The Conference Center at the Maritime Institute
Improving Staff Education and Competency to Enhance Medication Safety

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Institute for Safe Medication Practices
Objectives

• Review results of MD self-assessment scores pertaining to Key Element VIII - Staff Competency and Education

• Identify areas for improvement with staff orientation, baseline and ongoing competency and education

• Discuss strategies to enhance the content of orientation and educational programs
Problems with Staff Competency and Education

- Inadequate orientation process and baseline competency validation
- Competencies inconsistent throughout organization
- Lack of standardized, interdisciplinary education
- Inconsistent credentialing, training and certification
- Lack of sharing information about errors (internal and external), their causes and prevention
VIII. Staff Competency and Education

• Although staff education is a weak error reduction strategy alone, it plays an important role when combined with system-based error reduction strategies.

• Activities with the highest leverage include;
  – Ongoing assessment of healthcare providers’ baseline competencies
  – Education about new medications, non-formulary medications, high-alert medications, and medication error prevention.
## VIII. Staff Competency and Education

<table>
<thead>
<tr>
<th>ISMP Max Score</th>
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</tr>
</thead>
<tbody>
<tr>
<td>162</td>
<td>115</td>
<td>103</td>
<td>71%</td>
<td>64%</td>
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Practitioners receive sufficient orientation to medication use and undergo baseline and annual competency evaluation of knowledge and skills related to safe medication practices.

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<tr>
<td>92</td>
<td>68</td>
<td>62</td>
<td>74%</td>
<td>67%</td>
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Core Characteristic #15

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

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<td>47</td>
<td>41</td>
<td>67%</td>
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What Should be Included in Orientation?

• Key safety content may include
  – Specific processes and procedures related to the provision of care, treatment, and services;
  – Environment of care; and
  – Infection control.

• Staff is oriented to the key safety content before providing care, treatment, and services.
Staff to Include in Orientation

• Nurses
• Pharmacists
• Respiratory therapists
• Physicians
• Other staff
  – Human Resources
Patient Safety Requires a Team Effort

Created for the Regional Medication Safety Program for Hospitals

Regional Medication Safety Program for Hospitals
Health Care Improvement Foundation

An Educational Video

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Competency

• Does staff have the ability to use specific skills to employ knowledge necessary to perform their jobs?

• Should consider
  – Needs of its patient population,
  – Types of procedures conducted,
  – Conditions or diseases and
  – Equipment it uses
What Should be Included in Competencies?

• Medication safety related elements include:
  – Competency assessments focusing on specific knowledge, skill, and ability.
  – Staff competence *initially* assessed and documented as part of orientation.
  – Staff competence is assessed and documented once every three years, or more frequently as required by hospital policy.
## Highest Score Items: Core Characteristic #14

<table>
<thead>
<tr>
<th>Item</th>
<th>Item Description</th>
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<tbody>
<tr>
<td>171</td>
<td>All new staff participating in the medication use process, including agency staff, undergo baseline competency evaluation before working independently.</td>
<td>MD</td>
<td>0%</td>
<td>12%</td>
</tr>
<tr>
<td>181</td>
<td>The length of time for orientating new nurses and pharmacists is individualized and based on an ongoing assessment of their needs.</td>
<td>MD</td>
<td>0%</td>
<td>12%</td>
</tr>
<tr>
<td>170</td>
<td>A defined time period for orientation and training of agency staff is required before they can work independently.</td>
<td>MD</td>
<td>2%</td>
<td>12%</td>
</tr>
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## Lowest Score Items: Core Characteristic #14

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<tr>
<td>173</td>
<td>During <strong>orientation</strong>, nurses spend time in the pharmacy (and with clinical pharmacists) to become familiar with the order entry and/or verification process, drug preparation and dispensing, availability of drug information resources, ways to access these resources, and various medication safety initiatives.</td>
<td>MD</td>
<td>60%</td>
<td>26%</td>
</tr>
<tr>
<td>174</td>
<td>During <strong>orientation</strong>, pharmacists spend time in patient care units to become familiar with drug prescribing practices, unit stock storage conditions, medication administration procedures, and patient education processes.</td>
<td>MD</td>
<td>33%</td>
<td>31%</td>
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## Lowest Score Items: Core Characteristic #14

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<td>175</td>
<td>Pharmacists actively participate in the <strong>orientation</strong> process for new medical staff (including medical students, medical residents, and attending physicians).</td>
<td>MD 28%</td>
<td>29%</td>
<td>43%</td>
</tr>
<tr>
<td>183</td>
<td>The organization provides formal teamwork training (e.g., TeamSTEPPS) to all staff that incorporates elements of information sharing, conflict resolution, communication and teamwork skills, and clarification of team roles and responsibilities.</td>
<td>MD 24%</td>
<td>60%</td>
<td>17%</td>
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Topics for Orientation and Baseline Competency

- Safe practices around medication use
- At-risk behaviors
- Technology
- Error Reporting/Risk Identification
Topics to Include in Orientation and Baseline Competency

• System-based causes of medication errors
• High-leverage strategies for risk reduction
• Examples of medication errors
  – Internally reported
  – Externally reported
Examples of Items for Nurses

• Consistently measure and document height and weight using the metric system (only)

• Demonstrate performance of SBAR communication (i.e., situation, background, assessment, recommendation)
  – i.e., Verbalize the importance of sharing essential patient information between practitioner groups
Examples of Items for Nurses

• Order clarification process
• Utilize appropriate drug resources as necessary
• Consistently use two unique patient identifiers
• Perform the correct procedure for an independent double-check
Competency for Devices and Technology

• Appropriate devices for medication administration
  – e.g., oral syringes for oral liquid medications
• Select appropriate medications from ADCs using the MAR (or eMAR)
• BCMA
• Infusion pumps
Examples of Items for Pharmacists

• Verify all orders using the patient’s complete profile before entering new orders or adjusting current medications

• Utilize laboratory parameters to check on the proper dosing of drug therapy

• Recognize appropriate (and inappropriate) therapy for patients based on their disease process and past history
  – e.g., allergies and reactions, drug-drug interactions, inappropriate doses, drug duplications
Safe Practices for Pharmacists

• Clarify orders with the prescriber which are incomplete or inappropriate
• Complete all steps in the checking process for IV preparations
  – Additional checks required for high-alert products?
• Technology
  – Compounders
  – Robotics
  – Carousels
  – Medication administration
Examples of Items for Prescribers

• Need for complete orders
• Avoidance of dangerous abbreviations and dose expressions for all orders
• Use of mg/kg and total dose for pediatric/neonatal orders
• Formulary control
• Benefits of standardization
• Technology
  – CPOE
  – Drug information resources
Items on Error Reporting

• What is reportable in your organization?
  – Sentinel Event
  – Medication Error
  – Close calls

• Error Reporting Procedures
  – Reporting mechanism
Items on Error Reporting

• Methods for responding to errors
  – Root cause analysis
  – Proactive risk reduction activity (FEMA)

• Error Reduction Strategies

• How information is used
Examples of At-Risk Behaviors

• Accepting incomplete orders (verbal and written)
• Write down/read back telephone orders
• Administering medications without orders
• Not taking the MAR to the ADC or bedside
• Borrowing another patient's medications
• Labeling – syringes, bowels, etc.
• Mathematical calculations of doses not independently checked
• Use of dangerous abbreviations
Methods for Education and Ongoing Competency

- Verbal or written tests
- Observation
- Simulation
  - Identify at-risk behaviors or error prone situations and contributing factors that lead to error
Core Characteristics #15

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<tr>
<td>189</td>
<td>Practitioners are trained in the clinical and administrative procedures for responding to a serious medication error.</td>
<td>MD 5%</td>
<td>19%</td>
<td>76%</td>
</tr>
<tr>
<td>186</td>
<td>Practitioners receive ongoing information about medication errors occurring within the organization, error-prone conditions, errors occurring in other healthcare facilities, and strategies to prevent such errors.</td>
<td>MD 7%</td>
<td>38%</td>
<td>55%</td>
</tr>
<tr>
<td>184</td>
<td>Practitioners are educated about new drugs added to the formulary and associated protocols/guidelines and restrictions before the drugs are used in the hospital.</td>
<td>MD 2%</td>
<td>48%</td>
<td>50%</td>
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### Lowest Score Items: Core Characteristic #15

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<td>192</td>
<td>Simulations of error-prone conditions .....and/or role-playing .....are used as methodologies to orient and educate practitioners and other staff about medication/patient safety.</td>
<td>MD</td>
<td>33%</td>
<td>41%</td>
</tr>
<tr>
<td>193</td>
<td>HUMAN FACTORS and the principles of error reduction ...... are introduced during practitioner orientation, and used as the foundation for an annual mandatory educational program for all practitioners involved in the medication use process.</td>
<td>MD</td>
<td>31%</td>
<td>38%</td>
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<td>191</td>
<td>Pharmacists provide at least four <strong>educational programs</strong> per year to nurses, pharmacists, and prescribers on important drug safety issues.</td>
<td>MD</td>
<td>24%</td>
<td>33%</td>
</tr>
<tr>
<td>185</td>
<td>Pharmacists routinely provide nurses and other practitioners who administer medications with important <strong>information</strong> about non-formulary drugs before dispensing the products to patient care areas for administration.</td>
<td>MD</td>
<td>14%</td>
<td>41%</td>
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What Should be a Part of Education?

• Medication safety related elements include;
  – Ongoing education and training to maintain or increase their competency.
  – Specific to the needs of the patient population.
  – Incorporates the skills of team communication, collaboration, and coordination of care.
  – Includes information about the need to report unanticipated adverse events and how to report these events.
Examples of Topics for Staff Education

• Safety strategies with high-alert medications, particularly opioids and hazardous medications
  – Opioid equianalgesic dosing (e.g., HYDROMorphone)
  – Transdermal patch safety
  – PCA safety
• New drugs added to the formulary
• Expectations of practice/avoidance of “at-risk” behaviors
Examples of Topics for Staff Education

• Safety strategies for the safe use of ADCs
• Safe practice guidelines for the implementation of new technology
  – CPOE and pharmacy systems
  – Smart infusion pumps
  – BCMA
• Specific issues related to the organization’s error experiences and errors reported in the literature
Methods of Education

• Periodic medication safety tips via email
• Safety updates on the intranet or a medication safety website
• Story boards or other poster formats to describe medication safety initiatives and results (often used at an annual skills day/employee updates)
Methods of Education

• Communication logs used to share safety tips in patient care areas
• Videotapes and interactive CD-ROM programs
• Simulation exercises
• Weekly multidisciplinary safety rounds with frontline staff and management involvement.
Resources

• ASHP
  – Pharmacy Informatics and Technology
  – Competence Assessment Tools for Health-System Pharmacies
• Specialty nursing associations
• Local academic health systems
• ISMP