Building Your Patient Safety Team: Don’t Forget your Pharmacist Colleagues

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American Society of Health-System Pharmacists
Relevant financial relationship disclosure

• No one in control of the content of this activity has a relevant financial relationship (RFR) with an ineligible company.
Learning objectives

• Explain how an interdisciplinary stewardship approach can assist in reducing medication-related harm

• Describe opportunities for incorporating pharmacists into the interprofessional care team

• Identify resources for improving medication safety
American Society of Health-System Pharmacists

- Founded 1942
- 60,000-member professional association
- ASHP is the collective voice of pharmacists who serve as patient care providers in hospitals, health systems, ambulatory clinics, and other healthcare settings spanning the full spectrum of medication use
- Website: ashp.org
- Patient Website: SafeMedication.com
Vision: Medication use will be optimal, safe, and effective for all people all of the time.
ASHP’s Core Strengths

- **Leadership on professional issues**
  - Practice standards and guidelines
  - Practice advancement efforts

- **Advocacy and policy development**
  - Advocating public policy for health-system pharmacists

- **Publishing**
  - Evidence-based drug information resources

- **Developing practitioner educational programs**
  - Midyear and Summer Meetings, Leadership Conference, Preceptors Conference, certificate programs, other live and web based programs

- **Accreditation**
  - Pharmacy residency programs, Pharmacy technician training programs

- **Membership services**
  - Resources, tools, professional home for networking and collaboration
Measures to Improve Medication Safety

- Help the patient avoid medication errors
- Organizing health care units to deliver care safely
- Creating health care organizations that foster safe care
- Establishing an environment that enables organizations to deliver safe care
ASHP Statement on the Role of the Medication Safety Leader

Position

The American Society of Health-System Pharmacists (ASHP) believes that medication safety is a fundamental responsibility of all members of the profession of pharmacy. For a medication safety program to succeed, however, it is essential that there be an innovative leader to set a vision and direction, identify opportunities to improve the medication-use system, and lead implementation of error-prevention strategies. The medication safety leader’s role includes responsibility for leadership, medication safety expertise, influencing practice change, research, and education. ASHP believes that because of their training, knowledge of the medication-use process, skills, and abilities, pharmacists are uniquely qualified to fill the roles and meet the responsibilities of the medication safety leader in hospitals and health systems.
To encourage pharmacists to exert leadership in establishing a just culture in their workplaces and a nonpunitive systems approach to addressing medication errors while supporting a nonthreatening reporting environment to encourage pharmacy staff and others to report actual and potential medication errors in a timely manner; further,

To provide leadership in supporting a single, comprehensive, hospital- or health-system specific medication error reporting program that (1) fosters a confidential, nonthreatening, and nonpunitive environment for the submission of medication error reports; (2) receives and analyzes these confidential reports to identify system-based causes of medication errors or potential errors; and (3) recommends and disseminates error prevention strategies; further,

To provide leadership in encouraging the participation of all stakeholders in the reporting of medication errors to this program.
Medication Errors

- **Medication error**: Preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of the healthcare professional, patient, or consumer.

- “The pharmacist should participate in multidisciplinary committees of the organization and take an active role in the evaluation and monitoring of the medication-use process throughout the hospital or healthcare system to examine and improve systems to ensure that medication processes are safe.”

**ASHP REPORT**

**PREVENTING MEDICATION ERRORS**

**Appendix B—Self-assessment checklist**

- A medication safety leader has been designated by the institution.
- A medication safety strategic plan has been developed for the institution.
- A culture of safety has been supported at the highest level of the organization.
- An event reporting system is available for voluntary reporting of patient events.
- A medication safety team/committee has been developed and is multidisciplinary; alternatively, for smaller hospitals, the medication safety “business” can be taken care of at another meeting.
Medication Use System

Chat: Enter Medication Use Step > Example
## Medication Safety Dashboard

<table>
<thead>
<tr>
<th>Medication Use System</th>
<th>Metric</th>
<th>Owner</th>
<th>Goal</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage</td>
<td>Expired medication in automated dispensing cabinet</td>
<td>Pharmacy</td>
<td>Zero expired medications stocked beyond entered expiration date</td>
<td>ADC</td>
</tr>
<tr>
<td>Distribution</td>
<td>Percent barcode scanning within pharmacy</td>
<td>Pharmacy</td>
<td>&gt;95% based on barcode medication administration (BCMA) scanning goal</td>
<td></td>
</tr>
<tr>
<td>Administration</td>
<td>BCMA</td>
<td>Nursing</td>
<td>95% (Leapfrog)</td>
<td>EHR</td>
</tr>
<tr>
<td>Administration</td>
<td>Dose Error Reduction Software Compliance (Drug Library Limits)</td>
<td>Nursing leadership</td>
<td>&gt; 95% (ISMP)</td>
<td>Smart pump</td>
</tr>
</tbody>
</table>

Institute for Safe Medication Practices: Key Elements of Medication Use System™

Management of Information
- Patient information
- Drug information
- Communication of drug information
- Labeling, packaging, nomenclature
- Patient education

Management of Environment
- Drug storage, stock, standardization, distribution
- Medication devices
- Physical environment
- Risk management processes, culture

Management of Personnel
- Staffing patterns
- Staffing competency verification and education

https://www.ismp.org/key-elements-medication-use
Stewardship

• Careful and responsible management of something entrusted to one’s care
  ▪ Merriam-Webster

• Framework applicable to care delivery, medication management, healthcare operations, etc.

• Examples for medication management
  ▪ Antimicrobial
  ▪ Pain/Opioid
  ▪ Behavioral health
  ▪ Glycemic control
  ▪ Anticoagulation/antiplatelet
  ▪ Oncology/hematology
National Survey of Pharmacy Practice

- Conducted since 1975
- Describe practices and technologies used to manage and improve the medication-use system
- Each annual national survey focuses on two of the six components of the medication use system
  - Prescribing, transcribing, dispensing, administration, monitoring, and patient education
Opioid Stewardship

- 40.9% of hospitals have an opioid stewardship program
- Majority of hospitals over 200 beds reported having a program
- Pharmacists’ primary role:
  - Diversion detection: 71%
  - Leadership and Accountability: 55%
  - Clinical prescribing support: 35%
  - Pharmacist not actively involved: 3%
### Opioid Stewardship Program Strategies

- **Education/guidelines**: 71%
- **PDM program database search**: 65%
- **Emphasizing alternate pain management methods**: 62%
- **Opioid diversion detection program**: 56%
- **Limiting home discharge prescription supply**: 46%
- **Monitoring opioid prescribing practices**: 46%
- **Clinical Decision Support**: 36%
- **Naloxone dispensing or education**: 34%
- **Opioid medication reconciliation**: 29%
- **Restriction of specific opioids or doses (MMEs)**: 29%
- **Prescription opioid takeback program**: 22%
- **Opioid addiction management**: 20%
- **Daily review and feedback**: 17%
Member Spotlight

5/11/2018 | Opioid Management
Cone Health Greensboro, NC
Pharmacist intervention to monitor and reduce opioid use in patients with chronic pain.

5/11/2018 | BCPSC
Baptist Memorial
Opioid-light

Interdisciplinary Controlled Substance Stewardship Committee

Submitted by: Felicity Homsted, Pharm.D., BCPSC, Kristopher Reven, Pharm.D. Penobscot Community Health Care, Bangor, ME

Overview

The presence of co-morbidities negatively impacted by the use of controlled substances. Patients are reviewed and presented to the committee by the pharmacy department. The committee then assesses the appropriateness of therapy and develops recommendations for a treatment plan. A treatment plan is then developed and submitted to the prescriber. The committee follows up on recommendations to determine the need for further intervention.

Key Elements of Success
The success of our CSS committee is due in part to the support from our clinical leadership. Our Chief Medical Officer and Chief Psychiatry Officer sit on the committee and are in full support of its goals and objectives. Another element to our success is the effort our pharmacy residents put into researching and presenting patients. We keep this committee current by shifting our focus to...
ASHP Best Practices Award

The ASHP Best Practices Award is an annual recognition program developed and awarded by ASHP.

https://www.ashp.org/about-ashp/awards/leadership-awards/ashp-best-practices-award
2022 ASHP Best Practice Award

- Nebraska Medicine sought to use the tenets and tools of the stewardship model to improve outcomes associated with the complex, high-risk medication-use processes surrounding glucose management in the inpatient environment.

- Alignment of stewardship pharmacist and Diabetes Endocrinology & Metabolism division of Internal Medicine catalyzed safety-related performance improvement efforts.

- Blood glucose benchmark:
  - 65% reductions in blood glucose < 70 mg/dL in critical care units; 50% reduction in non-critical care
  - Length of stay decreased 0.46 days
  - $690,000 cost avoidance

Chat: Share Stewardship Examples
Strategy to Expand Medication Safety Program

- Establish a medication safety strategic plan
- Foster a culture of safety
- Implement established safe practices
- Evaluation medication system (ISMP Self-Assessment)
- Investigate individual errors
- Report errors, analyze trends, take corrective action
- Use a controlled formulary system
- Designate a “Medication Safety Officer”
### Medication Safety Program Tasks

<table>
<thead>
<tr>
<th>Task</th>
<th>Priority</th>
<th>Impact</th>
<th>Time Allocation</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitor adverse drug events and report to national reporting programs as appropriate</td>
<td>High</td>
<td>Major</td>
<td>Least</td>
<td>• ASHP Guidelines on Adverse Drug Reaction Monitoring and Reporting</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• FDA Medwatch</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Vaccine Adverse Events Reporting System: ISMP Medication Error Report</td>
</tr>
<tr>
<td>Develop a process for ISMP newsletter gap analysis review by completing the Quarterly Action Agenda</td>
<td>High</td>
<td>Major</td>
<td>Least</td>
<td>• ISMP Quarterly Action Agenda</td>
</tr>
<tr>
<td>Implement voluntary medication safety reporting program</td>
<td>High</td>
<td>Major</td>
<td>Moderate</td>
<td>ASHP Statement on Reporting Medication Errors</td>
</tr>
<tr>
<td>Determine organization's metrics for medication safety</td>
<td>Medium</td>
<td>Minor</td>
<td>Moderate</td>
<td></td>
</tr>
</tbody>
</table>

Strategies to Expand Pharmacy Services

- Develop trusting relationship with physicians, nurses, allied health professionals
- Strengthen drug distribution system
- Enhance education and training
- Collect and evaluate data on medication use

- Utilize existing literature and experiences of others
- Cost justify activities of pharmacists
- Decentralize pharmacists in all possible ways
- Leverage a layered learning model
Leading Change with Teamwork

- Two or more health care professionals who work collaboratively with patients and their caregivers to accomplish shared goals

- Traits of effective teams
  - Shared goals
  - Clear roles
  - Mutual trust
  - Effective communication
  - Measurable processes and outcomes

## Pharmacy Technicians: Essential Colleagues

<table>
<thead>
<tr>
<th>Role</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sterile compounding</td>
<td>96%</td>
</tr>
<tr>
<td>Inventory management</td>
<td>93%</td>
</tr>
<tr>
<td>Purchasing</td>
<td>84%</td>
</tr>
<tr>
<td>Non sterile compounding</td>
<td>84%</td>
</tr>
<tr>
<td>Hazardous drug handling</td>
<td>82%</td>
</tr>
<tr>
<td>Controlled substance system management</td>
<td>78%</td>
</tr>
<tr>
<td>Medication order distribution</td>
<td>60%</td>
</tr>
<tr>
<td>Supervisory responsibilities</td>
<td>56%</td>
</tr>
<tr>
<td>Billing and reimbursement</td>
<td>55%</td>
</tr>
<tr>
<td>Technician education and training</td>
<td>53%</td>
</tr>
</tbody>
</table>
What inspired you to become a pharmacy technician? - Top 10

- A desire to help people/patients: 52%
- General interest in a health care career: 32%
- General interest in a pharmacy career: 22%
- An opportunity to serve the public: 18%
- Fulfilling career: 16%
- Recommendation of a friend, colleague or family member: 13%
- Be a part of a team: 12%
- Employee benefits: 10%
- Work schedule/flexibility: 10%
- Exposure by working at a different job in a pharmacy organization: 7%

Base: 6,619 (79% of respondents)
Note: Respondents could select multiple options.
Parting Gifts
Are you using Standardize 4 Safety concentrations in your practice setting?

A. Yes, we use ASHP S4S Standards

B. Yes, we use some of the S4S standards and some that are internally developed

C. No, we do not use S4S standards but use standards from another source

D. No, we do not standardize concentrations
Standardize 4 Safety Initiative

Standardize 4 Safety is the first national, interprofessional effort to standardize medication concentrations to reduce errors, especially during transitions of care. Sign up to receive the latest about Standardize 4 Safety.

www.ashp.org/standardize4safety
Statement of the Problem

- No national consensus for standard concentrations of IV medications
- Patients transferred between patient care areas and locations with varying concentrations of the same medication
- IV medications have inherent potential for errors:
  - Complexities with weight-based dosing, dosing units, and special administration (route other than IV)
  - Vulnerable patients are involved

- Ordering
- Compounding
- Pump programming
- Documentation

- Critically ill
- Pediatric, neonates
- Geriatric
The Standardize 4 Safety Journey

- 2018 Adult Continuous Infusion
- 2018 Oral Compounded Liquids
- 2020 Pediatric Continuous Infusion
- 2022 PCA/Epidural Continuous Infusion
- Coming Intermittent Infusion
- Coming Oral Liquid Rounding
## Sample of Standard Concentration Table

<table>
<thead>
<tr>
<th>Drug</th>
<th>Concentration Standards</th>
<th>Dosing units</th>
<th>Commercially available</th>
<th>Concentration vs. unit mismatch</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alprostadil</td>
<td>1. 5 mcg/mL</td>
<td>mcg/kg/min</td>
<td>No</td>
<td>Possibly depending on vial</td>
<td>1. Pharmacia &amp; Upjohn Company. Prostin VR Pediatric* (alprostadil sterile solution) injection prescribing information. Kalamazoo, MI, 2013 April. AHFS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1b. Product Information: Activase(R) intravenous injection, alteplase intravenous injection. Genentech, Inc.(per Manufacturer); South San Francisco, CA, 2015- Micromedix</td>
</tr>
<tr>
<td>Amiodarone</td>
<td>1. 1.8 mg/mL</td>
<td>mcg/kg/ min*</td>
<td>Yes - 1.8 mg/mL</td>
<td>Yes</td>
<td>1a. Campbell S, Nolan PE, Bliss M et al. Stability of amiodarone hydrochloride in admixtures with other injectable drugs. <em>Am J Hosp Pharm.</em> 1986; 43:917–21.</td>
</tr>
<tr>
<td></td>
<td>2. 3.6 mg/mL</td>
<td></td>
<td></td>
<td></td>
<td>1b. Product Information: amiodarone HCl intravenous injection, amiodarone HCl intravenous injection. Teva Canada Limited (per Health Canada), Toronto, ON, Canada, 2016. - Micromedix</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2. Product Information: amiodarone HCl intravenous injection, amiodarone HCl intravenous injection. Teva Canada Limited (per Health Canada), Toronto, ON, Canada, 2016. - Micromedix</td>
</tr>
</tbody>
</table>
# Standardize 4 Safety Checklist Sample

## Adult Continuous Infusion

<table>
<thead>
<tr>
<th>What concentration(s) of</th>
<th>1Alteplase do you use?</th>
<th>1Amiodarone do you use?</th>
<th>1Argatroban do you use?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 mg/mL</td>
<td>1.8 mg/mL</td>
<td>1 mg/mL</td>
</tr>
<tr>
<td>Other concentrations used:</td>
<td>E.g. 5 mg/mL</td>
<td>Other concentrations used:</td>
<td>E.g. 5 mg/mL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What concentration(s) of</th>
<th>Bumetanide do you use?</th>
<th>Cisatracurium do you use?</th>
<th>Dexmedetomidine do you use?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.25 mg/mL</td>
<td>2 mg/mL</td>
<td>4 mcg/mL</td>
</tr>
<tr>
<td>Other concentrations used:</td>
<td>E.g. 5 mg/mL</td>
<td>Other concentrations used:</td>
<td>E.g. 5 mg/mL</td>
</tr>
</tbody>
</table>
ASHP Practice Advancement Initiative
<table>
<thead>
<tr>
<th>Patient-Centered Care</th>
<th>Pharmacist Role, Education, and Training</th>
<th>Technology and Data Science</th>
<th>Pharmacy Technician Role, Education, and Training</th>
<th>Leadership in Medication Use and Safety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shift from patient advocacy to patient and family activation</td>
<td>Increase in the credentialing and privileging of pharmacists in health systems</td>
<td>Harness data analytics to improve patient health</td>
<td>Foster development of professional career paths for pharmacy technicians</td>
<td>Advance use of pharmacogenomics information and lead medication stewardship activities</td>
</tr>
<tr>
<td>Integrate pharmacy enterprise for convenient and cost-effective care</td>
<td>Proliferation of board certification in many practice areas</td>
<td>Augmented intelligence is an important developing technology that will impact operations and practice</td>
<td>Achieve a recognized scope of practice</td>
<td>Increase public health opportunities to address social determinants, chronic illness, and addiction</td>
</tr>
<tr>
<td>Optimize care via pharmacist-provided comprehensive medication management</td>
<td>Building of workforce skills in population health management and mental/behavioral health</td>
<td>Assessing patient care technologies to support optimal medication-use outcomes</td>
<td>Advance pharmacy technician roles to improve patient care access</td>
<td>Support the well-being and resiliency of pharmacy workforce</td>
</tr>
</tbody>
</table>

The ASHP Practice Advancement Initiative (PAI) 2030 includes 59 recommendations to promote optimal, safe, and effective medication use; expand pharmacist and technician roles; and implement the latest technologies.
PAI 2030 Self-Assessment Tool

Overview

ASHP's Practice Advancement Initiative 2030 (PAI 2030) provides pharmacy teams with guidance for advancing healthcare, patient outcomes, and pharmacy practice through 59 recommendations. The PAI 2030 Self-Assessment Tool is designed to help you determine how well your practice setting aligns with the PAI 2030 recommendations. The tool identifies areas where the PAI 2030 recommendations could have the biggest impact on your practice setting.

The survey format is applicable to both institutional and ambulatory care pharmacy practice settings. Participants can complete the assessment, which takes about 45 minutes, from the perspective of a single practitioner or as an organization. The results will identify several areas for improvement. From there, a list of priorities for implementing change can be developed.

Please note that this assessment tool does NOT assist with therapeutic decision-making.

Tiered Scoring by Domain & Action Plan

ACCESS TO SELF-ASSESSMENT TOOL:
https://pai2030tool.ashp.org/

ASHP Podcast: Using the ASHP Practice Advancement Initiative (PAI) 2030 Self-Assessment Tool to Influence Practice Transformation
PAI 2030 Implementation Pathway

1. Get Started & Build Your Team
   - Identify State Champion
   - Champion PAI 2030 orientation
   - PAI 2030 Self-Assessment Tool tutorial

2. Prepare to Launch
   - Complete PAI 2030 Self-Assessment Tool
     - Organization
     - Practitioner
     - Personal vs. Official

3. Assess Current Practice
   - Review Action List and Assign Feasibility & Impact

4. Create an Action Plan
   - Strategic Planning
     - Goals
     - Objectives
     - Develop specific plans of action
     - PAI 2030 Focused Initiatives

5. Improve Your Practice
   - Complete reassessment PAI 2030 Self-Assessment Tool

6. Monitor Your Progress
   - Case Studies, podcasts, webinars
   - Toolkits/playbooks
   - Publish articles
   - Inform professional policy
   - Advocacy agenda
   - Indicators of progress

7. Tell Your Story
ASHP Well-Being Ambassador Program
**WBA Outcomes & Structure**

• National network of trained pharmacy professionals leading efforts to address occupational burnout in local communities

• Ambassador proficiency in well-being strategies to support resilience for themselves and others

• Transformation of organizations into cultures of well-being

[https://wellbeing.ashp.org/wellbeing/well-being-ambassador-program](https://wellbeing.ashp.org/wellbeing/well-being-ambassador-program)
Professional Certificate

- This activity is accredited for continuing education for pharmacists, physicians, nurses, and pharmacy technicians.
- https://elearning.ashp.org/products/9879/medication-safety-certificate

Medication Shortage Resources

- Drug shortages can adversely affect drug therapy, compromise or delay medical procedures, and result in medication errors
- https://www.ashp.org/drug-shortages
Key Points

- Stewardship over medication use advances team-based care efforts, increases care delivery coordination and efficiencies, and improves patient outcomes;
- Best practices for implementing stewardship frameworks should be shared and showcased; and
- Resources are available for improving medication safety.
Thank you.

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