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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

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Vision:
Medication use will be optimal, safe, and effective for all people all of the time.

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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
  - Books, eBooks, videos, electronic databases, Journal *(AJHP)*
- **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

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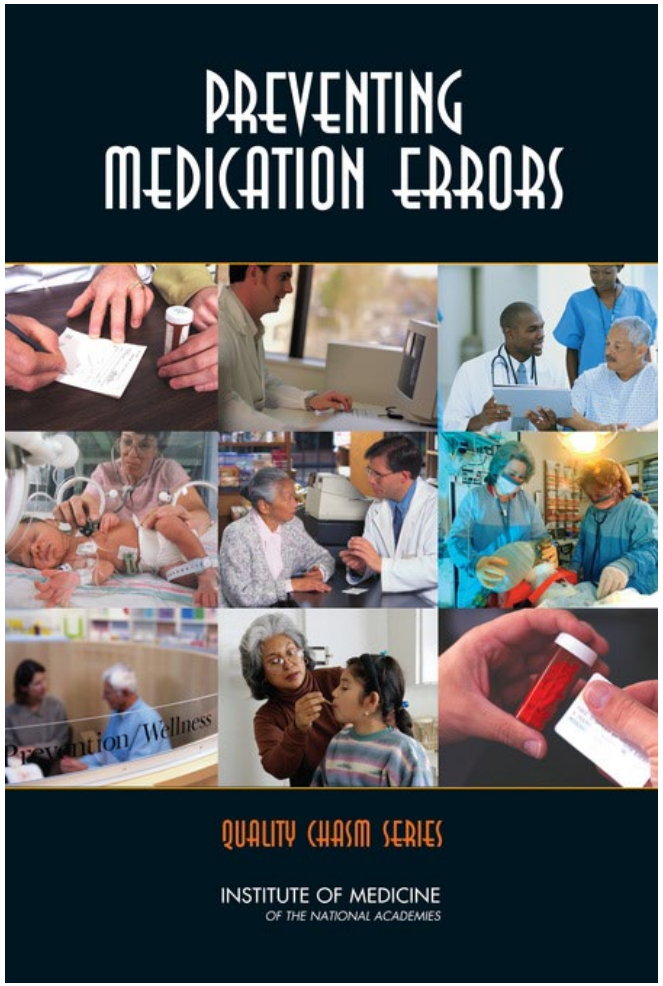


Institute of Medicine. 2007. *Preventing Medication Errors*. Washington, DC: The National Academies Press. https://doi.org/10.17226/11623.

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 Position on Medication Safety

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.

www.ashp.org/-/media/assets/policy-guidelines/docs/statements/role-of-medication-safety-leader

ASHP Policy Just Culture and Reporting Medication Errors

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


ASHP REPORT

ASHP Guidelines on Preventing Medication Errors in Hospitals

Am J Health-Syst Pharm. 2018; 75: 1493-517

pounding, dispensing, distribution, administration, education, monitor-

occur.[9] Blaming healthcare workers involved in errors or passively encour-

- **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."

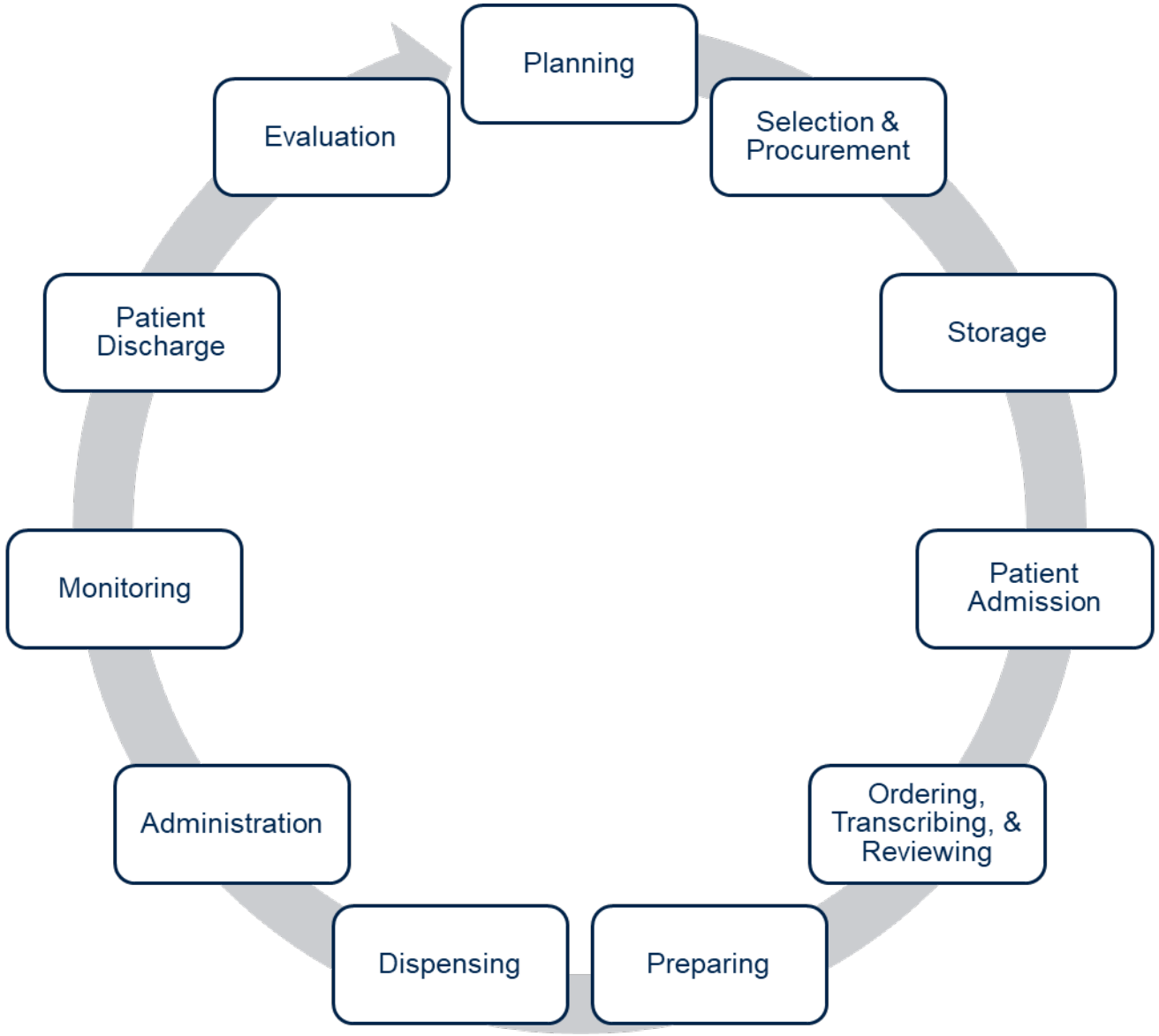

PREVENTING MEDICATION ERRORS ASHP REPORT

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.

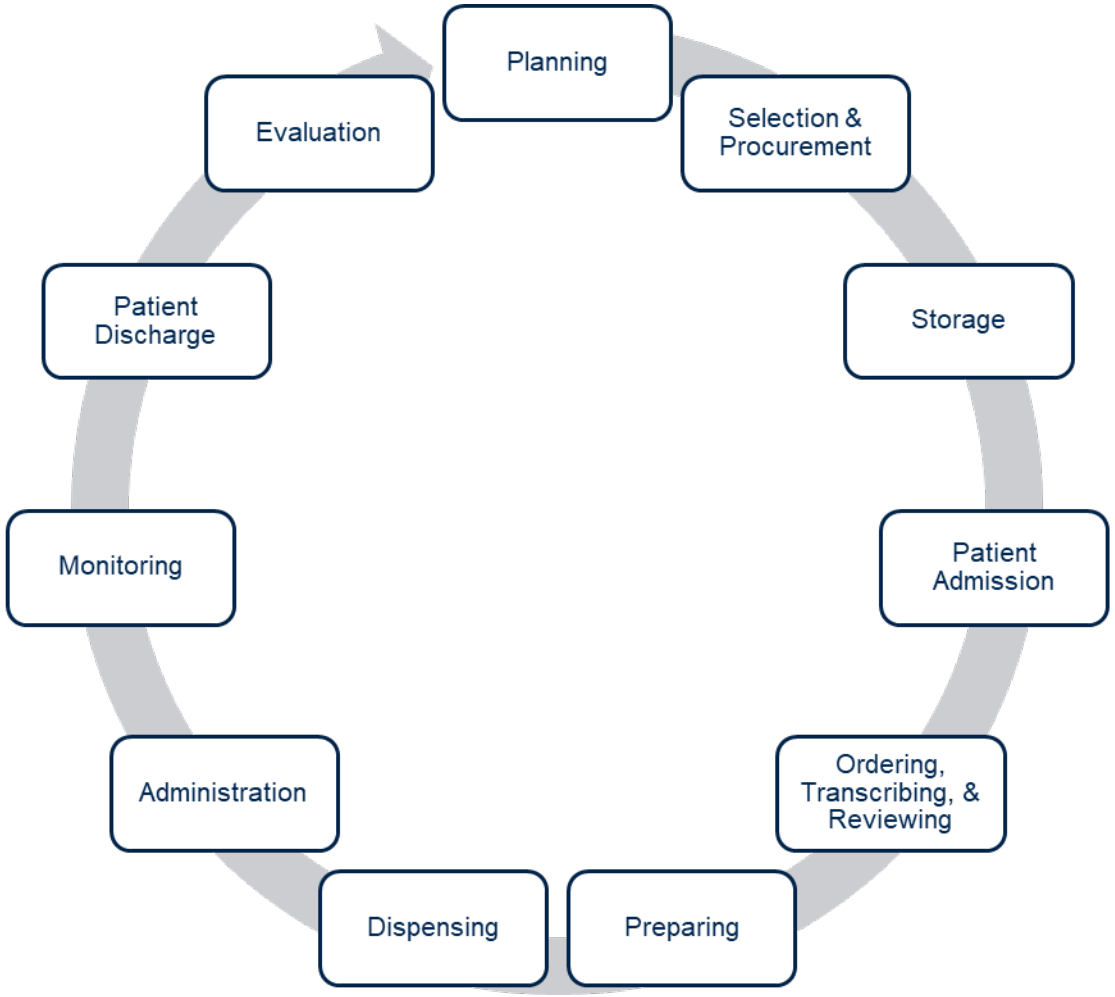
Hepler CD, Strand LM. Opportunities and responsibilities in patient care. Am J Hosp Pharm. 1990;47:533-543.
ASHP Guidelines on preventing medication errors in hospitals. Am J Hosp Pharm. 2018; 75:1493-1517.

Medication Use System



ASHP Guidelines on preventing medication errors in hospitals. Am J Hosp Pharm. 2018; 75:1493-1517.

Chat:
Enter Medication Use Step > Example



Medication Safety Dashboard

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

https://www.ashp.org/-/media/assets/pharmacy-practice/resource-centers/patient-safety/medication-safety-dashboard.pdf

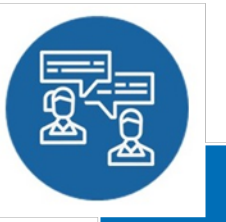
Institute for Safe Medication Practices: Key Elements of Medication Use System™

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

Stew·ard·ship

- 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

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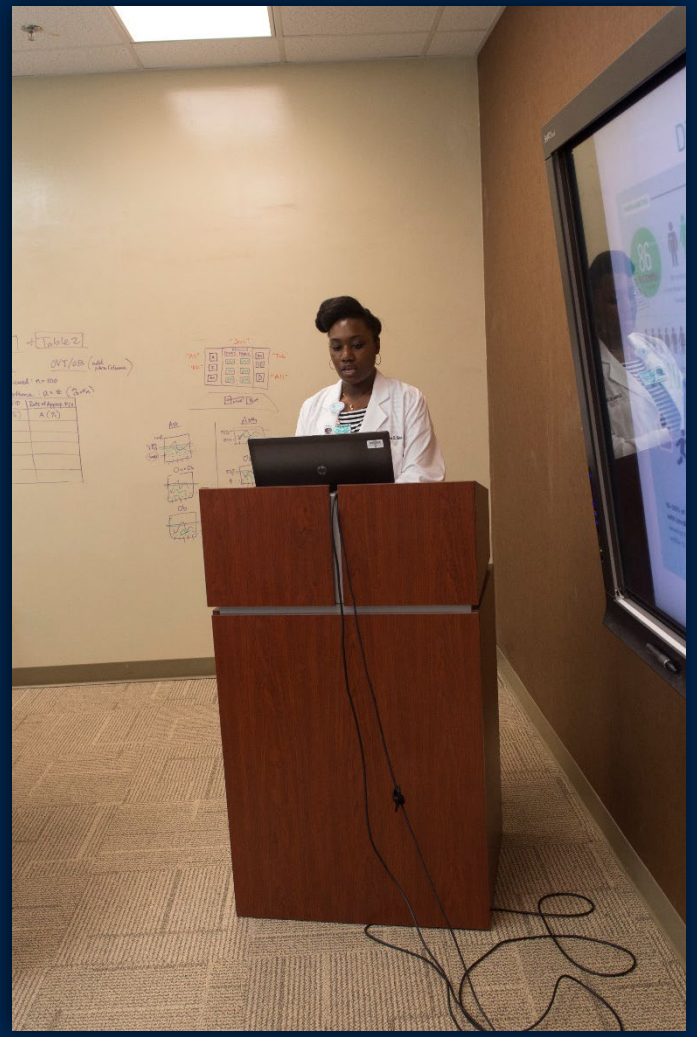

National Survey of Pharmacy Practice

- 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
- https://academic.oup.com/ajhp/pages/pharmacy_practice_in_hospital_settings_surveys

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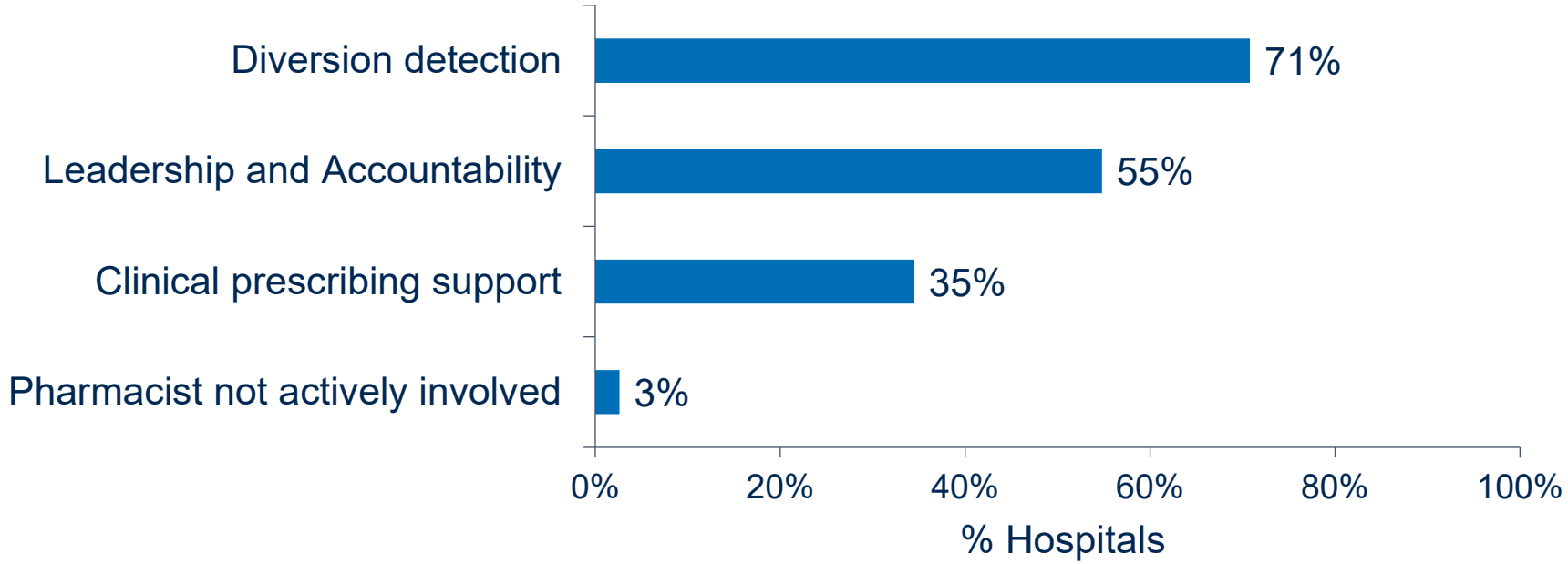
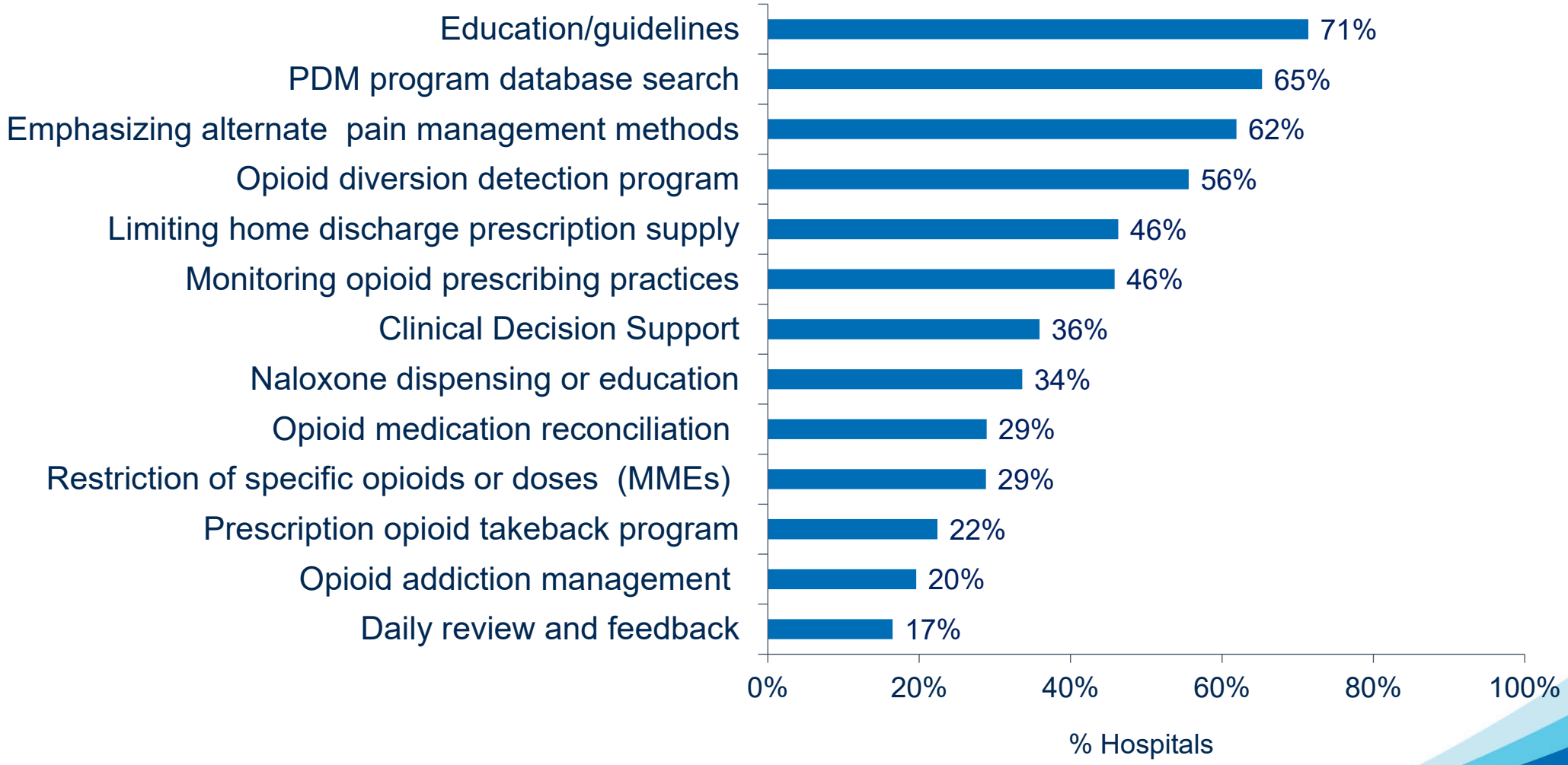
Opioid Stewardship

- 40.9% of hospitals have an opioid stewardship program
- Majority of hospitals over 200 beds reported having a program
- Pharmacists' primary role:



Opioid Stewardship Program Strategies



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Member Spotlight

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OPIOID

5/11/2018 | **Opioid Management**

Cone Health Greensboro, NC

Pharmacist intervention to monitor and reduce opioid use in patients with chronic

5/11/2018 |

Baptist Memph

Opioid-ligh

CASE STUDY

Interdisciplinary Controlled Substance Stewardship Committee

Submitted by: *Felicity Homsted, Pharm.D., BCPS, Kristopher Raven, Pharm.D. Penobscot Community Health Care, Bangor, ME*

Overview

presence of co-morbidities negatively impacted by 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

www.ashp.org/pharmacy-practice/resource-centers/opioid-management

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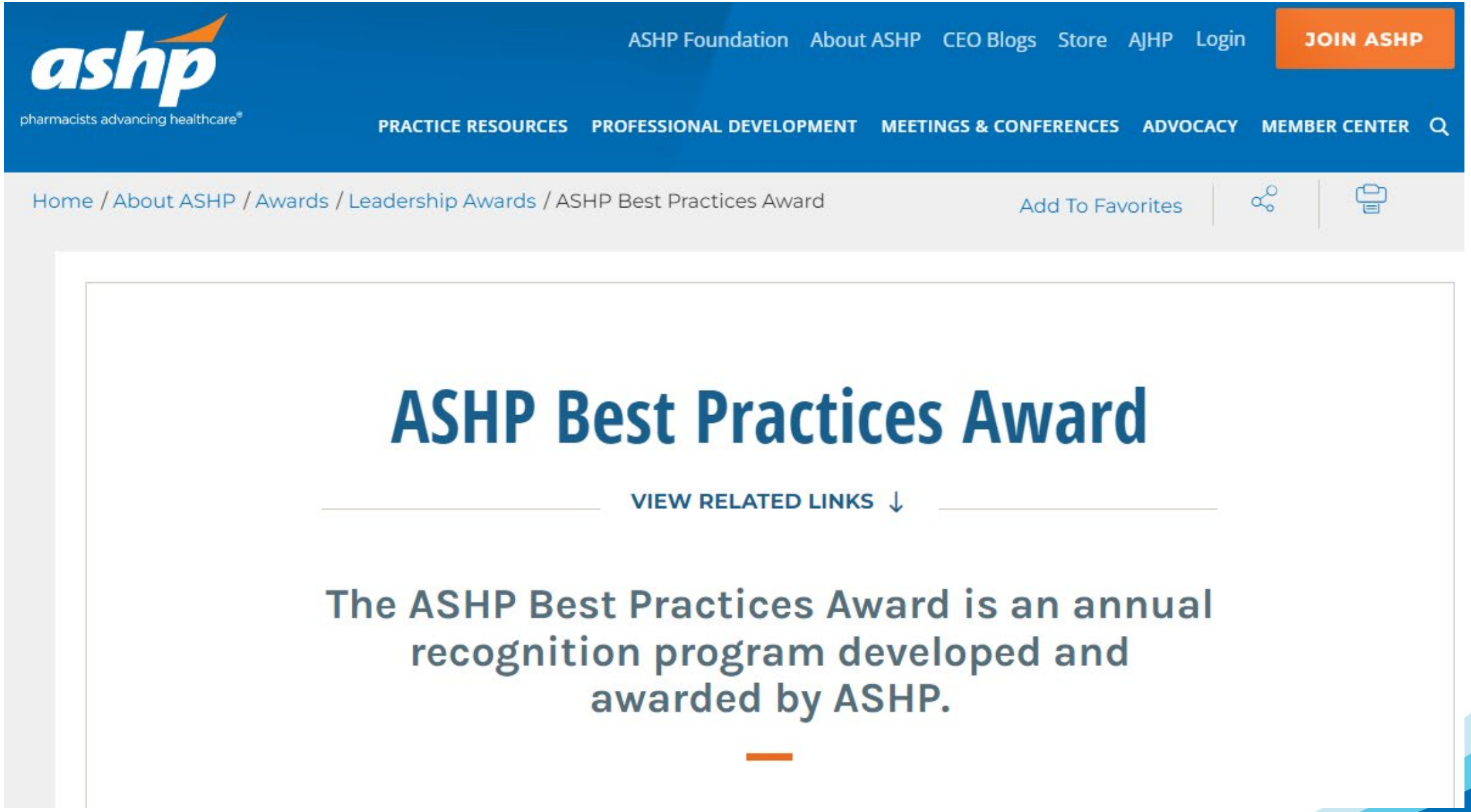

https://www.ashp.org/about-ashp/awards/leadership-awards/ashp-best-practices-award

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

Impact of a Novel Diabetes Stewardship Pharmacist Model on Enhancing Inpatient Safety, Outcomes, and Cost Avoidance

Jon Knezevich, PharmD, BCPS, DPLA
Colleen Malashock, PharmD, BCPS, DPLA
Andjela Drincic, MD
Nicholas Crites, PharmD, DPLA
Stacie Ethington, MSN, RN
Shelly Lautenbaugh, RN, BSN, CDCES
Christopher Bultsma, PharmD, BCPS
Brian Schmer, PharmD, MS
Craig Reha, PharmD, BCPS

Nebraska Medicine, University of Nebraska Medical Center
Omaha, NE

Nebraska Medicine

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https://www.ashp.org/about-ashp/awards/leadership-awards/ashp-best-practices-award/past-recipients/2020/nebraska-medicine

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

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

https://www.ashp.org/-/media/assets/pharmacy-practice/resource-centers/small-and-rural-hospitals/srh-medication-safety-task-list-prioritization-table.pdf

Strategies to Expand Pharmacy Services

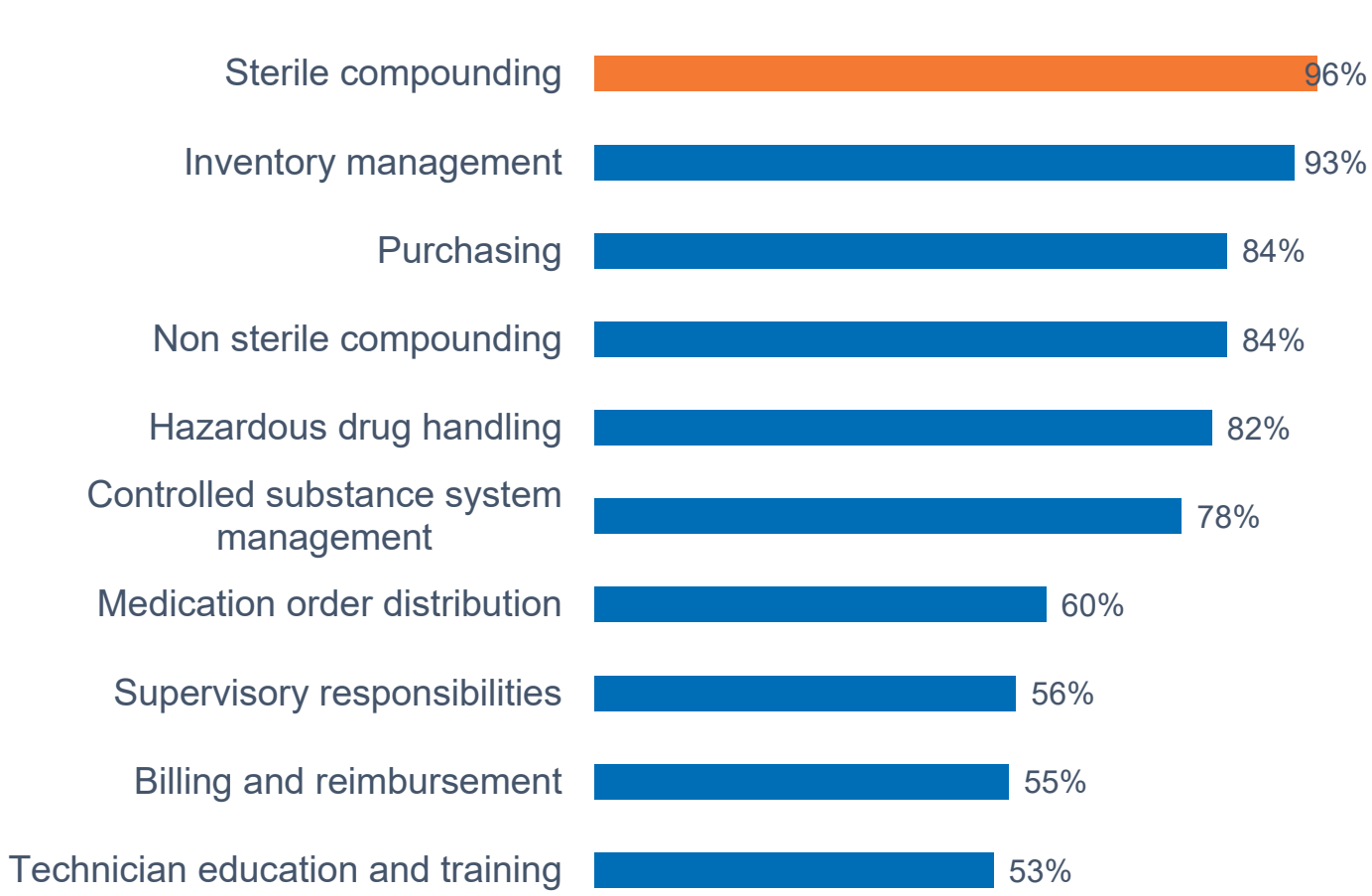
- Develop trusting relationship with physicians, nurses, allied health professionals
- Strengthen drug distribution system
- Enhance education and training
- Collect and evaluate data on medication use
- Utilize existing literature and experiences of others
- Cost justify activities of pharmacists
- 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

Smith, C. D., C. Balatbat, S. Corbridge, A. L. Dopp, J. Fried, R. Harter, S. Landefeld, C. Martin, F. Opelka, L. Sandy, L. Sato, and C. Sinsky. 2018. Implementing optimal team-based care to reduce clinician burnout. *NAM Perspectives.* Discussion Paper, National Academy of Medicine, Washington, DC. https://doi.org/10.31478/201809c

Pharmacy Technicians: Essential Colleagues



What inspired you to become a pharmacy technician? - Top 10

Base: 6,619 (79% of respondents)
Note: Respondents could select multiple options.

Parting Gifts

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ASHP Standardize 4 Safety

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

www.ashp.org/standardize4safey

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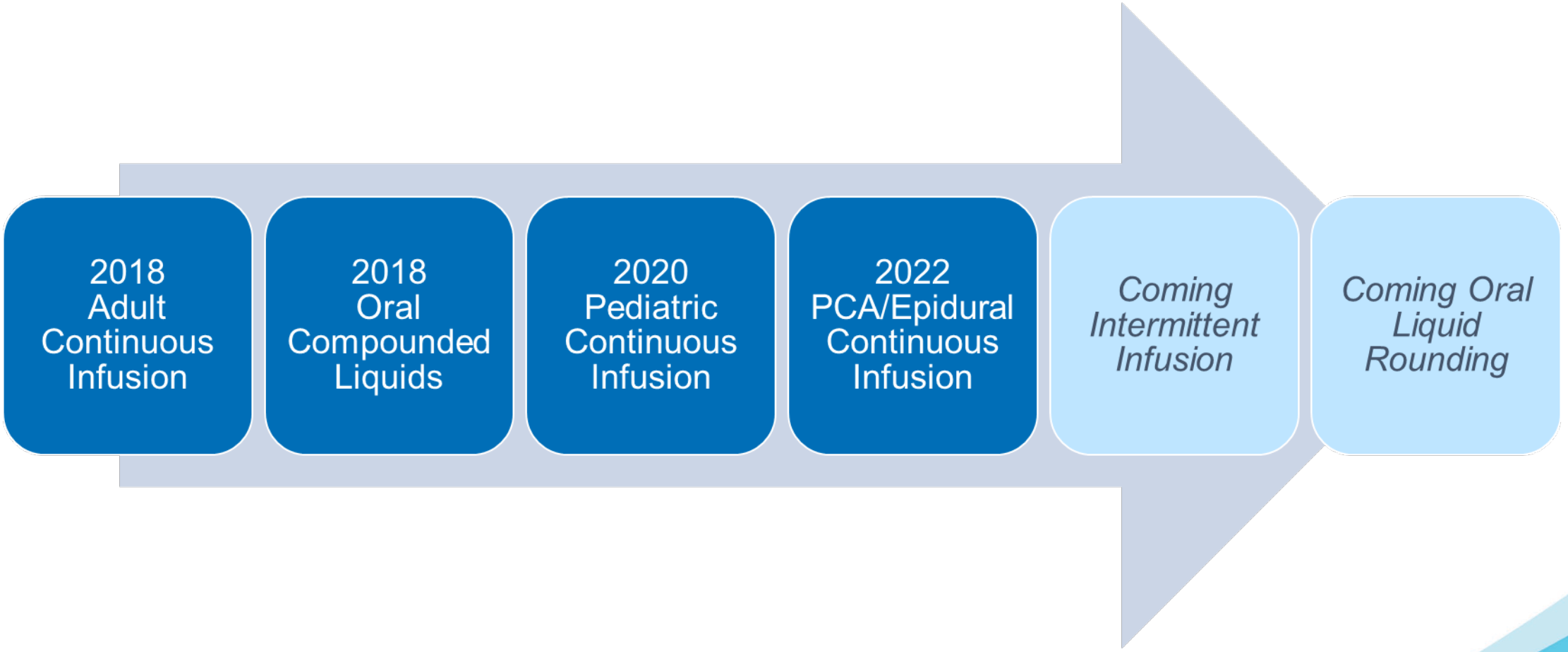
Statement of the Problem

- 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

The Standardize 4 Safety Journey



Sample of Standard Concentration Table

Drug	Concentration Standards	Dosing units	Commercially available	Concentration vs. unit mismatch	References
Alprostadil	1. 5 mcg/mL 2. 10 mcg/mL	mcg/kg/min	No	Possibly depending on vial	1. Pharmacia & Upjohn Company. Prostin VR Pediatric® (alprostadil sterile solution) injection prescribing information. Kalamazoo, MI; 2013 April. AHFS 2. Pharmacia & Upjohn Company. Prostin VR Pediatric® (alprostadil sterile solution) injection prescribing information. Kalamazoo, MI; 2013 April. AHFS
Alteplase	1 mg/mL	mg/kg/hour	No	No	1a. Frazen BS, Maximal Dilution of Activase. *Am J Hosp Pharm*, 1990;47:2016. 1b. Product Information: Activase(R) intravenous injection, alteplase intravenous injection. Genentech, Inc.(per Manufacturer), South San Francisco, CA, 2015- Micromedix
Amiodarone	1. 1.8 mg/mL 2. 3.6 mg/mL	**mcg/kg/min***	Yes - 1.8 mg/mL	Yes	1a. Campbell S, Nolan PE, Bliss M et al. Stability of amiodarone hydrochloride in admixtures with other injectable drugs. *Am J Hosp Pharm*. 1986; 43:917–21. 1b. Product Information: amiodarone HCl intravenous injection, amiodarone HCl intravenous injection. Teva Canada Limited (per Health Canada), Toronto, ON, Canada, 2016. - Micromedix 2. Product Information: amiodarone HCl intravenous injection, amiodarone HCl intravenous injection. Teva Canada Limited (per Health Canada), Toronto, ON, Canada, 2016. - Micromedix

Standardize 4 Safety Checklist Sample

Demographic Information | **Adult Continuous Infusion** | Oral Liquid Medications | Pediatric Continuous Infusion | Confirmation + Analysis Report

Adult Continuous Infusion

What concentration(s) of Alteplase do you use?

1 mg/mL

Other concentrations used:

E.g. 5 | mg/mL | Add

What concentration(s) of Amiodarone do you use?

1.8 mg/mL

3.6 mg/mL

Other concentrations used:

E.g. 5 | mg/mL | Add

What concentration(s) of Argatroban do you use?

1 mg/mL

Other concentrations used:

E.g. 5 | mg/mL | Add

What concentration(s) of Bumetanide do you use?

0.25 mg/mL

Other concentrations used:

E.g. 5 | mg/mL | Add

What concentration(s) of Cisatracurium do you use?

2 mg/mL

Other concentrations used:

E.g. 5 | mg/mL | Add

What concentration(s) of Dexmedetomidine do you use?

4 mcg/mL

Other concentrations used:

E.g. 5 | mcg/mL | Add

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ASHP Practice Advancement Initiative

ashp PAI 2030
Practice Advancement Initiative

Patient-Centered Care	Pharmacist Role, Education, and Training	Technology and Data Science	Pharmacy Technician Role, Education, and Training	Leadership in Medication Use and Safety
■ Shift from patient advocacy to patient and family activation ■ Integrate pharmacy enterprise for convenient and cost-effective care ■ Optimize care via pharmacist-provided comprehensive medication management	■ Increase in the credentialing and privileging of pharmacists in health systems ■ Proliferation of board certification in many practice areas ■ Building of workforce skills in population health management and mental/behavioral health	■ Harness data analytics to improve patient health ■ Augmented intelligence is an important developing technology that will impact operations and practice ■ Assessing patient care technologies to support optimal medication-use outcomes	■ Foster development of professional career paths for pharmacy technicians ■ Achieve a recognized scope of practice ■ Advance pharmacy technician roles to improve patient care access	■ Advance use of pharmacogenomics information and lead medication stewardship activities ■ Increase public health opportunities to address social determinants, chronic illness, and addiction ■ Support the well-being and resiliency of pharmacy workforce

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.

Learn more about PAI 2030 at ASHP.ORG/PAI

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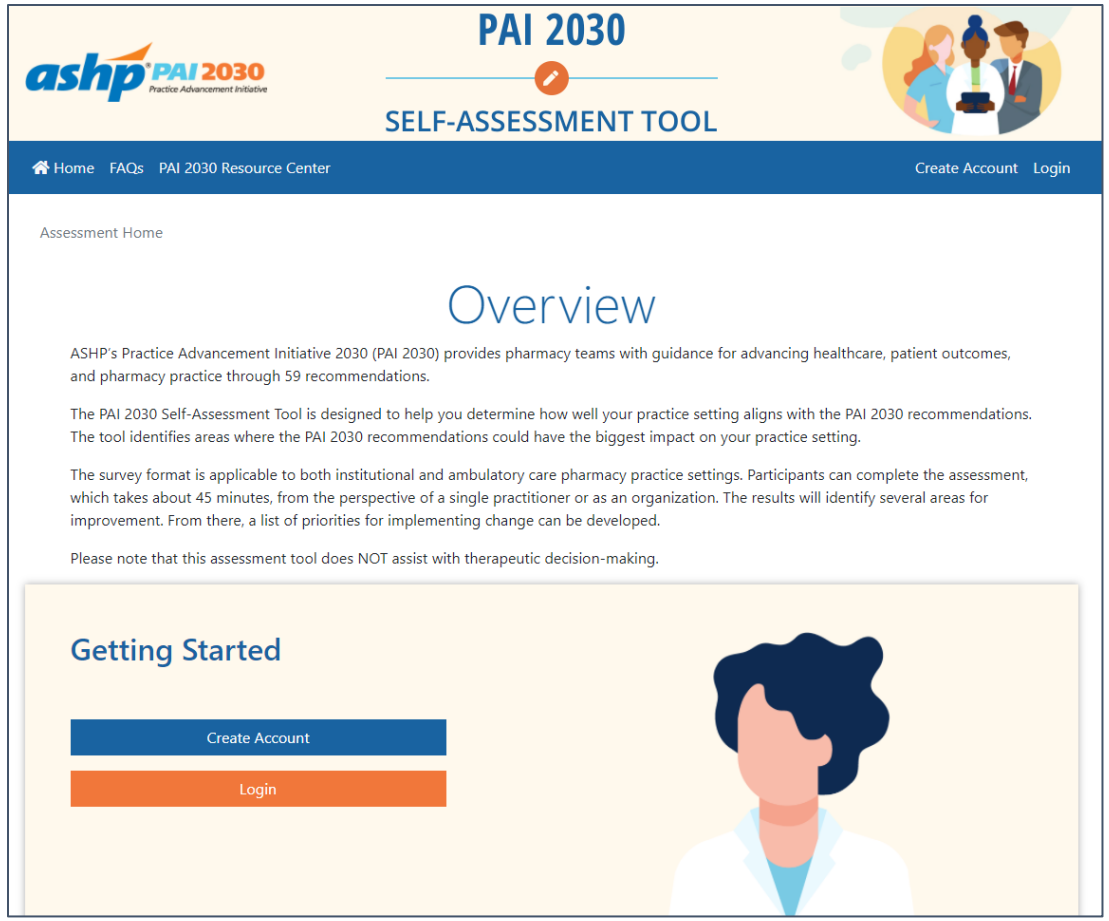
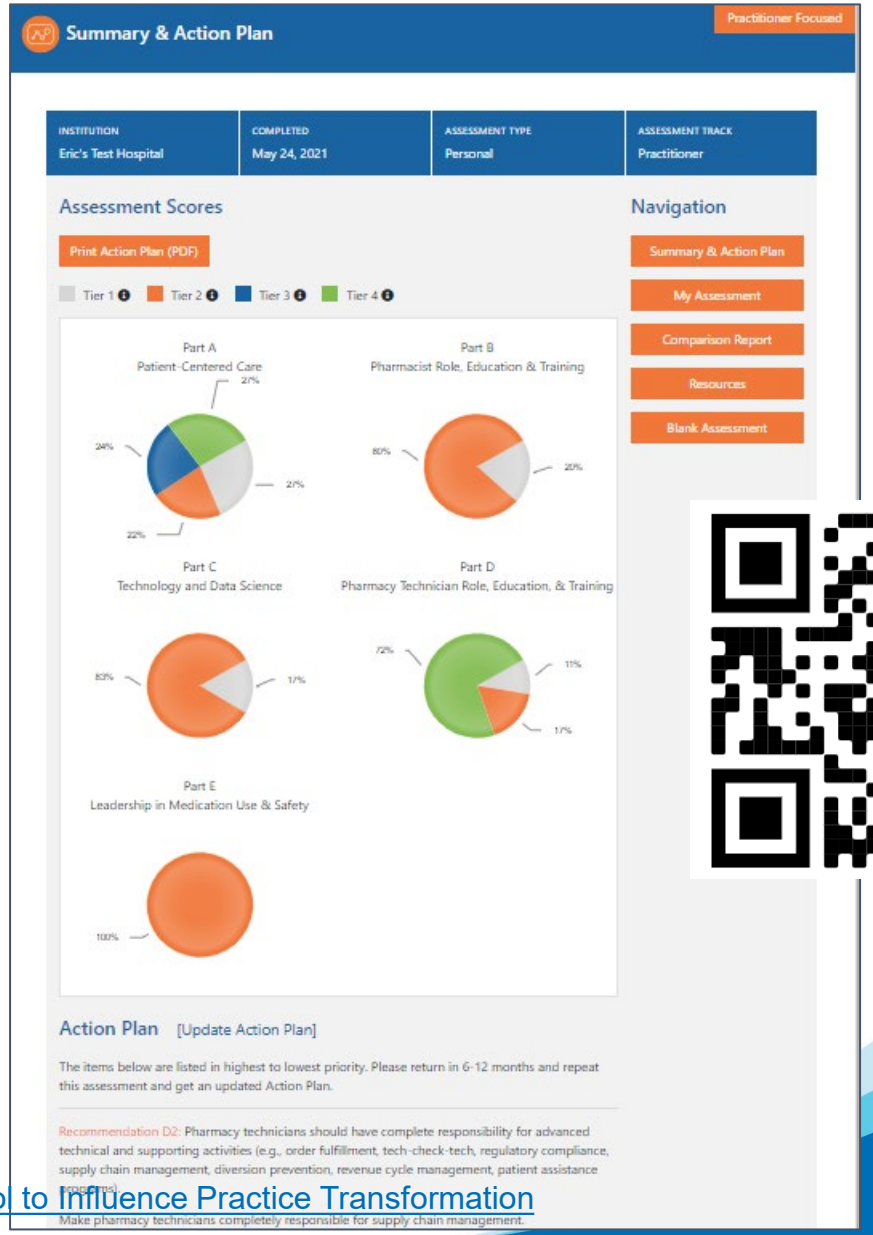
PAI 2030 Self-Assessment Tool

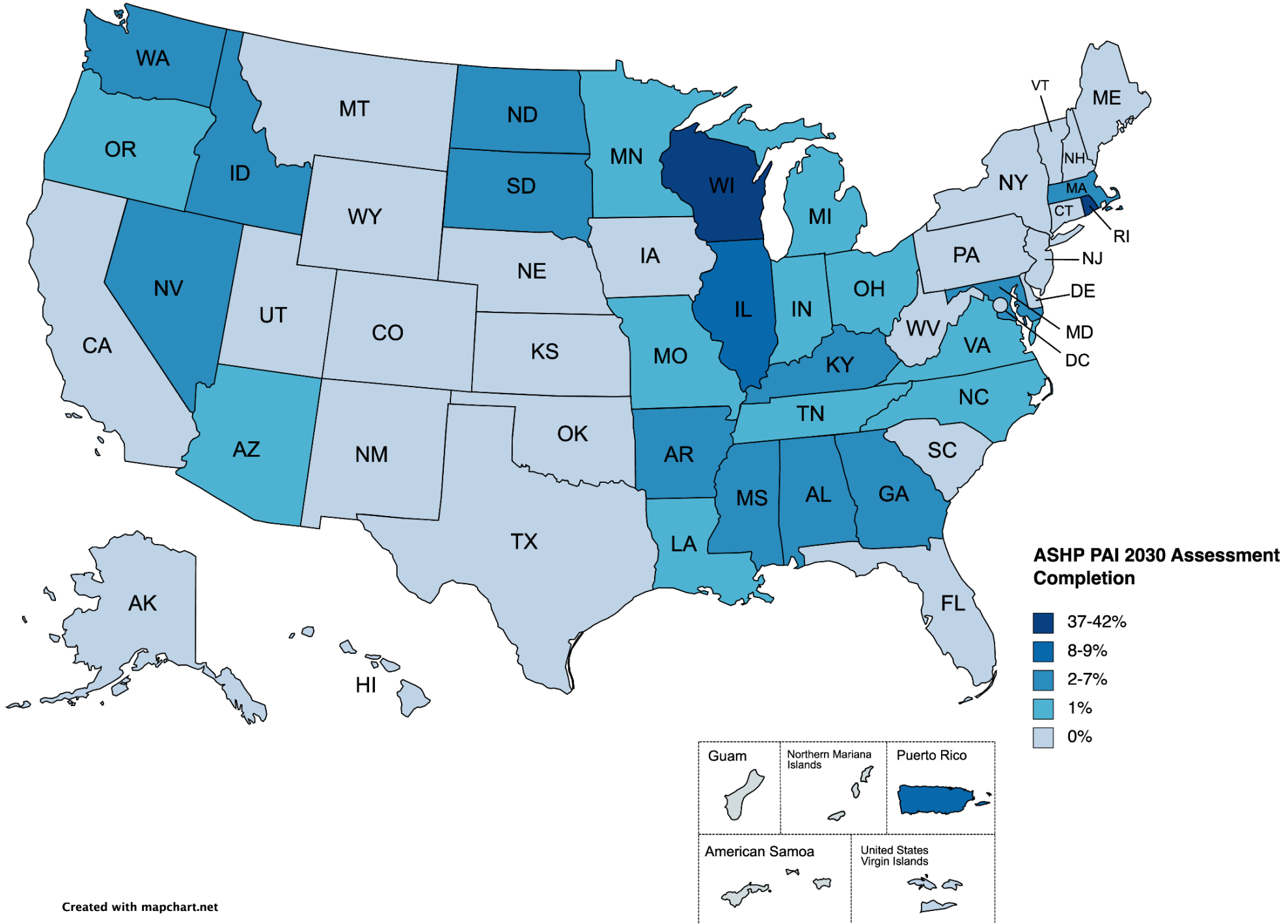
ACCESS TO SELF-ASSESSMENT TOOL:
https://pai2030tool.ashp.org/



Tiered Scoring by Domain & Action Plan



ASHP Podcast: Using the ASHP Practice Advancement Initiative (PAI) 2030 Self-Assessment Tool to Influence Practice Transformation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ASHP PAI 2030 Assessment Completion
37-42%
8-9%
2-7%
1%
0%
Guam
Northern Mariana Islands
Puerto Rico
American Samoa
United States Virgin Islands
Created with mapchart.net

PAI 2030 Implementation Pathway

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ashp Well-Being Ambassador

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

ashp Well-Being Ambassador

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.

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Thank you.

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