					
34	Standard policies, protocols, guidelines, and/or order sets have been established **and** are followed to identify, treat, and monitor patients (adult, pediatric, and/or neonatal patients, as applicable) with signs of hyponatremia, water intoxication, and/or syndrome of inappropriate antidiuretic hormone (SIADH).					
35	Preoperative and postoperative orders for medications (including hydrating solutions) are entered into a **CPOE** system (or pharmacy computer system) **and** screened electronically against the patient's current medications and medical profile to identify potential allergies, contraindications, interactions, duplicate therapy, and appropriateness of doses before medications are administered, unless a delay in administration could result in patient harm. ***Scoring guideline:*** *Do not score higher than B if orders are not entered into a* ***CPOE*** *system or pharmacy computer system.*					
36	Preoperative and postoperative orders for medications (including hydrating solutions) are verified by a pharmacist (remotely or onsite) *before* medications are administered, unless a delay in administration could result in patient harm. ***Scoring guideline:*** *Do not score higher than B if a pharmacist is not available to verify orders before medication administration.*					
37	Standardized, organization-approved emergency drug dosing guidelines (including weight-based resources for pediatric and neonatal patients, if applicable) are available as a hardcopy on adult, pediatric, and/or neonatal code carts, or immediately accessible in an electronic form; **and** the information provided corresponds to the dosage forms and concentrations of drugs available in the code carts. ***Scoring guideline:*** *If your facility provides care to only adults, neonates, or pediatric patients, score this item as it relates to the patient population you serve.*					

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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 for some or all patients, orders, drugs, or staff.
D	This item is fully implemented for some patients, orders, drugs, or staff.
E	This item is fully implemented for all patients, orders, drugs, or staff.

Key Element II: Drug Information (continued)

		A	B	C	D	E
38	A protocol for treating malignant hyperthermia is readily accessible, along with current reference material from the Malignant Hyperthermia Association of the United States (MHAUS) and the MHAUS hotline (phone number).					
39	A standard process is in place for screening patients for recent **ANTITHROMBOTIC MEDICATION** use before medical and/or surgical procedures; **and** if therapy must be discontinued, protocols or guidelines define when these medications should be stopped and restarted, and when alternative agents to bridge the patient should be considered.					
40	If an **ANTITHROMBOTIC MEDICATION(S)** is held for a medical and/or surgical procedure and if the procedure is then postponed, a process is in place to remind the prescriber to evaluate the need to resume antithrombotic therapy.					
41	A perioperative glycemic management plan is in place **and** followed to manage oral hypoglycemic medications and insulin in patients with prediabetes or type 1 or type 2 diabetes mellitus preoperatively (while NPO) and postoperatively to reduce the likelihood of hyperglycemia or hypoglycemia.					
42	Practitioner- and/or procedure-specific preference cards provide clear and concise medication instructions in an electronic format (not handwritten), **and** are approved and/or updated annually by an interdisciplinary committee (e.g., pharmacy and therapeutics).					
43	The medication information contained in practitioner- and/or procedure-specific preference cards is communicated in a standardized format (e.g., medication name, concentration/strength, intended route, anticipated quantity, special handling instructions for high-alert medications and/or **HAZARDOUS DRUGS**); **and** the preference cards do not contain **ERROR-PRONE ABBREVIATIONS**, including drug name abbreviations.					

continued on page 38

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 for some or all patients, orders, drugs, or staff.
D	This item is fully implemented for some patients, orders, drugs, or staff.
E	This item is fully implemented for all patients, orders, drugs, or staff.

Key Element III: Communication of Drug Orders and Other Drug Information

		A	B	C	D	E
Core Characteristic # 3 *Methods of communicating drug orders and other drug information in the perioperative setting are streamlined, standardized, and automated to minimize the risk for error.*						
44	In the perioperative setting (including during **REGIONAL ANESTHESIA** initiated prior to a procedure), the practitioner providing a medication or solution to the surgeon, surgical technician, or **ANESTHESIA PROVIDER**, or placing a medication or solution on the sterile field (e.g., topical thrombin), states what is being provided (e.g., drug name, concentration, expiration date); **and** the recipient repeats back the information for verification.					
45	Intraoperatively (including during emergencies), when a surgeon asks an **ANESTHESIA PROVIDER** to administer drug therapy (e.g., heparin, protamine, oxytocin), the **ANESTHESIA PROVIDER** communicates the drug therapy administration to the rest of the team (e.g., drug name, dose if important).					
46	Intraoperatively (including during emergencies), drug therapy (e.g., vasopressors, chemotherapy, methylene blue) administered by practitioners within the sterile field is communicated to the **ANESTHESIA PROVIDER** and to the rest of the team (e.g., drug name, dose if important).					
47	During a medical and/or surgical procedure, when care is transferred (e.g., shift change, break) between **ANESTHESIA PROVIDERS**, the arriving **ANESTHESIA PROVIDER** confirms with the leaving **ANESTHESIA PROVIDER** the names, concentrations, labels, and remaining volumes of any medication or solution currently infusing and/or pulled/prepared for use to deliver the planned anesthesia.					
48	During a medical and/or surgical procedure, when care is transferred (e.g., shift change, break) between perioperative nurses or any other participating practitioner working within the sterile field, the arriving practitioner reviews the medications available on the back table or on the sterile field, and the amount and time that each medication was administered, with the practitioner(s) who is leaving the **OPERATING ROOM** or **PROCEDURE ROOM**.					
49	Face-to-face verbal orders from prescribers who are onsite in the facility are never accepted, except in emergencies or during sterile procedures where ungloving would be impractical.					
50	During a medical and/or surgical procedure, a medication order communicated verbally by the prescriber is read back (or repeated back under sterile conditions) to the prescriber, stating doses digit-by-digit (e.g., "one-five" instead of "15") for verification before administration; **and** the verbal order is documented in the EHR or medical record.					
FAQ 51	Standard order sets for pre- and postoperative care have been developed through group consensus, approved by an appropriate interdisciplinary committee (e.g., pharmacy and therapeutics), **and** are used to manage perioperative patients.					

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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 for some or all patients, orders, drugs, or staff.
D	This item is fully implemented for some patients, orders, drugs, or staff.
E	This item is fully implemented for all patients, orders, drugs, or staff.

Key Element III: Communication of Drug Orders and Other Drug Information (continued)

		A	B	C	D	E
52	PCA (and PCEA if used) is initially prescribed using a standard order set. ***Scoring guideline:*** *Choose Not Applicable only if PCA and/or PCEA is never offered in your facility.*	NOT APPLICABLE				
53	Order sets for PCA (and PCEA if used) have been established **and** are followed, which include: ***Scoring guideline:*** *Choose Not Applicable only if PCA and/or PCEA is never offered in your facility.*	Score Each Item Individually				
FAQ a	Recommended initial and **MAXIMUM DOSES** (**BOLUS DOSES** and demand doses) and a lockout interval based on whether the patient is **OPIOID-NAÏVE** or **OPIOID-TOLERANT** (adults), and/or a **HIGH-RISK PATIENT** for respiratory depression (adults and/or older pediatric patients)	NOT APPLICABLE				
b	Detection and management of inadequate analgesia	NOT APPLICABLE				
c	Monitoring guidelines	NOT APPLICABLE				
d	Sedation scores that indicate a need to increase the frequency of patient monitoring, adjust the PCA (or PCEA) dose, stop the PCA (or PCEA), call the prescriber, provide airway support and/or oxygen, and/or administer naloxone	NOT APPLICABLE				
e	An order for naloxone to reverse respiratory depression, including directions for use	NOT APPLICABLE				
54	Order sets for PCA and/or PCEA are initiated before leaving the **POST-ANESTHESIA CARE UNIT** and implemented before the patient has been transferred to an inpatient clinical unit. ***Exception:*** *The PCA or PCEA is specifically ordered to start in the inpatient unit or is clearly contraindicated due to patient safety concerns in the perioperative setting.* ***Scoring guideline:*** *Choose Not Applicable only if PCA and/or PCEA is never offered in your facility.*	NOT APPLICABLE				
55	Standard protocols, guidelines, and/or order sets have been established **and** are followed for the management of patients who receive an IV or neuraxial opioid postoperatively for pain management (excluding PCA and/or PCEA), which includes: ***Scoring guideline:*** *Choose Not Applicable only if patients never receive an IV or neuraxial opioid analgesic in your facility.*	Score Each Item Individually				

continued on page 40

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 for some or all patients, orders, drugs, or staff.
D	This item is fully implemented for some patients, orders, drugs, or staff.
E	This item is fully implemented for all patients, orders, drugs, or staff.

Key Element III: Communication of Drug Orders and Other Drug Information (continued)

		A	B	C	D	E
a	The use of specific opioids, including dosing guidelines that differentiate between the management of **OPIOID-NAÏVE**, **OPIOID-TOLERANT**, and/or **HIGH-RISK PATIENTS**; and conditions that require dose adjustments	NOT APPLICABLE				
b	Detection and management of inadequate analgesia	NOT APPLICABLE				
c	Monitoring requirements, including the frequency, intensity, duration, and methods of monitoring based on patients' individual risk factors, response to therapy, and pharmacologic regimen	NOT APPLICABLE				
d	Identification and management of potentially serious adverse effects such as respiratory depression, inadequate oxygenation/ventilation, unintended advancing sedation, and allergic reaction	NOT APPLICABLE				
e	An order for naloxone to reverse respiratory depression, including directions for use	NOT APPLICABLE				
56	Standard protocols, guidelines, and/or order sets have been established **and** are followed for the management of patients who receive **NEURAXIAL ANESTHESIA**, which include: ***Scoring guideline:*** *Choose Not Applicable only if* ***NEURAXIAL ANESTHESIA*** *is never provided in your facility.*	Score Each Item Individually				
a	Detection and management of inadequate analgesia	NOT APPLICABLE				
b	Monitoring requirements, including the frequency, intensity, duration, and methods of monitoring based on patients' individual risk factors, response to therapy, and pharmacologic regimen	NOT APPLICABLE				
c	Identification and management of potentially serious adverse effects such as respiratory depression, accidental catheter disconnection, opioid/local anesthetic systemic toxicity, and allergic reaction	NOT APPLICABLE				
d	When to monitor, discontinue, and restart **ANTITHROMBOTIC MEDICATIONS** (to prevent spinal hematoma)	NOT APPLICABLE				
57	Order sets have been established **and** are used for **ELASTOMERIC PUMPS**, which include the indication for use; the medication, concentration, dose, infusion rate, and route of administration; concomitant analgesics (if acceptable); and patient monitoring requirements. ***Scoring guideline:*** *Choose Not Applicable only if* ***ELASTOMERIC PUMPS*** *are never used in the perioperative setting in your facility.*	NOT APPLICABLE				

continued on page 41

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 for some or all patients, orders, drugs, or staff.
D	This item is fully implemented for some patients, orders, drugs, or staff.
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Key Element III: Communication of Drug Orders and Other Drug Information (continued)

		A	B	C	D	E
58	When patients are transferred from the **OPERATING ROOM** or **PROCEDURE ROOM** to a **POST-ANESTHESIA CARE UNIT** or recovery area, the **ANESTHESIA PROVIDER** or **NON-ANESTHESIOLOGIST SEDATION PRACTITIONER** immediately communicates a verbal **HAND-OFF** report covering the procedure and any complications, allergy information, anesthesia and other medications/parenteral fluids administered, patient assessment (e.g., vital signs, estimated blood loss), any implanted devices, tubes, or pumps, the plan for pain control, and any other relevant medication-related information; **and** the **ANESTHESIA PROVIDER** or **NON-ANESTHESIOLOGIST SEDATION PRACTITIONER** supplies associated documentation to the practitioner(s) accepting care of the patient for recovery.					
59	After a medical and/or surgical procedure, if a patient is being transferred to an external healthcare provider (e.g., long-term care, rehabilitation, assisted living), a perioperative practitioner provides a verbal **HAND-OFF** via phone to a practitioner at the transferring facility (in addition to providing a written transfer/referral form) prior to the transfer.					
60	After a medical and/or surgical procedure, if a patient is being transferred to an external healthcare provider (e.g., long-term care, rehabilitation, assisted living), a perioperative practitioner prepares a written standard transfer/referral form, conducts medication reconciliation, and verifies the accuracy of the medication information provided, specifying which medications are being discontinued, the reason for discontinuation, and any new medications or changes to previous medications that the patient was taking prior to the procedure, including the time of the last dose administered.					
61	A standard communication mechanism is in place to notify perioperative practitioners (e.g., **ANESTHESIA PROVIDERS**, surgeons, nurses) when a potential or actual drug shortage or withdrawal from the market could impact their practice; **and** practitioners are educated about rationing drugs in short supply (e.g., use with priority patients) and/or available alternative products/concentrations and how to use them safely, including warnings about potential adverse events, prior to their availability.					
62	Systems are in place to deter and promptly identify drug diversion at any point of the **MEDICATION-USE PROCESS**, from procurement to administration and/or wasting of unused drug; **and** an internal group is available to quickly investigate concerns that arise during drug diversion surveillance.					
63	Perioperative leaders and managers promote interdisciplinary respect and cooperation, actively engage in dialogue about the untoward consequences of intimidation, and deal effectively with reported and observed disruptive behaviors to lessen the hierarchal structures that make it difficult or uncomfortable for people, regardless of education, experience, or rank, to raise concerns.					
64	A defined, clear, and effective process is followed to resolve conflicts when there is concern or disagreement about the safety of a medication order or practice that may place a patient at risk; **and** practitioners are aware of this process.					

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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 for some or all patients, orders, drugs, or staff.
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Key Element IV: Drug Labeling, Packaging, and Nomenclature

		A	B	C	D	E
Core Characteristic # 4 *Strategies are undertaken to minimize the possibility of perioperative errors with pharmacy-prepared, **COMMERCIALLY MANUFACTURED**, and/or **COMMERCIALLY PREPARED** drug products that have similar or confusing labeling/packaging and/or drug names that look and/or sound alike.*						
FAQ 65	An interdisciplinary group of perioperative practitioners examines the labeling and packaging of medications (pharmacy-prepared, **COMMERCIALLY MANUFACTURED**, **COMMERCIALLY PREPARED**) being considered for use in the perioperative setting to identify error potential before use.					
66	Medications that have similar or confusing labels, packaging, and/or drug names are stored separately in individual compartments in anesthesia trays/kits/carts and/or ADCs (e.g., locked, lidded compartments).					
67	Auxiliary warnings and/or other label enhancements (e.g., **TALL MAN LETTERING** to accentuate differences in look-alike drug name pairs) are used on packages and/or storage compartments of perioperative medications with look-alike or error-prone names, packages, and/or labels.					
68	**EPINEPH**rine-containing local anesthetics (e.g., lidocaine 1% with **EPINEPH**rine 1:100,000) are stored separately from plain local anesthetic formulations (e.g., lidocaine 1%) in all perioperative storage areas, including trays, kits, carts, and/or ADCs.					
69	Irrigation solutions are not placed on the same pole as an IV infusion; **and** a warning label stating, "**For Irrigation Use Only**," is included on the irrigation solution container.					
70	Medication storage in medication trays, kits, carts, and/or ADCs in the perioperative setting is configured to allow practitioners to immediately view the label while selecting medications (i.e., label is facing up), instead of a "cap up" storage configuration which has only the top of the vial facing up.					
71	Vials of tranexamic acid stocked in ADCs and anesthesia trays, kits, carts, drawers, or other anesthesia storage areas are sequestered or separated from look-alike vials used for **REGIONAL ANESTHESIA** (e.g., bupivacaine, ropivacaine). ***Scoring guideline:*** *Choose Not Applicable only if tranexamic acid vials are never stocked in your facility (e.g., tranexamic acid is never used for patients, or vials have been fully replaced by **COMMERCIALLY MANUFACTURED** and/or **COMMERCIALLY PREPARED** small volume infusion bags of tranexamic acid).*				NOT APPLICABLE	
72	Final containers (e.g., syringes, IV bags, repackaged vials) of pharmacy-prepared (not **ANESTHESIA PROVIDER**-prepared) neuromuscular blocking agents include a clearly visible warning (e.g., "**Warning: Paralyzing Agent—Causes Respiratory Arrest**;" "**Warning: Causes Respiratory Paralysis—Patient Must Be Ventilated**") that does not obscure important label information to communicate that respiratory paralysis will occur and ventilation is required.					

continued on page 43

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 for some or all patients, orders, drugs, or staff.
D	This item is fully implemented for some patients, orders, drugs, or staff.
E	This item is fully implemented for all patients, orders, drugs, or staff.

Key Element IV: Drug Labeling, Packaging, and Nomenclature (continued)

		A	B	C	D	E
73	Storage bins and/or ADC pockets, drawers, kits, and/or trays containing neuromuscular blocking agents include an auxiliary label to clearly communicate that respiratory paralysis will occur and ventilation is required (e.g., "**Warning: Paralyzing Agent—Causes Respiratory Arrest**;" "**Warning: Causes Respiratory Paralysis—Patient Must Be Ventilated**"). ***Scoring guideline:*** *Compliance can also be achieved by affixing an auxiliary warning label (in addition to the manufacturers' warning on the cap and ferrule) directly on all vials and/or other containers stocked in the storage locations, or by displaying a warning on an ADC screen, which must be acknowledged prior to removal of a neuromuscular blocking agent—score accordingly.*					
FAQ 74	Perioperative settings only purchase and use **COMMERCIALLY PREPARED** (e.g., 503B outsourcing facility prepared) products that follow USP <7> labeling practices, which require the total amount of drug per total volume to be the primary display of strength, followed by the per mL amount in parentheses. ***Scoring guideline:*** *Choose Not Applicable only if: a)* **COMMERCIALLY PREPARED** *products are never purchased or used by your facility; instead, pharmacy-prepared syringes are used in the perioperative setting; or b)* **COMMERCIALLY PREPARED** *products are never purchased or used by your facility; instead, practitioner-prepared syringes are used in the perioperative setting.*	NOT APPLICABLE				
75	Lipid-based lubricants (e.g., Rotaglide, ViperSlide) used during atherectomy procedures, knee arthroplasties, or cardiac catheterizations never enter the anesthesia workspace and are never available on the same work surface as propofol or small volume infusion bags of intralipids; **and** these lubricants are introduced to the sterile field only after induction of sedation or anesthesia.					
Core Characteristic # 5 *Readable labels that clearly identify drugs are on all drug containers in the perioperative setting, and drugs remain labeled up to the point of actual drug administration.*						
76	Medication storage bins, trays, kits, drawers, shelves, and compartments in the perioperative setting are labeled using electronically generated labels that include, at a minimum, the generic medication name (using **TALL MAN LETTERING**, as appropriate) and concentration; handwritten labels are not used.					
77	Preprinted sterile labels, or sterile blank labels and smudge-proof markers, are used for labeling medications/solutions on the sterile field during medical and/or surgical procedures.					

continued on page 44

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B	This item has been formally discussed and considered, but it has not been implemented.
C	This item has been partially implemented for some or all patients, orders, drugs, or staff.
D	This item is fully implemented for some patients, orders, drugs, or staff.
E	This item is fully implemented for all patients, orders, drugs, or staff.

Key Element IV: Drug Labeling, Packaging, and Nomenclature (continued)

		A	B	C	D	E
78	In the **PREOPERATIVE HOLDING AREA** and in the **POST-ANESTHESIA CARE UNIT** or recovery area, practitioners are provided with preprinted or blank medication and solution labels; **and** practitioners label each medication or solution they prepare with, at a minimum, the drug or solution name, strength/concentration, amount of medication (or solution that contains medication) if not apparent from the container (e.g., syringe or medicine cup without measurement increments), the diluent (if used) name and volume if not apparent from the container, and the expiration date and time when not used within 24 hours or when expiration occurs in less than 24 hours. ***Exception:*** *The date and time are not necessary for short procedures, as defined by the facility.*					
79	The containers (e.g., syringes, medicine cups, basins) holding medications and solutions (e.g., lidocaine, contrast, methylene blue, thrombin) on the sterile field are labeled immediately after filling (i.e., labels are not applied to empty containers before filling), even if only one medication or solution is present.					
80	The labels of practitioner-prepared medication and solution containers (e.g., syringes, medicine cups, basins) on the sterile field are free of **ERROR-PRONE ABBREVIATIONS**, including drug name abbreviations.					
81	The labels on practitioner-prepared medication and solution containers (e.g., syringes, medicine cups, basins) on the sterile field include, at a minimum, the drug or solution name, strength/concentration, amount of medication or solution that contains medication if not apparent from the container (e.g., syringe, medicine cup, or basin without measurement increments), the diluent (if used) name and volume if not apparent from the container, and the expiration date and time when not used within 24 hours or when expiration occurs in less than 24 hours. ***Exception:*** *The date and time are not necessary for short procedures, as defined by the facility.*					
82	Before affixing a sterile preprinted or handwritten label to the container of a medication or solution prepared on the sterile field, the label is compared visually to the original container and read back to the circulating nurse verbally for confirmation.					
83	For medications and solutions delivered to the sterile field during a medical and/or surgical procedure, the original containers are kept in the **OPERATING ROOM** and/or **PROCEDURE ROOM** for reference and are not discarded until after the medical and/or surgical procedure has concluded.					

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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 for some or all patients, orders, drugs, or staff.
D	This item is fully implemented for some patients, orders, drugs, or staff.
E	This item is fully implemented for all patients, orders, drugs, or staff.

Key Element IV: Drug Labeling, Packaging, and Nomenclature (continued)

		A	B	C	D	E
84	Syringes of medications prepared by **ANESTHESIA PROVIDERS** are labeled with the complete name and concentration/dose of the drug, and the expiration date and time when the medication will not be used within 24 hours or when expiration occurs in less than 24 hours. (An anesthesia color-differentiated drug class label alone is not sufficient.) ***Exception:*** *Labeling is not required if the syringe is prepared immediately before drug administration, never leaves the hand of the preparer before administration, and the entire dose in the syringe is administered or the remaining volume is immediately wasted or discarded before the syringe leaves the preparer's hand. Expiration date and time are not required for short procedures, as defined by the facility.*					
85	The labels of medication syringes prepared by **ANESTHESIA PROVIDERS** and other perioperative practitioners are free of **ERROR-PRONE ABBREVIATIONS**.					
86	**ELASTOMERIC PUMPS** initiated for patients in the perioperative setting are labeled with the name of the drug, concentration, infusion rate (mL per hour and dose per hour), and start date. ***Exception:*** *Infusion rate and dose should not be included on the label if they might change due to titration to effect (e.g., increased or decreased due to pain level).*					

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C	This item has been partially implemented for some or all patients, orders, drugs, or staff.
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E	This item is fully implemented for all patients, orders, drugs, or staff.

Key Element V: Drug Standardization, Storage, and Distribution

		A	B	C	D	E
Core Characteristic # 6 *IV and* ***REGIONAL ANESTHESIA*** *solutions, drug concentrations, doses, and administration times are standardized whenever possible.*						
87	The facility has established standard concentrations for adult and/or neonatal/pediatric perioperative IV infusions of high-alert medications such as morphine, heparin, insulin, vasopressors, and neuromuscular blocking agents, which are used for 90% of adult and/or neonatal/pediatric patients.					
88	The facility has established standard mixtures and concentrations for adult and/or neonatal/pediatric **NEURAXIAL ANESTHESIA**, which are used for 90% of adult and/or neonatal/pediatric patients. ***Scoring guideline:*** *Choose Not Applicable only if your facility never administers* ***NEURAXIAL ANESTHESIA.***	NOT APPLICABLE				
89	The facility has established standard mixtures and concentrations for adult and/or neonatal/pediatric peripheral nerve blocks, which are used for 90% of adult and/or pediatric patients. ***Scoring guideline:*** *Choose Not Applicable only if your facility never administers peripheral nerve blocks.*	NOT APPLICABLE				
90	The facility has established standard drug concentrations and dosing units between the **OPERATING ROOM/PROCEDURE ROOM** and inpatient critical care unit(s) within the same health system for infusions started in the **OPERATING ROOM/ PROCEDURE ROOM** that are likely to continue in critical care units. ***Scoring guideline:*** *Choose Not Applicable only if your facility never transfers patients who have undergone a medical and/or surgical procedure to an inpatient critical care unit within the same health system.*	NOT APPLICABLE				
91	Standardized **COMMERCIALLY MANUFACTURED** solutions are used in the perioperative setting for all IV hydrating solutions.					
FAQ 92	Standardized **COMMERCIALLY MANUFACTURED**, **COMMERCIALLY PREPARED**, and/or pharmacy-prepared (not perioperative practitioner-prepared) solutions are used in the perioperative setting, unless they are needed in emergent situations, for the following:	Score Each Item Individually				
a	IV medication infusions					
b	**REGIONAL ANESTHESIA** infusions (excluding **BOLUS DOSES**) ***Scoring guideline:*** *Choose Not Applicable only if* ***REGIONAL ANESTHESIA*** *infusions are never used in your facility.*	NOT APPLICABLE				

continued on page 47

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 for some or all patients, orders, drugs, or staff.
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E	This item is fully implemented for all patients, orders, drugs, or staff.

Key Element V: Drug Standardization, Storage, and Distribution (continued)

		A	B	C	D	E
c	Parenteral local anesthetics used during eye surgery ***Scoring guideline:*** *Choose Not Applicable only if eye surgeries requiring local anesthetics are never performed in your facility.*	NOT APPLICABLE				
d	Irrigation and flush solutions (e.g., heparinized saline)					
e	**ELASTOMERIC PUMP** medications and solutions ***Scoring guideline:*** *Choose Not Applicable only if* ***ELASTOMERIC PUMPS*** *are never used in your facility.*	NOT APPLICABLE				
f	Cardioplegic solutions ***Scoring guideline:*** *Choose Not Applicable only if cardioplegic solutions are never used in your facility.*	NOT APPLICABLE				
FAQ 93	For adults, **COMMERCIALLY MANUFACTURED**, **COMMERCIALLY PREPARED**, and/or pharmacy-prepared prefilled syringes of medications (e.g., neuromuscular blocking agents, opioids, induction agents, tranquilizers, vasopressors, anticholinergics) are used in the perioperative setting (including by **ANESTHESIA PROVIDERS**) for at least 80% of all adult medications administered from a syringe; perioperative practitioner-prepared syringes of medications are avoided whenever possible. ***Scoring guideline:*** *Choose Not Applicable only if adult patients never undergo medical and/or surgical procedures in your facility.*	NOT APPLICABLE				
FAQ 94	For neonates/pediatric patients, **COMMERCIALLY MANUFACTURED**, **COMMERCIALLY PREPARED**, and/or pharmacy-prepared prefilled syringes of medications (e.g., neuromuscular blocking agents, opioids, induction agents, tranquilizers, vasopressors, anticholinergics) are used in the perioperative setting (including by **ANESTHESIA PROVIDERS**) for at least 80% of all neonatal/pediatric medications administered from a syringe; perioperative practitioner-prepared syringes of medications are avoided whenever possible. ***Scoring guideline:*** *Choose Not Applicable only if neonates and/or pediatric patients never undergo medical and/or surgical procedures in your facility.*	NOT APPLICABLE				
Core Characteristic # 7 *Medications are provided to and stocked in perioperative settings in a safe and secure manner and are available for administration within a time frame that meets essential patient needs.*						
95	Perioperative medication storage areas, including ADCs and anesthesia medication trays, kits, and/or carts, have a standardized configuration; **and** all medications, including different forms and concentrations of the same medication, are stored in separate compartments.					
96	Perioperative medication storage locations, including ADCs and anesthesia medication trays, kits, and/or carts, are secured or locked except when in use.					

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B	This item has been formally discussed and considered, but it has not been implemented.
C	This item has been partially implemented for some or all patients, orders, drugs, or staff.
D	This item is fully implemented for some patients, orders, drugs, or staff.
E	This item is fully implemented for all patients, orders, drugs, or staff.

Key Element V: Drug Standardization, Storage, and Distribution (continued)

		A	B	C	D	E
97	Separate anesthesia trays, kits, and/or carts are used to store **REGIONAL ANESTHESIA** and **GENERAL ANESTHESIA** agents. ***Scoring guideline:*** *Choose Not Applicable only if your facility never provides* ***REGIONAL ANESTHESIA.***					
		NOT APPLICABLE				
98	Specialty medications (e.g., concentrated potassium chloride, oxytocin, terbutaline, mannitol) that may be required by subspecialty **ANESTHESIA PROVIDERS** (e.g., anesthesia used for neurological, cardiovascular, obstetrical, transplant surgeries) are stored in separate carts; supplemental trays, kits, or drawers; or in another manner that does not alter the standard storage configuration of routine anesthesia medications or allow the subspecialty medications to become available for use outside of designated specialty cases.					
99	In perioperative settings, all appropriate antidotes, reversal agents, and rescue agents, with directions for preparation and use, are readily available and easily accessible; **and** protocols or coupled order sets permit their emergency administration to prevent patient harm. *Examples of appropriate antidotes, reversal agents, and rescue agents that should be available in perioperative settings include: methylene blue and oxygen (to treat methemoglobinemia from oral anesthetic sprays or gels); naloxone (opioid toxicity); flumazenil (benzodiazepine toxicity); dantrolene/Ryanodex (malignant hyperthermia); lipid emulsion (local anesthetic systemic toxicity); glycopyrrolate and neostigmine (neuromuscular blocking agent reversal).*					
100	Benzocaine oral topical anesthetic spray used to suppress the gag reflex prior to a medical and/or surgical procedure is provided only in a metered dose sprayer container to help control the duration of each spray and the amount of medication applied, thus lessening the risk of methemoglobinemia. ***Scoring guideline:*** *Choose Not Applicable only if your facility never uses benzocaine oral topical anesthetic spray.*					
		NOT APPLICABLE				
101	An emergency code cart(s) is readily available in the perioperative setting in a convenient location(s) that takes minimal time to bring to a patient's bedside if needed.					
102a	If medical and/or surgical procedures are performed on both adults and children, separate adult and pediatric emergency code carts are available and clearly identified. ***Scoring guideline:*** *Choose Not Applicable for either 102a or 102b if both adults and children never undergo medical and/or surgical procedures in your facility.*					
		NOT APPLICABLE				
OR	OR					
102b	If medical and/or surgical procedures are performed on both adults and children, a universal emergency code cart is available with supplies and medications for adult and pediatric patients in separate trays or drawers, which are clearly identified. ***Scoring guideline:*** *Choose Not Applicable for either 102a or 102b if both adults and children never undergo medical and/or surgical procedures in your facility.*					
		NOT APPLICABLE				

continued on page 49

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 for some or all patients, orders, drugs, or staff.
D	This item is fully implemented for some patients, orders, drugs, or staff.
E	This item is fully implemented for all patients, orders, drugs, or staff.

Key Element V: Drug Standardization, Storage, and Distribution (continued)

		A	B	C	D	E
103	Solutions intended for IV, neuraxial, or regional/local administration are not stored or placed temporarily in warming cabinets intended for linens or irrigation solutions.					
104	In perioperative locations where anesthetic agents that may trigger malignant hyperthermia (e.g., succinylcholine, inhalation agents) are used, the sterile water for injection required for the preparation of dantrolene/Ryanodex is available in vial(s) or a 2- or 3-liter bag, which is sequestered from other IV products in a malignant hyperthermia kit or cart; **and** if a 2- or 3-liter bag is in the kit or cart, it is clearly labeled to avoid IV administration.					
FAQ 105	In perioperative locations where anesthetic agents that may trigger malignant hyperthermia are used (e.g., succinylcholine, inhalation agents), a full dose of dantrolene/Ryanodex (drug mixed with required diluent) can be prepared and administered within 10 minutes of diagnosing a malignant hyperthermia event.					
106	Perioperative practitioners, including nurses and **ANESTHESIA PROVIDERS**, select the anticipated medications needed for one case at a time, **and** prepare the medications immediately prior to the medical and/or surgical procedure (e.g., medications are not pre-drawn into syringes or prepared in communal infusion bags for use during multiple cases or for cases throughout the day).					
107	Perioperative practitioners never mix two or more medications into the same syringe (e.g., ketamine and propofol) or IV infusion bag.					
108	For patients undergoing **REGIONAL ANESTHESIA**, a local anesthetic with a rapid onset of action (e.g., lidocaine) is never mixed with a local anesthetic of longer duration of action (e.g., bupivacaine) to prevent the risk of additive toxicity.					
109	Multiple-dose vials (30 mL) of **EPINEPH**rine for injection (1 mg/mL) are NOT stocked in, or provided to, the perioperative setting (they are only available in the pharmacy).					
110	Medications intended for topical use (e.g., topical thrombin) are never drawn into a parenteral syringe.					

continued on page 50

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E	This item is fully implemented for all patients, orders, drugs, or staff.

Key Element V: Drug Standardization, Storage, and Distribution (continued)

		A	B	C	D	E
111	Presoaked **EPINEPH**rine pledgets, rather than 30 mL vials of **EPINEPH**rine, are used for topical application during a medical and/or surgical procedure.					
112	Irrigation solution containers stocked in, and/or dispensed to, perioperative settings are packaged in 2- or 3-liter bags, pour bottles, or other route-specific packaging to differentiate them from IV bags; **and** irrigation solutions and IV bags are stored separately.					
Core Characteristic # 8 *Access to perioperative medications is restricted and controlled.*						
113 a	**In facilities using PROFILED ADCs:** In the **PREOPERATIVE HOLDING AREA** and the **POST-ANESTHESIA CARE UNIT** or recovery area, **PROFILED ADCs** are used **and** require a pharmacist to review preoperative and postoperative orders before medications can be removed from the cabinet. ***Exception:*** *The full access/critical override mode can be used for urgent or lifesaving situations where a delay would harm the patient.* ***Scoring guideline:*** *Choose Not Applicable only if ADCs are not available in the **PREOPERATIVE HOLDING AREA** or the **POST-ANESTHESIA CARE UNIT** or recovery area in your facility.*					
	NOT APPLICABLE					
OR	OR					
113 b	**In facilities using AUTOVERIFICATION procedures:** In the **PREOPERATIVE HOLDING AREA** and the **POST-ANESTHESIA CARE UNIT** or recovery area, **AUTOVERIFICATION** procedures are in place for removal of all or certain medications from an ADC based on organization-defined inclusion criteria and protocols; **and** a pharmacist retrospectively reviews preoperative and postoperative medication orders. ***Exception:*** *The full access/critical override mode can be used for urgent or lifesaving situations where a delay would harm the patient.* ***Scoring guideline:*** *Choose Not Applicable only if ADCs are not available in the **PREOPERATIVE HOLDING AREA** or the **POST-ANESTHESIA CARE UNIT** or recovery area in your facility.*					
	NOT APPLICABLE					
OR	OR					
113 c	**In facilities using non-profiled ADCs:** In the **PREOPERATIVE HOLDING AREA** and the **POST-ANESTHESIA CARE UNIT** or recovery area, medications are obtained from non-profiled ADCs; **and** a pharmacist retrospectively reviews preoperative and postoperative medication orders. ***Exception:*** *The full access/critical override mode can be used for urgent or lifesaving situations where a delay would harm the patient.* ***Scoring guideline:*** *Choose Not Applicable only if ADCs are not available in the **PREOPERATIVE HOLDING AREA** or the **POST-ANESTHESIA CARE UNIT** or recovery area in your facility.*					
	NOT APPLICABLE					

continued on page 51

A	There has been no activity to implement this item.
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Key Element V: Drug Standardization, Storage, and Distribution (continued)

		A	B	C	D	E
114	In the **PREOPERATIVE HOLDING AREA** and the **POST-ANESTHESIA CARE UNIT** or recovery area, a medication order (e.g., electronic, written, verbal/telephone) is obtained (or an approved protocol is in effect) prior to removing any medication from unit stock, including prior to removing medications from ADCs (if available), even if they are removed using the override function.					
FAQ 115	In the **PREOPERATIVE HOLDING AREA** and the **POST-ANESTHESIA CARE UNIT** or recovery area, interactive ADC alerts require users to enter or select clinically relevant information (e.g., purpose for drug removal, confirmation of required continuous electronic monitoring of oxygenation and/or ventilation, verification that the patient is ventilated [for neuromuscular blockers]) prior to removal of certain organization-identified medications. ***Scoring guideline:*** *Choose Not Applicable only if ADCs are not available in the **PREOPERATIVE HOLDING AREA** or the **POST-ANESTHESIA CARE UNIT** or recovery area in your facility.*	NOT APPLICABLE				
116	Refrigerated and nonrefrigerated neuromuscular blocking agents stored inside **OPERATING ROOMS** and/or **PROCEDURE ROOMS**, including in **ANESTHESIA PROVIDER** supplies and ADCs, are segregated from other medications, with different agents each stored in a separate compartment or drawer.					
117	Refrigerated and nonrefrigerated neuromuscular blocking agents stored in perioperative settings outside of **OPERATING ROOMS** and **PROCEDURE ROOMS** (e.g., anesthesia workrooms, **PREOPERATIVE HOLDING AREA**, **POST-ANESTHESIA CARE UNIT**) are sequestered in a rapid sequence intubation kit and/or segregated from other medications, with different agents each stored in a separate lidded compartment or drawer.					
118	Processes are in place in perioperative settings for managing expiration dates of refrigerated medications that may be temporarily stored outside of refrigeration (e.g., neuromuscular blocking agents).					
119	In anesthesia trays, kits, carts, and/or drawers, the quantity of medications (e.g., vials, ampules, syringes) is limited to the amount needed to meet essential patient needs between replenishment (e.g., not to exceed 72 hours); **and** the variety of different medication concentrations and formulations is restricted.					
120	The placement of topical thrombin on the sterile field is delayed whenever possible until after all parenteral products have been administered; **and** once clearly labeled topical thrombin has been placed on the sterile field, it is sequestered or separated from any parenteral products that are open or immediately available for use on the sterile field.					
121	To prevent an inadvertent bolus of any residual drug remaining in the IV tubing following drug administration, IV administration sets are immediately flushed (or the IV sets are changed) at the rate recommended by the manufacturer, documented in peer reviewed literature, or approved by the organization.					

continued on page 52

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Key Element V: Drug Standardization, Storage, and Distribution (continued)

		A	B	C	D	E
122	All continuous IV medications and epidural infusions (e.g., continuous infusions of magnesium, neuromuscular blocking agents, opioids) and associated administration sets are immediately discarded after discontinuation (and not left to hang on an IV pole or at the bedside).					
123	**CONTROLLED MEDICATIONS** are retrieved by the **ANESTHESIA PROVIDER, NON-ANESTHESIOLOGIST SEDATION PRACTITIONER**, or other practitioner who will be administering the medication; **and** removal of **CONTROLLED MEDICATIONS** occurs immediately prior to each medical and/or surgical procedure. ***Exception:*** *In rare emergent situations when more* ***CONTROLLED MEDICATIONS*** *are required than originally anticipated, it is acceptable to ask another practitioner to retrieve and bring the medications to the administering practitioner, if they are unable to leave the patient.*					
124	A process is followed for wasting and disposing of the unused portion of **CONTROLLED MEDICATIONS**, and/or for securing and returning unused **CONTROLLED MEDICATIONS** to their secure storage location per organizational policy, immediately after each medical and/or surgical procedure.					
125	Practitioners never place medications (e.g., vials, syringes of prepared medications), including **CONTROLLED MEDICATIONS**, in their pockets. ***Exception****: In emergent or urgent conditions, a provider may place a potentially lifesaving medication in a pocket while transporting a patient from one perioperative care area to another (e.g.,* ***OPERATING ROOM*** *to* ***POST-ANESTHESIA CARE UNIT****) if their hands are not free. However, organizational policy to allow this exception must be based on a thorough risk assessment that supports this decision.*					
126	Fenta**NYL** transdermal patches are not stocked in perioperative unit stock, including ADCs, **and** are not used to treat acute or postoperative pain. ***Scoring guideline:*** *Choose Not Applicable only if fenta**NYL** patches are never stocked or used in your facility.*					NOT APPLICABLE
127	Organ preservation solutions used during organ harvesting are labeled with an appropriate warning (e.g., "**Organ Harvest Use Only**") and brought into the perioperative area immediately before needed and/or stored in sealed kits or locked storage areas and obtained from storage immediately before use; **and** once the procedure has been completed, there is an effective process to return any unused preservation solutions to their secure locations or to immediately dispose of partially empty bags. ***Scoring guideline:*** *Choose Not Applicable only if organ harvesting never occurs in your facility.*					NOT APPLICABLE

continued on page 53

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Key Element V: Drug Standardization, Storage, and Distribution (continued)

		A	B	C	D	E
128	Vials of concentrated potassium chloride or high-dose potassium cardioplegic solutions are sequestered in sealed kits or locked storage areas and obtained immediately before use; **and** once the procedure has been completed, there is an effective process in place to return unused products to their secure locations and/or dispose of the partially empty vials or bags. ***Scoring guideline:*** *Choose Not Applicable only if your facility does not perform cardiac surgery that requires stopping the heart, or if your facility uses an alternative to potassium chloride to stop the heart during surgery (e.g., adenosine, lidocaine, magnesium solutions).*					
		NOT APPLICABLE				
129	Availability of cardioplegic solutions used in the perioperative setting is restricted to only certain perioperative suites that require its use (e.g., cardiac bypass surgery). ***Scoring guideline:*** *Choose Not Applicable only if cardioplegic solutions are never used in your facility.*					
		NOT APPLICABLE				
Core Characteristic # 9 ***Hazardous drugs,*** *chemicals, and potentially flammable products used in the perioperative setting are safely prepared, dispensed, stored, and administered.*						
130	A protocol based on USP <800> is in place **and** followed to address the safe preparation, handling, transport, storage, administration, disposal, and management of spills of **HAZARDOUS DRUGS** used in the perioperative setting, which includes:	Score Each Item Individually				
a	Identifying a list of **HAZARDOUS DRUGS** commonly used in the perioperative setting (see definition of **HAZARDOUS DRUGS** for examples)					
b	Alerting perioperative practitioners to which **HAZARDOUS DRUGS** are being used in the perioperative setting and when special precautions are needed					
c	Requiring preparation of **HAZARDOUS DRUGS** in **COMMERCIALLY MANUFACTURED**, **COMMERCIALLY PREPARED**, and/or pharmacy-prepared, ready-to-use containers					
d	Requiring auxiliary warning labels for **HAZARDOUS DRUGS**					
e	Safe delivery, transport, and storage of **HAZARDOUS DRUGS**					
f	Preventing surface contamination and personnel exposure (e.g., personal protective equipment) to **HAZARDOUS DRUGS**					
g	Managing **HAZARDOUS DRUG** spills					
h	Outlining disposal procedures for **HAZARDOUS DRUGS** (e.g., infusion bag, administration set, leftover products)					

continued on page 54

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Key Element V: Drug Standardization, Storage, and Distribution (continued)

		A	B	C	D	E
i	Monitoring staff who are exposed to **HAZARDOUS DRUGS**, on the basis of their job duties, via a confidential medical surveillance program that assesses and documents symptom complaints, physical findings, and laboratory values (e.g., blood count)					
131	Antineoplastic agents, including Bacillus Calmette-Guêrin (BCG) and cancer immunotherapies, and other **HAZARDOUS DRUGS** to be administered during a medical and/or surgical procedure are prepared following USP <800> requirements and transported to the **OPERATING ROOM** or **PROCEDURE ROOM** immediately before the beginning of the procedure. ***Scoring guideline:*** *Choose Not Applicable only if your facility never administers antineoplastic agents (including BCG, cancer immunotherapies) or other* ***HAZARDOUS DRUGS****.*	NOT APPLICABLE				
132	A plan exists **and** is followed to reduce the risk of surgical fires in the **OPERATING ROOM** and/or **PROCEDURE ROOM**, including specific procedures for the safe use of flammable, alcohol-based skin prep solutions (e.g., use of prefilled applicators or small prep kits or sponges to limit pooling, soaking up spilled or pooled solutions, adequate drying time before draping).					
133	Glacial acetic acid (greater than or equal to 99.5% acetic acid) is not available in the pharmacy or in the perioperative setting for use after dilution in certain medical and/or surgical procedures; instead, vinegar (5% solution) or a **COMMERCIALLY MANUFACTURED**, diluted acetic acid 0.25% (for irrigation) or 2% (for otic use) is available or dispensed.					

continued on page 55

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Key Element VI: Medication Delivery Device Acquisition, Use, and Monitoring

		A	B	C	D	E
Core Characteristic # 10 *The potential for* ***HUMAN ERROR*** *is mitigated through careful procurement, maintenance, use, and standardization of devices used to prepare and administer medications in the perioperative setting.*						
134	Labels with the name of the drug being infused and route of administration are affixed to each access line (e.g., IV, epidural, bladder installations) at the distal end closest to the patient **and** above each pump or channel.					
135	When parenteral infusions are started, reconnected, or changed (new bag or syringe), or the rate is adjusted, the tubing is traced by hand from the solution container, to the pump, and then to the patient for verification of the proper pump/channel and route of administration.					
136	Infusion pumps (including syringe pumps) used for epidural infusions are standardized throughout the facility, specifically configured for epidural administration, visually distinguishable from those used for IV administration, and labeled or visually identified as delivering epidural infusions. ***Scoring guideline:*** *Choose Not Applicable only if your facility never administers epidural infusions.*					NOT APPLICABLE
137	Administration sets with yellow-striped tubing and without injection ports are used for all epidural infusions, and not for any other purpose than for epidural infusions.					
138	Policies, protocols, and/or guidelines are in place to guide the care of patients with a continuous subcutaneous insulin infusion device (insulin pump) and/or continuous glucose monitor prior to, during, and immediately after a medical and/or surgical procedure, which include an evaluation to determine the appropriateness of continuing insulin delivery via the pump, how to avoid exposure of the pump to ionizing radiation or magnetic fields during imaging procedures, distance for required separation between the pump and common radio frequency emitters used in the perioperative settings that might cause interference, and how to manage the pump when the patient is not able to do so. ***Scoring guideline:*** *Choose Not Applicable only if you never allow patients to use a continuous subcutaneous insulin infusion device (insulin pump) and/or a continuous glucose monitor while present in your facility.*					NOT APPLICABLE
139	Use of **SMART INFUSION PUMP TECHNOLOGY** with an engaged **DOSE ERROR-REDUCTION SYSTEM** is expected by leadership **and** implemented in all perioperative settings, including intraoperatively by **ANESTHESIA PROVIDERS** and other practitioners, for the following:	Score Each Item Individually				
a	Continuous medication infusions					
b	Intermittent and secondary infusions ***Exception****:* ***GRAVITY INFUSIONS*** *may be used for intermittent and secondary infusions used only as a carrier fluid.*					

continued on page 56

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Key Element VI: Medication Delivery Device Acquisition, Use, and Monitoring (continued)

		A	B	C	D	E
c	**Regional anesthesia** infusions					
d	IV hydrating solution infusions ***Exception: Gravity infusions*** *may be used for IV hydrating solutions if they are only used as a flush solution or if used for fluid resuscitation and the required rate of infusion is greater than the pump allows.*					
140	Upper and lower **hard limits** for medication doses, concentrations, infusion rates, and **loading doses** and **bolus doses** (if a **bolus dose** feature is available) have been set in the drug library for **smart infusion pump technology** used in perioperative settings, including in the **operating room** and/or **procedure room.** ***Scoring guideline:*** *Choose Not Applicable for each item only if your facility never uses **smart infusion pump technology** in the perioperative setting.*					NOT APPLICABLE
141	**Anesthesia providers** and/or other perioperative practitioners administer **loading doses** and/or **bolus doses** only by a hand-held syringe or via the **bolus dose** feature available with **smart infusion pump technology** (with **maximum dose** limits configured as **hard stops**), which automatically starts/resumes the maintenance infusion at the prescribed rate once the **loading dose** or **bolus dose** has been infused; **loading doses** and/or **bolus doses** are never administered via a maintenance/continuous infusion by simply increasing the rate of infusion and/or using the basic infusion mode.					
142	Data from **smart infusion pump technology** used in the perioperative setting are regularly reviewed and analyzed by an interdisciplinary team including perioperative practitioners: ***Scoring guideline:*** *Choose Not Applicable for each item only if your facility never uses **smart infusion pump technology** in the perioperative setting.*	Score Each Item Individually				
a	At least monthly to evaluate **dose error-reduction systems** compliance by medication and hydrating solution					NOT APPLICABLE
b	At least quarterly to monitor the alerts (e.g., **soft limits**, **hard limits**, clinical alerts, infusion parameters [dose, dose-rate, concentration, duration]) and actions taken in response to the alerts (e.g., percent of reprogrammed alerts, percent of overridden alerts, switch to a basic infusion without **dose error-reduction systems**, canceled/abandoned infusions)					NOT APPLICABLE
c	To develop perioperative-specific improvement plans (e.g., update the library, address nuisance alerts, modify clinical workflow or procedures, identify opportunities for additional education) to remove or reduce barriers to the proper use of **smart infusion pump technology**					NOT APPLICABLE

continued on page 57

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Key Element VI: Medication Delivery Device Acquisition, Use, and Monitoring (continued)

		A	B	C	D	E
143	Representatives from healthcare industry device companies are permitted to program, calibrate, integrate, and synchronize **MEDICATION DELIVERY DEVICES** only under the direct supervision of the facility practitioner responsible for the patient and implanted device, **and** they are present only to advise the perioperative team, never to assist directly in the sterile field (never scrub in for a procedure).					
144	Pharmaceutical vendors and prescribers are prohibited from distributing drug samples in the perioperative setting.					
145	Perioperative practitioners who may use specific **MEDICATION DELIVERY DEVICES** are involved in the decisions surrounding their selection and utilization, **and** patient safety is one of the primary factors among others (e.g., effectiveness, usability, reliability, heuristics, design) when making these decisions.					
146	All gas cylinders, flow meters, and wall outlets utilize a Pin Index Safety System, Diameter Index Safety System, or other system to avoid cross utilization.					
147	Specifically designed ENFit and/or oral syringes distinctly marked "Enteral Use Only" or "Oral Use Only," which cannot be connected to parenteral tubing, are available in **PREOPERATIVE HOLDING AREAS** and **POST-ANESTHESIA CARE UNITS**/recovery areas; **and** oral or ENFit syringes (never a parenteral syringe) are used for dispensing and/or administering oral and enteral liquid medications that are not available in **COMMERCIALLY MANUFACTURED** or **COMMERCIALLY PREPARED** unit dose cups.					
148	Deep peripheral nerve blocks are guided by an ultrasonographic image that allows real-time visualization of anatomical structures, the progression of the needle, and the spread of the injected local anesthetic. ***Exception:*** *Transtracheal and ankle blocks do not require ultrasonographic guidance.* ***Scoring guideline:*** *Choose Not Applicable only if your facility never performs deep peripheral nerve blocks.*	NOT APPLICABLE				
FAQ 149	Plans are in place to transition to the new design standards (ISO 80369-6) for small neuraxial NRFit connectors used on medical device tubing, which will not fit into ports other than neuraxial, reducing the risk of misconnections. ***Scoring guideline:*** *Choose Not Applicable only if your facility never performs neuraxial procedures (e.g.,* ***NEURAXIAL ANESTHESIA****, neuraxial medication administration, spinal tap).*	NOT APPLICABLE				

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Key Element VII: Environmental Factors, Workflow, and Staffing Patterns

		A	B	C	D	E
Core Characteristic # 11 *Medications are prescribed, transcribed, prepared, dispensed, and administered in the perioperative setting within an efficient and safe workflow and in a physical environment that offers adequate space and lighting, and allows practitioners to remain focused on the* ***MEDICATION-USE PROCESS*** *without distractions.*						
FAQ 150	Proper lighting (illumination levels of 90 to 150 foot-candles) is available in perioperative areas where medications are stored, prepared, checked, and administered.					
151	Perioperative practitioners work in a physical environment that offers adequate space to store, prepare, and/or administer medications, and monitor patients in the following settings:	Score Each Item Individually				
a	**PREOPERATIVE HOLDING AREA**					
b	**OPERATING ROOMS** and **PROCEDURE ROOMS**					
c	**POST-ANESTHESIA CARE UNIT**/recovery area					
d	Pharmacy serving the perioperative setting ***Scoring guideline:*** *Choose Not Applicable only if your facility does not include an internal pharmacy that serves the perioperative setting (e.g., some freestanding ASCs).*	NOT APPLICABLE				
152	Facility-provided and/or personal mobile device (e.g., cell phones, pagers, tablets, smart watches) use, and/or internet use, in the perioperative setting is limited to patient care related activities.					
153	Alarms on monitors, **SMART INFUSION PUMP TECHNOLOGY**, anesthesia machines, and other applicable technology are functional, activated, sufficiently audible, and used in conjunction with direct patient observation and clinical assessment to monitor the perioperative patient's condition.					
154	Default parameters for physiological monitors used in the perioperative setting reflect patient demographics and clinical indications appropriate for the typical patient population; **and** when a monitor has been discontinued, perioperative practitioners immediately return the monitor to the default settings (e.g., "discharge the patient," "end the case") so the monitor is ready for reactivation with another patient.					
155	Unauthorized access to USB ports on medical devices (e.g., **SMART INFUSION PUMPS**, anesthesia machines), intended for connecting approved accessories or transferring/installing new data or software, is controlled by disabling the ports through device settings or by using physical USB locks or similar devices.					

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Key Element VII: Environmental Factors, Workflow, and Staffing Patterns (continued)

		A	B	C	D	E
Core Characteristic # 12 *The complement of qualified, well-rested practitioners in the perioperative setting matches the clinical workload without compromising patient safety.*						
156	Perioperative practitioners involved in the **MEDICATION-USE PROCESS** are scheduled to work: ***Exception:*** *Staffing for emergency add-on procedures is excluded; only staffing for scheduled cases is included.*	Score Each Item Individually				
a	No more than 12 consecutive hours in a 24-hour period					
b	No more than five 8-hour shifts or three 12-hour shifts in a row without a day off					
c	With a 30-minute break for each mealtime that occurs during their shift					
FAQ 157	A fatigue reduction plan is designed **and** followed for on-call perioperative practitioners and/or those who have worked overtime that provides adequate recovery time for staff between shifts and guides an appropriate and just response when practitioners feel, or the organization determines, it is unsafe to provide care during an immediately subsequent shift due to fatigue.					
158	An adjusted case load, delay in procedures, or planned late arrival of a perioperative practitioner due to fatigue from working on call and/or overtime does not result in **DISCIPLINARY SANCTION** or other punitive action.					
159	A 1:1 nurse-patient ratio is maintained for patients in a **POST-ANESTHESIA CARE UNIT** or recovery area during the first 15 minutes or until the patient is hemodynamically stable and has a stable airway, and until transfer if a patient has received an opioid pain medication in the **POST-ANESTHESIA CARE UNIT** or recovery area.					
160 a **OR** **160 b**	**For facilities with a daily onsite pharmacist(s):** At least one pharmacist works in the perioperative area(s) performing clinical activities such as reviewing patient records and drug orders, providing input into the selection and administration of drugs, educating patients, monitoring the effects of medications on patients, overseeing safe medication storage, and providing perioperative staff education. **OR** **For facilities without a daily onsite pharmacist(s):** A pharmacist regularly conducts medication safety rounds in perioperative settings, in accordance with state and federal regulations and accrediting standards, to oversee safe medication storage, preparation, and administration and to provide perioperative staff education.					

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Key Element VIII: Staff Competency and Education

		A	B	C	D	E
Core Characteristic # 13 *Perioperative practitioners receive sufficient orientation to the perioperative* ***MEDICATION-USE PROCESS*** *and undergo baseline and annual competency evaluations of knowledge and skills related to safe medication practices.*						
161	Practitioners are educated about, and demonstrate current understanding of, the **SURGICAL SAFETY CHECKLIST** and/or a **TIME-OUT** process.					
162	Role-playing and simulations of perioperative error-prone conditions (e.g., syringe and infusion bag swaps, unlabeled syringes, problematic medication packages and labels) and adverse events (e.g., emergencies, methemoglobinemia, malignant hyperthermia) are used as methodologies to orient and educate perioperative staff about medication and patient safety.					
163	Only a physician, dentist, podiatrist, CRNA, or certified anesthesiologist assistant who is licensed and 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 medical and/or surgical procedure, is permitted to administer medications which could lead to **DEEP SEDATION** (e.g., propofol, ketamine, etomidate) of non-ventilated patients, even if **MODERATE SEDATION** is intended. (PALS and/or ACLS certification alone is not sufficient.)					
164	**NON-ANESTHESIOLOGIST SEDATION PRACTITIONERS** and perioperative practitioners who administer **MODERATE SEDATION** are qualified by education, training, and licensure, and have current certification in advanced airway assessment and management appropriate for the patient population (e.g., PALS; ACLS; advanced trauma life support [ATLS]; medical board certification/board eligible in emergency medicine, critical care, pulmonary medicine, or anesthesia).					
165	Perioperative practitioners who titrate **MODERATE SEDATION** agents and/or postoperative pain medications to effect have received training about each drug's onset, peak, and duration; how to determine whether a previous dose has taken full effect before administering another dose; and to consider other drugs administered that might increase the risk of hypotension or sedation, to prevent overdoses caused by **DOSE STACKING**.					
166	If a registered nurse is allowed to administer certain facility-defined **MODERATE SEDATION** agents, such administration occurs only within the scope of their professional practice and under the direct supervision of a physician, dentist, or podiatrist qualified by education, training, and credentialing to administer **MODERATE SEDATION**.					
Core Characteristic # 14 *Practitioners involved in the perioperative* ***MEDICATION-USE PROCESS*** *are provided with ongoing education about perioperative medication error prevention and the safe use of drugs that have the greatest potential to cause harm if misused.*						
167	During orientation of all practitioners participating in the **MEDICATION-USE PROCESS** in the perioperative setting, known perioperative medication safety risks and reduction strategies are reviewed.					

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Key Element VIII: Staff Competency and Education (continued)

		A	B	C	D	E
168	At least quarterly, practitioners participating in the **MEDICATION-USE PROCESS** in the perioperative setting receive information about medication risks and errors that could impact their practice, including those that have been reported by external organizations; **and** strategies to minimize these risks and errors are discussed.					
169	Perioperative practitioners receive education about new drugs added to the formulary, including risks that could lead to errors and adverse events and risk-reduction strategies.					
170	Perioperative practitioners are educated about **MEDICATION DELIVERY DEVICES** used in the perioperative setting (e.g., infusion pumps, **ELASTOMERIC PUMPS**, implantable devices, pen devices, syringes, needles) and associated protocols, guidelines, order sets, and restrictions *before* they are permitted to operate such devices or manage patients who are using these devices.					
171	Perioperative practitioners are educated about the safe preparation, handling, transport, storage, administration, disposal, and management of spills of **HAZARDOUS DRUGS** that might be used in the perioperative setting.					

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Key Element IX: Patient Education

		A	B	C	D	E
Core Characteristic # 15 *Patients are included as active partners in their perioperative care and are educated about their medications and ways to avert errors.*						
172	During the preoperative phase of care (e.g., pre-anesthesia testing visit, care in the **PREOPERATIVE HOLDING AREA**), patients and/or caregivers are educated about the types of medications they may be receiving before, during, and after the medical and/or surgical procedure (e.g., preprocedure antibiotics, antiemetics, anesthesia plan, pain management plan), **and** are encouraged to ask questions.					
173	During the preoperative phase of care (e.g., pre-anesthesia testing visit, care in the **PREOPERATIVE HOLDING AREA**), patients for whom PCA or PCEA is planned are educated about its use; **and** during the post-operative phase of care (e.g., care in the **POST-ANESTHESIA CARE UNIT**), the instructions for using PCA or PCEA are reviewed and reinforced before being transferred out of the perioperative area. ***Scoring guideline:*** *Choose Not Applicable only if PCA and/or PCEA is never offered in your facility.*	NOT APPLICABLE				
174	Patients, caregivers, and visitors are educated about the dangers of any individual other than the patient activating the PCA or PCEA button to deliver a medication dose (i.e., PCA by proxy); **and** a warning label, "**For Patient Use Only**," appears on the cord or activation button for PCA or PCEA. ***Scoring guideline:*** *Choose Not Applicable only if PCA and/or PCEA is never offered in your facility.*	NOT APPLICABLE				
175	During each drug administration in the **PREOPERATIVE HOLDING AREA** and in the **POST-ANESTHESIA CARE UNIT** or recovery area, nurses and other licensed perioperative practitioners provide patients and/or caregivers with the name of the drug, its general purpose, the prescribed dose, and, during initial drug administration, important side effects. ***Exception:*** *Patients who are awakening but not alert in the **POST-ANESTHESIA CARE UNIT** or recovery area can just be informed about the general purpose of drug administration (e.g., for pain, for nausea).*					
176	When discharged home from the perioperative setting after a medical and/or surgical procedure, patients and/or caregivers are provided with verbal and up-to-date written information at an appropriate reading level and in their preferred language about:	Score Each Item Individually				
a	Any newly prescribed postoperative or postprocedural medications (e.g., pain medications, antibiotics), including the name, dose, route, frequency of use, important side effects (e.g., impact on psychomotor and cognitive function), secure storage, and proper disposal of unused PRN opioids and other as needed medications					
b	Proper use of any recommended over-the-counter medications (e.g., pain medications, stool softeners)					

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Key Element IX: Patient Education (continued)

		A	B	C	D	E
c	Any ambulatory pump that will be delivering medication (e.g., implanted pump, **ELASTOMERIC PUMP**) and management of the infusion site ***Scoring guideline:*** *Choose Not Applicable only if patients are never discharged with an ambulatory pump.*	NOT APPLICABLE				
d	When to resume or not to resume previous prescription and over-the-counter medications taken before the medical and/or surgical procedure					
e	Symptoms of **NEURAXIAL ANESTHESIA** and/or epidural injection complications (e.g., spinal hematoma, epidural abscess, post-dural puncture headache) and what to do if any occur ***Scoring guideline:*** *Choose Not Applicable only if patients never receive* ***NEURAXIAL ANESTHESIA*** *and/or epidural injections.*	NOT APPLICABLE				
177	Patients who are discharged after a medical and/or surgical procedure are accompanied by a responsible adult who agrees to drive the patient home (ride-hailing services such as Uber, Lyft, and taxis are not acceptable); **and** staff reasonably confirm, *before* the medical and/or surgical procedure begins, that a responsible adult will be available to observe the patient for the remainder of the day.					
178	Patients and/or the responsible adult staying with the patient after a medical and/or surgical procedure are instructed to observe for signs of rebound sedation and/or paralysis, and when and how to seek immediate medical attention.					
179	Special instructions are given to the adult responsible for neonates and/or younger pediatric patients who will be transported home in a car safety seat regarding the need to carefully observe the child's head position to avoid airway obstruction. ***Scoring guideline:*** *Choose Not Applicable only if neonates and/or younger pediatric patients are never treated in your facility.*	NOT APPLICABLE				

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Key Element X: Quality Processes and Risk Management

		A	B	C	D	E
Core Characteristic # 16 *A safety-supportive **JUST CULTURE** and model of shared accountability for safe **SYSTEM DESIGN/REDESIGN** and making safe behavioral choices is in place and supported by perioperative leaders, managers, and the associated Board of Trustees/Directors.*						
180	Patient safety is a fundamental core value in the organization, which is reflected in the organization's mission, vision, and value statements.					
181	The perioperative setting is governed by a formal policy(ies) that outline the organization's commitment to a fair and **JUST CULTURE**, defines individual and leadership/management accountabilities associated with behavioral choices and **SYSTEM DESIGN/REDESIGN**, and provides an overview of the organization's just response to **HUMAN ERROR** (**CONSOLING**), **AT-RISK BEHAVIOR** (**COACHING**), and **RECKLESS BEHAVIOR** (**REMEDIAL ACTION/DISCIPLINARY SANCTION**).					
182	Perioperative leaders and managers have been educated about establishing and/or maintaining a fair and **JUST CULTURE** of safety; **and** key accountabilities and outcome measures (e.g., culture survey results) for establishing and/or maintaining a **JUST CULTURE** are included in their job descriptions (or position statements or medical staff bylaws, if applicable) and performance appraisals.					
183	Perioperative leaders and managers hold all practitioners equally accountable for the quality of their behavioral choices, regardless of their professional discipline, rank or position in the organization, experience, and/or financial importance.					
FAQ 184	Perioperative leaders and managers do not react to a harmful event by automatically punishing the person/people involved, nor do they ignore the same behavior when the outcome is good; **and** leaders and managers do not wait until harm occurs to redesign error-prone systems.					
185	Perioperative leaders and managers anticipate that practitioners will occasionally engage in **AT-RISK BEHAVIORS**; observe work daily for signs of this behavioral drift; **and** manage **AT-RISK BEHAVIORS** through investigation, **SYSTEM REDESIGN**, changes in the rewards that entice the behavior, and **COACHING** (not **DISCIPLINARY SANCTION**) of individuals to see the risk associated with behaviors that work around the problems they encounter.					
FAQ 186	**DISCIPLINARY SANCTIONS** are not taken against a practitioner for making a **HUMAN ERROR**.					
187	Perioperative practitioners have been educated about their important role in the following key accountabilities; **and** these key accountabilities are included in their job descriptions (or position statements or medical staff bylaws, if applicable) and performance appraisals:	Score Each Item Individually				
a	Making safe behavioral choices rather than being perfect and never making **HUMAN ERRORS** (which are not behavioral choices)					
b	Reporting **AT-RISK BEHAVIORS**, hazards, and errors (including close calls that are immediately corrected)					

continued on page 63

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Key Element X: Quality Processes and Risk Management (continued)

		A	B	C	D	E
c	Participating in event investigation and implementation of action plans					
Core Characteristic # 17 *Practitioners are stimulated to detect and report perioperative adverse events, errors (including close calls), hazards, and observed* ***AT-RISK BEHAVIORS****;* ***and*** *interdisciplinary teams regularly analyze these reports as well as reports of perioperative errors that have occurred in other organizations to mitigate future risks.*						
188	Perioperative leaders and managers create a work environment where practitioners feel empowered and safe to report risks, errors, and barriers to care; actively pose questions when challenges arise; and share their insights and concerns about safety.					
189	Perioperative leaders and managers are visible and accessible in perioperative care units (e.g., **PATIENT SAFETY LEADERSHIP WALKROUNDS**, **SAFETY HUDDLES**) to learn about daily system failures, risks, and suggestions for error prevention.					
190	Perioperative practitioners are actively involved in the organization's reporting program and report all identified medication errors (including close calls), hazards, and system failures that stem from breakdowns in the environment, staffing, technology, information management, and the supply of materials.					
191	A defined process has been established and is followed to determine if a medical and/or surgical procedure can continue after a medication error has been identified.					
192	Perioperative (or organizational) leaders have identified reliable sources (e.g., patient safety organizations, regulatory/accrediting agencies, professional organizations) of external medication safety alerts and/or recommendations; **and** the leaders have established a systematic review of this information at least quarterly to assess and address vulnerabilities to similar events.					
193	The organization routinely reviews the following data and reports; **and** a convened interdisciplinary team, which includes at least one senior leader, investigates identified problems, learns their causes, and recommends/facilitates action for improvement:	Score Each Item Individually				
a	Staff compliance with protocols, guidelines, and order sets related to selected high-alert medications					
b	Staff compliance with technology (e.g., **BARCODE SCANNING** rates, activation of **SMART INFUSION PUMP TECHNOLOGY DOSE ERROR-REDUCTION SYSTEMS**, ADC overrides)					
c	Technology alerts (e.g., **MAXIMUM DOSES**, serious drug interaction, allergies) associated with **HIGH-ALERT MEDICATIONS** used in the perioperative setting to determine whether practitioners are responding to them appropriately					
d	Internal reports of medication risks, errors, and adverse events in the perioperative setting					

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Key Element X: Quality Processes and Risk Management (continued)

		A	B	C	D	E
194	Close calls and hazards that have the potential to cause patient harm are considered for analysis.					
195	The following investigative resources are used to identify risks or errors with medications used in the perioperative setting and to demonstrate sustained improvement after implementation of risk-reduction strategies:	Score Each Item Individually				
a	Use of reversal agents or antidotes (e.g., flumazenil, naloxone, vitamin K_1, fresh frozen plasma, lipid emulsion, prothrombin complex concentrates, dantrolene)					
b	Clinical **TRIGGERS** (e.g., airway interventions, unplanned or prolonged hospitalization, inability to complete a procedure [sedation failures], opioid-induced respiratory depression or unintended advancing sedation)					
196	Risks and events that are investigated include analysis of what normally happens to uncover how involved tasks are conducted under usual circumstances as opposed to how the task has been designed according to a policy or procedure.					
197	The perioperative **MEDICATION-USE PROCESS** is analyzed at least every 2 years (e.g., using a **PROACTIVE RISK ASSESSMENT** tool such as this self assessment) to identify potential risk factors for medication errors.					
198	Risks and errors that are investigated result in action plans, which are layered with multiple, **HIGH-LEVERAGE RISK-REDUCTION STRATEGIES**; **and** these action plans have a realistic timeline for implementation that considers all available resources.					
199	The scope of organizational learning from risks and errors, and the scope of interventions established in action plans, are widespread and include all areas with similar risks, including perioperative areas.					
200	Perioperative leaders and managers measure the implementation and effectiveness of action plans (e.g., measure compliance with new medication protocols, drug use evaluations, random chart review using **TRIGGERS**, track risk priority numbers from FMEAs, observational methods) without relying on practitioner-reported events; **and** any necessary adjustments are made to action plans to demonstrate sustained improvement over time.					
Core Characteristic # 18 *Redundancies that support a system of **INDEPENDENT DOUBLE CHECKS** or automated verification processes are used for vulnerable parts of the perioperative **MEDICATION-USE PROCESS** to detect and correct serious errors before they reach patients.*						
201	Prior to each medical and/or surgical procedure, the entire surgical or procedural team actively participates in a **SURGICAL SAFETY CHECKLIST** (or adaptation) and/or a **TIME-OUT** process to confirm key aspects of the procedure, including (at a minimum):	Score Each Item Individually				
a	Patient identity					

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Key Element X: Quality Processes and Risk Management (continued)

		A	B	C	D	E
b	Allergies and associated reactions					
c	Preprocedure antibiotics (when required)					
d	Procedure being performed and laterality (if applicable)					
e	Anesthesia plan					
f	Other medications and doses to be administered during the procedure (e.g., heparin, local anesthetics)					
g	A patient monitoring and rescue plan (e.g., readily available rescue agent)					
202	**BARCODE SCANNING** technology is used by perioperative practitioners in the following perioperative locations:	Score Each Item Individually				
a	**PREOPERATIVE HOLDING AREA** to verify the patient **and** medications/solutions prior to administration					
b	**OPERATING ROOMS** by **ANESTHESIA PROVIDERS, NON-ANESTHESIOLOGIST SEDATION PRACTITIONERS,** and/or other perioperative practitioners (e.g., surgeons, nurses) to verify medications/solutions prior to administration ***Scoring guideline:*** *Choose Not Applicable only if your facility does not have any* ***OPERATING ROOMS.***	NOT APPLICABLE				
c	**PROCEDURE ROOMS** by **ANESTHESIA PROVIDERS, NON-ANESTHESIOLOGIST SEDATION PRACTITIONERS,** and/or other perioperative practitioners (e.g., surgeons, nurses) to verify medications/solutions prior to administration ***Scoring guideline:*** *Choose Not Applicable only if your facility does not have any* ***PROCEDURE ROOMS.***	NOT APPLICABLE				
d	**POST-ANESTHESIA CARE UNIT**/recovery area to verify the patient **and** medications/solutions prior to administration					
203	If **BARCODE SCANNING** technology is employed prior to administration of any perioperative medications and solutions, an interdisciplinary team reviews data from the system, including the percent of medications with a readable barcode, scanning compliance rates, and bypassed or acknowledged alerts; **and** any barriers with using the technology safely and effectively are addressed. ***Scoring guideline****: Choose Not Applicable only if your facility never uses* ***BARCODE SCANNING*** *technology prior to administration of any perioperative medication or solution.*	NOT APPLICABLE				

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Key Element X: Quality Processes and Risk Management (continued)

		A	B	C	D	E
204	In the **PREOPERATIVE HOLDING AREA, OPERATING ROOM, PROCEDURE ROOM,** and **POST-ANESTHESIA CARE UNIT** or recovery area, when selected high-alert medications (as defined by the facility) are removed from unit stock (including ADCs), the medication and dose/concentration are **INDEPENDENTLY DOUBLE CHECKED** by another practitioner and documented before administration.					
205	In the **PREOPERATIVE HOLDING AREA, OPERATING ROOM, PROCEDURE ROOM,** and/or **POST-ANESTHESIA CARE UNIT** or recovery area, before starting selected facility-defined high-alert medication infusions and at additional facility-defined steps (e.g., change of shift, **HAND-OFFS**, change in the infusion rate/dose, change in the bag/bottle/syringe), an **INDEPENDENT DOUBLE CHECK** is performed **and** documented to verify the patient; the patient's weight (for weight-based medications); the drug/solution, concentration, dose, and infusion rate; channel selection; and line attachment.					
Core Characteristic # 19 *Proven infection control practices are followed in perioperative settings when storing, preparing, and administering medications.*						
206	Healthcare providers in the perioperative setting use appropriate hand hygiene procedures and standardized aseptic technique prior to preparing any injectable product (e.g., IM, IV push).					
207	A single syringe is never used for multiple patients, even if the needle is changed between patients.					
208	Single-dose vials are used for only one patient, even if medication remains in the vial.					
209	Containers of propofol (e.g., 10 mL, 20 mL, 50 mL, 100 mL), which are intended for single patient use only, are never used to prepare doses for more than one patient. ***Exception:*** *During a propofol shortage, larger containers of propofol may be withdrawn into syringes or transferred to smaller containers only in a pharmacy that is compliant with sterile compounding regulations;* ***and*** *the syringes and smaller containers are labeled with a beyond-use date.*					
210	If a multiple-dose vial enters an immediate perioperative patient treatment area (e.g., **OPERATING ROOM, PROCEDURE ROOM,** anesthesia and procedure carts, patient room or bay), the vial is treated as a single-dose vial and used for a single patient only.					
211	Sterile caps are used on secondary or primary IV administration sets when disconnected from a catheter hub and intended for future use.					
212	Parenteral (e.g., IV, neuraxial) medication infusions and hydrating solutions are spiked immediately prior to administration, not hours in advance of need.					

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Key Element X: Quality Processes and Risk Management (continued)

		A	B	C	D	E
FAQ 213	Clear and consistent policies that address the discontinuation and/or continuation of parenteral nutrition (PN) during medical and/or surgical procedures have been established and are followed, **and** the policies include guidance on appropriate metabolic monitoring of the patient during surgery.					
214	An aseptic process is in place to transfer medications from vials/bags/bottles to the sterile field.					
215	Topical preparations used in perioperative settings (e.g., ophthalmic drops, lubricating jelly) are never used for multiple patients.					
FAQ 216	Perioperative practitioners caring for adult patients do NOT withdraw IV push medications from **COMMERCIALLY MANUFACTURED**, cartridge-type syringes into another syringe for administration. ***Scoring guideline:*** *Choose Not Applicable if your organization never provides care to adult patients, or if* ***COMMERCIALLY MANUFACTURED****, cartridge-type syringes are never available.*	NOT APPLICABLE				
FAQ 217	Perioperative practitioners caring for pediatric and/or neonatal patients do NOT withdraw IV push medications from **COMMERCIALLY MANUFACTURED**, cartridge-type syringes into another syringe for administration. ***Scoring guideline:*** *Choose Not Applicable if your organization never provides care to pediatric and/or neonatal patients, or if* ***COMMERCIALLY MANUFACTURED****, cartridge-type syringes are never available.*	NOT APPLICABLE				
FAQ 218	Perioperative practitioners never dilute or reconstitute an IV push medication by drawing the contents into a **COMMERCIALLY MANUFACTURED** prefilled flush syringe of 0.9% sodium chloride.					
219	A bag or bottle of IV solution or medication infusion (e.g., phenylephrine, insulin) is never prepared and/or used outside the pharmacy as a source of flushes, diluents, or **BOLUS DOSES** for single or multiple patients.					

Glossary

Anesthesia personnel: ANESTHESIA PROVIDERS as well as any licensed practitioners or unlicensed personnel who work under the direct supervision of ANESTHESIA PROVIDERS, including anesthesia assistants and anesthesia technicians who may assist (e.g., order, stock, and replenish medications and supplies) ANESTHESIA PROVIDERS with clinical (not business/billing) processes.

Anesthesia provider: A licensed practitioner (e.g., anesthesiologist, CRNA, certified anesthesiologist assistant) who is trained, qualified, and authorized within the organization to plan and administer MAC, DEEP SEDATION, GENERAL ANESTHESIA, and/or REGIONAL ANESTHESIA; monitor sedated and/or anesthetized patients during procedures; support patients' vital functions inclusive of hemodynamic stability and airway management during procedures; and diagnose and treat pathologic changes and other clinical problems that might occur during the perioperative period.

Antithrombotic medication: Includes warfarin; heparin(s) (e.g., unfractionated heparin, low molecular weight heparin); factor Xa inhibitors (e.g., apixaban, betrixaban, edoxaban, fondaparinux, rivaroxaban); direct thrombin inhibitors (e.g., argatroban, bivalirudin, dabigatran); thrombolytics (e.g., alteplase, tenecteplase); and antiplatelet medications (e.g., abciximab, aspirin, clopidogrel, dipyridamole, prasugrel, ticagrelor, ticlopidine).

At-risk behavior: Behavioral drift that occurs over time in all humans after successful violations (no adverse outcomes) of a rule; a behavioral choice that increases risk where the risk is not recognized or mistakenly believed to be insignificant or justified. AT-RISK BEHAVIORS often occur when individuals knowingly violate policies, procedures, or generally accepted practices to work around unexpected problems and system failures to accomplish their work in the moment. Examples include bypassing a duplicate therapy alert during order entry without due consideration; technology workarounds; removing more than one patient's medications from an ADC prior to administration; and written orders or documentation that include ERROR-PRONE ABBREVIATIONS. The just response to AT-RISK BEHAVIOR is to investigate the source and scope of the behavior; to remove any barriers to the desired safer alternative choice; and to COACH (not DISCIPLINE) individuals to see the significant risk associated with their choice and more appropriate safer alternatives.

Autoverification: EHR functionality which allows a medication order to be entered and released (automatically verified) in the EHR, bypassing the need for medication order verification by a pharmacist and facilitating medication administration.

Barcode scanning: The use of optical machine-readable representation of data found in barcodes on medication packages and patient identification bands to verify that the correct patient is receiving the correct medication, the correct solution or ingredient is selected prior to compounding a preparation, or the correct medication is retrieved from or stocked in the correct storage location. The process involves the use of a barcode scanner, an electrical device that can read and output printed barcodes to a computer.

Basal infusion: A continuous infusion of an opioid to provide a constant level of analgesia, which may also be administered as BOLUS DOSES, PCA, or PCEA.

Bolus dose: A discrete dose of medication or fluid given in a set volume at the desired infusion rate or for a specified duration prior to (see LOADING DOSE) or during a continuous infusion.

Coach/coaching: Refers to a values-supportive, non-DISCIPLINARY discussion with a person who has misread risk and engaged in an AT-RISK BEHAVIOR, to help them see risk that was not seen or misread as being insignificant or justifiable, and to help them understand the need to engage in better behavioral choices.

Commercially manufactured: A product available from a commercial manufacturer.

Commercially prepared: A product available from an outsourced compounding facility (e.g., a 503B outsourcing facility).

Computerized prescriber order entry (CPOE): Refers to an inpatient and/or outpatient electronic computer system into which an authorized prescriber enters medical orders.

Console/consoling: Refers to the act of comforting an individual who has made a HUMAN ERROR to help alleviate any sense of failure and loss, restore relationships and trust, and promote forgiveness (of self and others) and healing.

Controlled medications: Medications or substances that are categorized under the Controlled Substances Act and which are regulated under state and federal law into five "schedules," depending on the substance's medical use, the potential for abuse, and safety or dependence liability. Examples of classes of CONTROLLED MEDICATIONS include

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Glossary continued

opioids, depressants, stimulants, hallucinogens, and anabolic steroids.

Deep sedation: A drug-induced depression of consciousness during which patients cannot be easily aroused but respond purposefully following repeated or painful stimulation. The ability to independently maintain ventilatory function may be impaired. Patients may require assistance in maintaining a patent airway, and spontaneous ventilation may be inadequate. Cardiovascular function is usually maintained.

Disciplinary sanction/discipline: Punitive deterrent to encourage an individual or group to refrain from undesired behavioral choices.

Dose error-reduction system: Refers to the integral computer software in **SMART INFUSION PUMPS** intended to aid in prevention of infusion programming-related errors and warn users of potential over- or under-delivery of a medication or fluid by checking programmed doses/rates against facility-configurable preset limits specific to a medication/fluid, and to a clinical application (e.g., epidural administration) and/or location (e.g., neonatal intensive care unit, medical/surgical unit).

Dose stacking: The administration of another dose of the same medication or class of medication (e.g., **MODERATE SEDATION** agents, pain medications) before the peak effect of the previous dose/medication has been reached, which could result in an excessive total drug effect over time. For example, peak analgesic effect with morphine may not be achieved for up to 2 minutes following IV administration. **DOSE STACKING** is possible if more morphine is given before the previous dose reaches its peak effect. However, morphine may be titrated safely in certain settings (e.g., immediate postoperative setting) every 5 minutes if smaller **BOLUS DOSES** are used.

Drug intolerance: An adverse drug reaction characterized as a side effect (undesirable effect at recommended doses), intolerance (low tolerance to an adverse effect), idiosyncrasy (genetically determined, abnormal reaction to a drug), or toxicity (toxic reactions linked to excess dose and/or impaired excretion), rather than a true drug allergy.

Elastomeric pump: A device (e.g., Ambu ACTion, ON-Q, ball pump) used after certain procedures to intermittently or continually infuse medications, typically local anesthetics, at a specific rate into the tissues around an incision. The medication is held in a stretchable balloon reservoir (medication reservoir ball), and pressure from the elastic walls of the balloon drives the medication delivery, rather than gravity.

End-tidal carbon dioxide ($ETCO_2$) monitoring (capnography): Breath-by-breath measurement of the amount of carbon dioxide (CO_2) in exhaled air, which assesses ventilation and provides an early warning about a worsening trend in a patient's condition caused by hypoventilation, hyperventilation, increased metabolic activity, decreased cardiac output, and/or poor pulmonary perfusion.

Epidural anesthesia: A technique of managing pain in the thoracic, lumbar, or sacral areas without the loss of consciousness, in which an opioid and/or anesthetic is injected or infused into the peridural space through an indwelling catheter. Administration may be a single injection, a continuous **BASAL INFUSION**, or self-administered (patient-controlled) within programmed limits.

Error-prone abbreviations: Certain medical abbreviations, symbols, ratio expressions used for single-entity products, drug name abbreviations, 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/node/8.

General anesthesia: A drug-induced loss of consciousness during which patients are not arousable, even by painful stimulation. The ability to independently maintain ventilatory function is often impaired. Patients often require assistance in maintaining a patent airway, and positive pressure ventilation may be required because of depressed spontaneous ventilation or drug-induced depression of neuromuscular function. Cardiovascular function may be impaired.

Gravity infusion: Medication or fluid administered without an infusion device or **DOSE ERROR-REDUCTION SYSTEMS**, which relies on the force of gravity to infuse and is manually controlled (e.g., with a roller clamp).

Hand-off: The real-time process of communicating all pertinent patient information from one provider/team to another provider/team as the responsibility of care is transferred (transitions of care) for the purpose of ensuring continuity and safety. The process includes verification of the shared information and an opportunity to ask questions and receive answers.

Hard limit/hard stop (within drug library): A medication or fluid-specific forcing function that ensures that an

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Glossary continued

infusion cannot be given outside facility-established medication or fluid-specific parameters (e.g., concentration, dose-rate of continuous infusions, dose of intermittent infusions, duration of intermittent infusions). These upper (maximum) and lower (minimum) limits are set in the drug library and cannot be overridden.

Hazardous drug: The National Institute for Occupational Safety and Health (NIOSH) considers a drug to be hazardous if it exhibits one or more of the following characteristics in humans or animals: carcinogenicity, teratogenicity or developmental toxicity, reproductive toxicity, organ toxicity at low doses, genotoxicity, or structure and toxicity profiles of new drugs that mimic existing **HAZARDOUS DRUGS**. Examples of **HAZARDOUS DRUGS** used in the perioperative setting include antineoplastic drugs such as bevacizumab, gemcitabine, fluorouracil, methotrexate, and mito**MY**cin; non-antineoplastic drugs that meet other NIOSH criteria, such as aza**THIO**prine and car**BAM**azepine; and drugs with reproductive hazards, such as fosphenytoin, dronedarone, zidovudine, estrogen creams, fluconazole, oxytocin, and progesterone.

High-leverage risk-reduction strategies: Refers to the most effective risk-reduction strategies, which prevent, restrict, or stop an identified risk with minimal reliance on human vigilance and memory. **HIGH-LEVERAGE RISK-REDUCTION STRATEGIES** often require **SYSTEM REDESIGN** and a **JUST CULTURE** to make systems more resistant to **HUMAN ERROR** and enable practitioners to make safe behavioral choices by removing the system- and cultural-based incentives for cutting corners. Examples of **HIGH-LEVERAGE RISK-REDUCTION STRATEGIES** include barriers that prevent carrying out tasks the wrong way, strategies that "force" task completion the correct way (forcing functions), engineering fail safes (e.g., free-flow protection with **SMART INFUSION PUMPS**), and technology such as **BARCODE SCANNING** to provide just-in-time decision support, verify accuracy, and halt progress when errors are made. Education and rules, while important, are not **HIGH-LEVERAGE RISK-REDUCTION STRATEGIES** and should not be relied on alone to prevent errors.

High-risk patient (for respiratory depression): A pediatric or adult patient receiving a central nervous system depressant (e.g., general anesthetic, sedative, opioid) who has risk factors that increase the likelihood of respiratory depression and associated adverse outcomes:

- Age less than 6 months or greater than 55 years
- Obesity
- Hepatic or renal impairment
- Known or suspected sleep-disordered breathing (e.g., snoring, upper airway resistance syndrome, obstructive sleep apnea-hypopnea syndrome)
- Large neck circumference
- Anatomical maxilla or mandible abnormalities
- Prolonged surgery (greater than 2 hours)
- Thoracic or upper abdominal surgical incisions that may impair adequate ventilation
- Pulmonary or cardiac disease or dysfunction or major organ failure
- Congenital central hypoventilation syndrome (pediatrics)
- Myasthenia gravis
- Ultra-rapid drug metabolism (genetic polymorphism)
- Smoker
- Concomitant administration of sedating agents
- High opioid dose requirements
- History of naloxone administration

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 behavioral choices; thus, the just response to **HUMAN ERROR** is to **CONSOLE** the individual and to investigate **SYSTEM REDESIGN** to prevent/reduce reoccurrence.

Independent double check (independently double checked): 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 the results.

Invasive procedure: A procedure that penetrates the protective surfaces of a patient's body, generally requiring entry into a body cavity and/or insertion of an indwelling foreign body; is performed in an aseptic surgical field; and requires **MODERATE SEDATION**, **DEEP SEDATION**, **MAC**, **REGIONAL ANESTHESIA**, and/or **GENERAL ANESTHESIA** of the patient to perform. Procedures that do not require sedation or anesthesia as listed above are not included in this definition.

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 behavioral 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

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Glossary continued

choices (**HUMAN ERROR** is not a behavioral choice) and for reporting their errors and system vulnerabilities.

Loading dose: The initial dose of a medication given by infusion that is intended to rapidly achieve a therapeutic level prior to initiating the continuous infusion or scheduled maintenance dose infusion.

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 delivery device: An instrument/equipment used to administer medications and solutions, including programmable large volume and syringe infusion pumps, PCA pumps, epidural infusion pumps, implantable pumps, pen devices that contain medication (e.g., **EPINEPH**rine, insulin), syringes, and dosing cups.

Medication safety officer: A clinical practitioner designated by an organization to serve as the authoritative leader in safe medication use for the purpose of reducing patient harm related to medication use. Other titles used to describe this role include medication safety leader, medication safety manager, medication safety coordinator, medication safety clinical specialist, medication safety pharmacist or nurse, and director of medication safety.

Medication-use process: A series of clinical tasks and subtasks for managing the information, environment, and human resources associated with all phases of medication use, including medication procurement, prescribing, preparation, dispensing, administration, and patient monitoring. The **MEDICATION-USE PROCESS** consists of ISMP's *Key Elements of the Medication Use System*™ that form a framework for managing medication use safely: 1) patient information; 2) drug information; 3) communication of drug orders and other drug information; 4) drug labeling, packaging, and nomenclature; 5) drug standardization, storage, and distribution; 6) **MEDICATION DELIVERY DEVICE** acquisition, use, and monitoring; 7) environmental and workflow patterns; 8) staffing patterns and competency; 9) patient/caregiver education; and 10) quality processes and risk management.

Moderate sedation: A drug-induced depression of consciousness during which patients respond purposefully to verbal commands, either alone or accompanied by light tactile stimulation. No interventions are required to maintain a patent airway, and spontaneous ventilation is adequate. Cardiovascular function is usually maintained. **MODERATE SEDATION** can be performed by a qualified individual, separate from the proceduralist, so that vital functions can be continuously monitored and supported.

Monitored anesthesia care (MAC): A specific anesthesia service used for medical and/or surgical procedures in which a qualified **ANESTHESIA PROVIDER** continually monitors and supports the patient's vital functions; diagnoses and treats clinical problems that occur; administers sedative, anxiolytic, or analgesic medications to achieve varying levels of sedation, awareness, and analgesia; and converts to **GENERAL ANESTHESIA** if required.

Neuraxial anesthesia: A type of **REGIONAL ANESTHESIA** (excluding peripheral nerve blocks) that involves injection of one or more opioids and/or anesthetic medications by the epidural or intrathecal (spinal) routes of administration to manage pain in the thoracic, lumbar, or sacral region, without loss of consciousness. **NEURAXIAL ANESTHESIA** includes **EPIDURAL ANESTHESIA** and **SPINAL ANESTHESIA.**

Non-anesthesiologist sedation practitioner: A licensed physician, dentist, or podiatrist who has not completed postgraduate training in anesthesiology but is specifically trained to personally administer and supervise the administration of **MODERATE SEDATION.**

Non-controlled medications: Medications that are not controlled under the Controlled Substances Act (e.g., neuromuscular blockers, reversal agents, vasopressors, hypotensive agents, anticholinergics, antiemetics, antibiotics, steroids, electrolytes, blood glucose regulators, gastrointestinal agents, bronchodilators, anticoagulants).

Operating room: A specially equipped room that meets the requirements of a **RESTRICTED AREA** and is designated and equipped for performing medical and/or surgical procedures, that require an aseptic field. Any form of anesthesia may be administered in an **OPERATING ROOM** as long as appropriate anesthesia gas administration devices and exhaust systems are provided. A hybrid **OPERATING ROOM** is included in this definition (an **OPERATING ROOM** that has permanently installed equipment [not portable imaging technology] to enable diagnostic imaging before, during, and after medical and/or surgical procedures).

Opioid-naïve patient (adult): Patients who do NOT meet the definition of **OPIOID-TOLERANT**, and thus have NOT been receiving for 1 week or longer, at least: 60 mg oral morphine/day; 25 mcg transdermal fenta**NYL**/hour; 30 mg oral oxy**CODONE**/day; 8 mg oral **HYDRO**morphone/day;

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25 mg oral oxy**MOR**phone/day; 60 mg oral **HYDRO**codone/day; or an equianalgesic dose of another opioid, including heroin and/or non-prescribed opioids.

Opioid-tolerant patient (adult) (opioid tolerance): OPIOID TOLERANCE is defined by the following markers: Patients receiving, for 1 week or longer, at least: 60 mg oral morphine/day; 25 mcg transdermal fenta**NYL**/hour; 30 mg oral oxy**CODONE**/day; 8 mg oral **HYDRO**morphone/day; 25 mg oral oxy**MOR**phone/day; 60 mg oral **HYDRO**codone/day; or an equianalgesic dose of another opioid, including heroin and/or non-prescribed opioids.

Patient Safety Leadership WalkRounds: Weekly rounds by senior leaders in patient care units, designed to open the lines of communication about patient safety among leaders and staff so learning can occur, and to demonstrate leadership's commitment to safety and communicate its value in the organization. **FAQ**

Post-anesthesia care unit: A unit (sometimes called the recovery room or area) that provides a safe environment where immediate care of patients who have undergone a medical and/or surgical procedure can be closely monitored by specially trained practitioners for the return of protective airway reflexes and early recognition and treatment of anesthesia and/or procedural side effects and instability, including airway compromise, respiratory depression, bleeding and other hemodynamic instability, nausea, vomiting, delirium, and pain control.

Preoperative holding area: Any location where practitioners prepare patients and conduct a preprocedure assessment (e.g., vital signs, medication history, airway assessment, general health assessment) of the patient on the day of their scheduled medical and/or surgical procedure, before the procedure begins.

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. Understanding the risk and hazards helps to inform the design, planning, and development of appropriate system interventions that will eliminate or minimize risks and hazards before patient injuries occur.

Procedure room: A room designated for the performance of medical and/or surgical procedures that requires high-level disinfection or sterile instruments and some environmental controls but is not required to be performed with the environmental controls of an **OPERATING ROOM**.

Profiled ADC: Functionality that allows an ADC to be interfaced with the pharmacy computer system and EHR, thereby restricting the removal of a medication from the ADC until after a pharmacist has verified the safety of the order. Once pharmacy verification has occurred, a practitioner can select the medication from a patient-specific list on the ADC screen and remove the medication from the ADC.

Reckless behavior: A behavioral choice to consciously disregard a substantial and unjustifiable risk. (Conscious disregard of a policy or procedure, rather than conscious disregard of a significant risk, is often an **AT-RISK BEHAVIOR**, not **RECKLESS BEHAVIOR**.) **RECKLESS BEHAVIORS** occur when people put their own needs ahead of the needs of patients, the organization, and/or their colleagues. An example includes drug diversion. The just response to **RECKLESS BEHAVIOR** is typically **REMEDIAL ACTION** or **DISCIPLINARY SANCTION**.

Regional anesthesia: Refers to peripheral nerve blocks as well as all **NEURAXIAL ANESTHESIA**, including **EPIDURAL ANESTHESIA** and **SPINAL ANESTHESIA.**

Remedial action: Actions taken to aid an individual including education, training, and/or reassignment to a task appropriate to their knowledge and skill level.

Restricted area: A designated space that can only be accessed through a **SEMI-RESTRICTED AREA** to achieve a high level of asepsis control. Traffic in the **RESTRICTED AREA** is limited to authorized personnel and patients, and personnel are required to wear surgical attire and cover head and facial hair. Masks are required where open sterile supplies or scrubbed persons may be located.

Safety huddles: A short (5-15 minutes), stand-up meeting involving the entire care team, led by senior leaders in a non-judgmental environment at the same time each workday, to give the team a way to actively manage safety and quality, including review of specific patient safety issues and review of the care of patients who may be at higher risk for an adverse outcome during or after a medical and/or surgical procedure.

Semi-restricted area: Peripheral support areas surrounding the **RESTRICTED AREA** of a surgical area, including storage areas for clean and sterile supplies, sterile processing rooms, work areas for storage and processing of instruments, scrub sink areas, corridors leading to the **RESTRICTED AREA**, and pump rooms.

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Smart infusion pump/smart infusion pump technology: An infusion pump with integral computer software (see **DOSE ERROR-REDUCTION SYSTEMS**) that is, at a minimum, capable of: 1) maintaining a drug library of standard drug concentrations, which when enabled, is used to support dose calculations and alert the user to incorrect orders, calculation errors, or programming errors that would result in significant over- and under-delivery of a drug, electrolyte, or other fluid; and 2) capturing administrative infusion data in a systematic, objective manner to support improvement in medication use. If the programmed dose is outside the preset limits, the pump alerts clinicians and can either require confirmation before beginning delivery (**SOFT LIMIT**) or not allow delivery (**HARD LIMIT**).

Soft limit/soft stop (within drug library): A medication or fluid-specific limit that can be overridden by a practitioner. These upper (maximum) and lower (minimum) limits advise the user that the specified infusion is about to be infused outside facility-established parameters (e.g., common dosage range).

Spinal anesthesia: A technique of managing pain in the lower part of the body by the injection of an opioid and/or anesthetic into the spinal canal, usually in the lumbar region, to interrupt conduction of nerve impulses without the loss of consciousness.

Surgical safety checklist: A tool similar to that created by the World Health Organization (WHO) designed to improve the safety of medical and/or surgical procedures by bringing together the whole procedural team (surgeons, **ANESTHESIA PROVIDERS**, **ANESTHESIA PERSONNEL**, and nurses) to perform key safety checks during vital phases of perioperative care: prior to the induction of anesthesia ("sign in"), prior to skin incision ("**TIME-OUT**"), and before the team leaves the **OPERATING ROOM**.

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 lettering: Refers to a method of differentiating the appearance of similar drug names known to be confused with one another by using bolded, uppercase letters to draw attention to a small group of unique letter characters that are different in each of the drug names. A list of look-alike drug names with recommended **TALL MAN LETTERING** can be found at: www.ismp.org/node/136.

Time-out: A formal process of active communication among all team members involved in a medical and/or surgical procedure, by which, immediately prior to the procedure, all team members pause to review a standardized checklist to confirm key aspects of the procedure, such as verification of the patient, the procedure being performed, procedure laterality, medications to be administered, and a patient monitoring and rescue plan.

Trigger(s): Critical indicators (e.g., laboratory values, patient symptoms, use of antidotes for medications administered) that alert practitioners to the need for evaluation of a potential adverse event.

About the Institute for Safe Medication Practices

The Institute for Safe Medication Practices (ISMP) is the only 501c (3) nonprofit organization devoted entirely to preventing medication errors. During its more than 25-year history, ISMP has helped make a difference in the lives of millions of patients and the healthcare professionals who care for them.

ISMP is known and respected as the gold standard for medication safety information. It also has served as a vital force for progress. ISMP's advocacy work alone has resulted in numerous necessary changes in clinical practice, public policy, and drug labeling and packaging.

Among its many initiatives, ISMP runs the only national voluntary practitioner medication error reporting program, publishes newsletters with real-time error information read and trusted throughout the global healthcare community, and offers a wide range of unique educational programs, tools, and guidelines.

In 2020, ISMP formally affiliated with ECRI to create one of the largest healthcare quality and safety entities in the world. The affiliation allows both organizations to work more closely together for the benefit of providers, patient advocates, governments, and most importantly, patients.

From the affiliation, a new Patient Safety Organization took form: ECRI and the Institute for Safe Medication Practices PSO. The launch of the new PSO created a single source for safety that harnesses the unprecedented expertise of each organization. Together, ISMP and ECRI bring up-to-date information and real-time guidance to assure healthcare leaders across the continuum of care that they are making the best decisions to keep patients safe.

As an independent watchdog organization, ISMP receives no advertising revenue and depends entirely on charitable donations, educational grants, newsletter subscriptions, and volunteer efforts to pursue its life-saving work. Learn more at www.ismp.org.

Endorsing Organizations

American Association for Accreditation of Ambulatory Surgery Facilities

National Association for Healthcare Quality

ashp

AMERICAN ASSOCIATION OF NURSE ANESTHETISTS

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ECRI

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