CE Activity Announcement

Medication Safety Certificate Program

ACPE Activity Number(s): 0204-9999-17-724-H05-P and T thru to 0204-9999-17-739-H05-P and T
Release Date: May 18, 2017
Expiration Date: May 18, 2020
Activity Type: Application-based

Accreditation for Pharmacists and Pharmacy Technicians

The American Society of Health-System Pharmacists is accredited by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education.

This activity is jointly provided with the Institute for Safe Medication Practices.

Accreditation for Physicians

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the American Society of Health-System Pharmacists and the Institute for Safe Medication Practices. The American Society of Health-System Pharmacists is accredited by the ACCME to provide continuing medical education for physicians.

Accreditation for Nurses

Educational Review Systems is an approved provider of continuing nursing education by the Alabama State Nurses Association, an accredited approver by the American Nurses Credentialing Center's Commission on Accreditation (provider # 5-115).

Educational Review Systems is also approved for nursing continuing education by the state of California, the state of Florida, and the District of Columbia.

Certified Professionals in Patient Safety (CPPS)

This activity meets the criteria of the Certification Board for Professionals in Patient Safety for up to 51.0 CPPS CE hours.

Target Audience

This program is intended for pharmacists, physicians, nurses, pharmacy technicians, and other healthcare professionals responsible for improving the safety of medication use in their respective practice settings.

Activity Overview

These modules are designed for participants to recognize the importance of improving medication safety in hospitals and health systems. Participants will develop the knowledge and skills necessary to identify and engage in efforts to minimize and eliminate the occurrence of medication errors. The curriculum will cover the fundamental principles of the medication use process and medication safety culture. The course also will present strategies for identifying and implementing opportunities for medication safety improvements. After completing all of the modules, participants should be proficient in the fundamental concepts required for risk identification,

medical error investigation, risk reduction, and general actions required to sustain safe medication practices in their practice settings.

Learning Objectives and Schedule of Activities

CE Information	Title, Description and Learning Objectives
ACPE #: 0204-9999-17-724-H05-P 0204-9999-17-724-H05-T **CE Hours:** 3.5 **Activity Type:** Application-based The American Society of Health-System Pharmacists designates this enduring material for a maximum of *3.5 AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.	**Title: Scope and Background of Medication Safety** Faculty: • **Michael R. Cohen, R.Ph., M.S., Sc.D. (hon), D.P.S. (hon),** President, Institute for Safe Medication Practices This activity covers a general overview of medication safety and the most common types and causes of medication errors. **Learning Objectives:** • Describe historical and contemporary approaches to promoting medication safety. • Evaluate difficult to identify medication safety risks. • Discuss the most common types and causes of medication errors. • Contrast the difference between active and latent failures. • Identify system causes of medication errors. • Identify the ten ISMP Key Elements of the Medication Use System™.

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ACPE #: 0204-9999-17-725-H05-P 0204-9999-17-725-H05-T **CE Hours:** 3.0 **Activity Type:** Application-based The American Society of Health-System Pharmacists designates this enduring material for a maximum of *3.0 AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.	**Title: Setting the Medication Safety Agenda** Faculty: • **Patricia C. Kienle, R.Ph., M.P.A., FASHP,** Director, Accreditation and Medication Safety, Cardinal Health Innovative Delivery Solutions • **Michael R. Cohen, R.Ph., M.S., Sc.D. (hon), D.P.S. (hon),** President, Institute for Safe Medication Practices This activity describes how the medication safety agenda has been established through the work of regulatory and accreditation organizations to ensure improvement in analysis and identification of medication errors. **Learning Objectives:** • Restate strategies for medical error improvement defined in the 1999 Institute of Medicine (IOM) report. • Explain how regulatory and accreditation organizations include medication safety issues in standards. • List the major healthcare organizations that focus on medication safety. • Define common medication safety terms. • List three important findings from the case study that require additional investigation. • Apply appropriate thought process to medication error analysis acknowledging characteristics consistent in all errors.

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ACPE #: 0204-9999-17-726-H05-P 0204-9999-17-726-H05-T **CE Hours:** 2.25 **Activity Type:** Application-based The American Society of Health-System Pharmacists designates this enduring material for a maximum of *2.25 AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.	**Title: Leading and Managing Change** Faculty: • **John B. Hertig, Pharm.D., M.S., CPPS,** Center for Medication Safety Advancement, Purdue University College of Pharmacy This activity discusses key leadership and change management concepts that enable successful integration of medication safety into an organization's strategic plan. **Learning Objectives:** • Discuss the integration of medication safety into an organization's strategic plan. • Repeat Kotter's eight steps for leading change. • Explain how Kotter's eight steps can be used to quickly transform medication safety initiatives. • Discuss factors that promote the diffusion of innovation and spread of change. • Distinguish skills of an effective medication safety change agent in a complex health care environment. • List methods used to influence and engage key stakeholders in medication safety initiatives. • Describe effective conflict management techniques used to build successful teams.
ACPE #: 0204-9999-17-727-H05-P 0204-9999-17-727-H05-T **CE Hours:** 2.5 **Activity Type:** Application-based The American Society of Health-System Pharmacists designatess this enduring material for a maximum of *2.5 AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.	**Title: Strategies and Tools to Implement Change** Faculty: • **Nicole Mollenkopf, Pharm.D., M.B.A., BCPS,** Johns Hopkins School of Nursing, Armstrong Institute for Patient Safety and Quality This activity describes specific tools that can be used to successfully lead and manage change resulting in improved medication use safety in an organization. **Learning Objectives:** • Differentiate between Six Sigma and Lean. • Describe Lean tools that can be used to improve medication-use safety. • Restate the attributes of a High Reliability Organization. • List the four skills core to the TEAMSTEPPS® framework . • Express how "people development" and "deference to expertise" lead to successful change cultures. • Identify methods that increase the likelihood of success when introducing change. • Describe common pitfalls encountered when leading change.

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CE Information	Title, Description and Learning Objectives
ACPE #: 0204-9999-17-728-H05-P 0204-9999-17-728-H05-T **CE Hours:** 2.75 **Activity Type:** Application-based The American Society of Health-System Pharmacists designates this enduring material for a maximum of *2.75 AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.	**Title: The Impact of Culture on Safety** Faculty: • **Judy L. Smetzer, B.S.N., R.N., FISMP,** Institute for Safe Medication Practices This activity covers the different organizational cultures and the influence culture can have on safety. **Learning Objectives:** • Recognize the differences between highly reliable industries and healthcare. • Discuss the recurrent themes associated with a culture of safety in highly reliable organizations. • Interpret how culture is the most significant influence on safety in highly reliable organizations. • Describe the punitive impact of an outcome-based and rule-based model of accountability. • Differentiate between a blame-free culture and a punitive culture. • Express the shortcomings of a blame-free culture.
ACPE #: 0204-9999-17-729-H05-P 0204-9999-17-729-H05-T **CE Hours:** 2.75 **Activity Type:** Application-based The American Society of Health-System Pharmacists designates this enduring material for a maximum of *2.75 AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.	**Title: Establishing a Just Culture** Faculty: • **Judy L. Smetzer, B.S.N., R.N., FISMP,** Institute for Safe Medication Practices This activity discusses the many aspects of establishing a Just Culture including the management of risk and its impact on both first and second victims of errors. **Learning Objectives:** • Compare the two key sides of Just Culture. • List the three types of behavior that can be involved in error. • Identify six core beliefs about the management of risk in a Just Culture. • Contrast retributive justice and restorative justice. • Describe how a restorative Just Culture enables support of both the first and second victims of errors. • Restate the value of establishing a rapid response team for second victims.

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ACPE #: 0204-9999-17-730-H05-P 0204-9999-17-730-H05-T **CE Hours:** 2.5 **Activity Type:** Application-based The American Society of Health-System Pharmacists designates this enduring material for a maximum of *2.5 AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.	**Title: Managing Systems and Behaviors in a Just Culture** Faculty: • **Judy L. Smetzer, B.S.N., R.N., FISMP,** Institute for Safe Medication Practices This activity describes how to eliminate or reduce human error through system design strategies and appropriate management of behaviors. **Learning Objectives:** • List three high-leverage system design strategies that can help eliminate or reduce human error. • Recognize the differences between human error, at-risk behavior, and reckless behavior. • Explain how inattentional blindness and confirmation bias can cause one to miss important information. • Express five common at-risk behaviors in healthcare and why these happen. • Differentiate between first-order and second-order problem solving.
ACPE #: 0204-9999-17-731-H05-P 0204-9999-17-731-H05-T **CE Hours:** 3.5 **Activity Type:** Application-based The American Society of Health-System Pharmacists designates this enduring material for a maximum of *3.5 AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.	**Title: Implementing and Measuring a Just Culture** Faculty: • **Judy L. Smetzer, B.S.N., R.N., FISMP,** Institute for Safe Medication Practices This activity explains how algorithms can be used to analyze events, risk, and individual accountability to assist organizations in promoting a Just Culture. **Learning Objectives:** • Distinguish how various algorithms can be used to analyze events, risk, and both system and individual accountability. • List the questions that must be answered when applying an algorithm as a tool to promote a Just Culture. • Explain how an algorithm intended to promote a Just Culture can be misused. • Apply an algorithm as a tool to promote Just Culture . • Define six key self-assessment questions that can help organizations assess progress toward creating a Just Culture. • Discuss the value of surveying staff to determine the safety climate of an organization.

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CE Information	Title, Description and Learning Objectives
ACPE #: 0204-9999-17-732-H05-P 0204-9999-17-732-H05-T **CE Hours:** 4.0 **Activity Type:** Application-based The American Society of Health-System Pharmacists designates this enduring material for a maximum of *4.0 AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.	**Title: Human Factors Engineering** Faculty: • **John W Gosbee, M.D., M.S.,** Red Forest Consulting, Ann Arbor, MI This activity covers human factors engineering concepts and methods and how these can be used to analyze medication safety events, create interventions, and evaluate safety issues. **Learning Objectives:** • Restate the basics of human factors engineering concepts and methods. • Describe the application of human factors engineering concepts when analyzing medication safety events. • Contrast usability testing and heuristic evaluation as human factors engineering methods to analyze medication safety events. • Distinguish how to use heuristic evaluation and usability testing to create medication safety interventions. • Discuss using human factors engineering methods to evaluate medication safety interventions. • Describe how human factors engineering is used to evaluate safety issues with information technology. • Describe how to find medication safety issues in your workplace where human factors engineering concepts or methods might be applied.

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ACPE #: 0204-9999-17-733-H05-P 0204-9999-17-733-H05-T **CE Hours:** 4.0 **Activity Type:** Application-based The American Society of Health-System Pharmacists designates this enduring material for a maximum of *4.0 AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.	**Title: Reactive Identification of Medication Risk** Faculty: • **Andrew P. Stivers, Pharm. D.,** Medication Safety Officer, University of North Carolina Medical Center This activity describes reactive medication safety risk identification principles including the use of triggers and technology data to determine safety risk. **Learning Objectives:** • Describe principles of medication safety risk identification. • Restate the direct observation method of risk identification. • Interpret how the IHI Global Trigger Tool is used in identifying and measuring adverse events. • Describe the process for using manual and electronic triggers to detect medication safety risks. • Recognize the triggers contained in the IHI Global Trigger Tool. • Restate the IHI Global Trigger Tool methodology. • List types of technology data that can be used to identify medication safety risks. • Distinguish how to use different types of technology data to determine medication safety risk. • Contrast the strengths and limitations of reactive medication safety risk identification.

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CE Information	Title, Description and Learning Objectives
ACPE #: 0204-9999-17-734-H05-P 0204-9999-17-734-H05-T **CE Hours:** 3.0 **Activity Type:** Application-based The American Society of Health-System Pharmacists designates this enduring material for a maximum of *3.0 AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.	**Title: Proactive Identification of Medication Risk** Faculty: • **Elizabeth Rebo, Pharm.D.,** Director of Medication Safety, Wellstar Heath System This activity discusses various methodologies and actions that can be used to proactively identify medication safety risk. **Learning Objectives:** • Explain how process improvement and lean methodologies can aid in the identification of medication safety risks. • Debate how leadership rounds can be utilized to proactively identify medication safety risks. • Recognize external resources that can be used to prospectively evaluate medication safety risks. • Evaluate risk using an external resource. • Describe failure mode and effects analysis (FMEA) and how it can be used to identify medication safety risks. • Differentiate the components of a FMEA. • Discuss the strengths and limitations of proactive medication safety risk identification.

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ACPE #: 0204-9999-17-735-H05-P 0204-9999-17-735-H05-T **CE Hours:** 4.0 **Activity Type:** Application-based The American Society of Health-System Pharmacists designates this enduring material for a maximum of *4.0 AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.	**Title: Investigation and Analysis of Medication Errors** Faculty: • **Bob Feroli, Pharm.D., FASHP,** Medication Safety Officer, Johns Hopkins Hospital • **Natasha Nicol, Pharm.D., FASHP,** Director of Global Patient Safety Affairs, Cardinal Health This activity covers the many aspects of a systems approach to medication error investigation and analysis resulting in useful and meaningful data that can be used to implement lasting change. **Learning Objectives:** • Distinguish how "systems thinking" will help avoid an inappropriately superficial analysis of a medication error. • Discuss why making "system changes" at process steps other than where the error manifested is often the most effective approach to address the error. • Define a medication error. • Contrast the difference between an Error and an Adverse Drug Event. • Restate the difference between an Adverse Drug Event and an Adverse Drug Reaction. • List at least seven major steps of the medication use process that should be considered when investigating a medication error. • Express five potential contributing factors of an error as defined in the Systems Engineering Initiative for Patient Safety (SEIPS) model. • Identify the major steps of a Root Cause Analysis (RCA). • Recognize the differences between RCA and Failure Mode and Effects Analysis (FMEA) methodologies. • Recognize why it is important to not compare "rates" of error or harm between facilities. • Discuss why institutional self-assessments may be used for proactive risk assessment. • Interpret the NCC MERP error severity categories for meaningful data review. • Explain why limiting the number of error categories simplifies data analysis in a useful and meaningful way. • Identify a method to summarize and report medication safety efforts by presenting implemented system fixes. • Explain effective ways to spread the lessons learned through event investigation and analysis to achieve lasting change.

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ACPE #: 0204-9999-17-736-H05-P 0204-9999-17-736-H05-T **CE Hours:** 3.25 **Activity Type:** Application-based The American Society of Health-System Pharmacists designates this enduring material for a maximum of *3.25 AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.	**Title: Reducing Risk of System-Based Causes of Error** Faculty: • **Elizabeth Wade, Pharm.D., BCPS,** Medication Safety Officer, Concord Hospital This activity explains risk reduction strategies and how these are used to minimize system errors. **Learning Objectives:** • Explain the concept of risk reduction strategies in preventing and reducing system failures. • Identify four principles of risk reduction strategies. • List the rank order of risk reduction strategies. • Evaluate what makes a high alert medication list an effective risk reduction strategy. • Distinguish advantages and disadvantages of each type of risk reduction strategy. • Recognize examples of each type of risk reduction strategy.
ACPE #: 0204-9999-17-737-H05-P 0204-9999-17-737-H05-T **CE Hours:** 2.5 **Activity Type:** Application-based The American Society of Health-System Pharmacists designates this enduring material for a maximum of *2.5 AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.	**Title: Risk Reduction Strategies and Implementing Improvements** Faculty: • **Elizabeth Wade, Pharm.D., BCPS,** Medication Safety Officer, Concord Hospital • **Lynn Eschenbacher, Pharm.D., M.B.A., FASHP,** National Director of Pharmacy Operations, Ascension This activity describes the selection of appropriate risk reduction strategies in regard to specific cases and how to successfully engage stakeholders to facilitate implementation of selected strategies. **Learning Objectives:** • Analyze appropriate risk reduction strategies and implementation plans in regard to specific patient cases. • Identify three key factors that are considered during prioritization of risk reduction strategies . • Identify key stakeholders needed to facilitate a successful implementation. • Compare the pros and cons related to competency development and assessment. • Describe a process for communication and education of the change. • List the key elements of an effective dashboard for ongoing monitoring of implemented risk reduction strategies. • Express appropriate techniques for patient safety WalkRounds™.

CE Information	Title, Description and Learning Objectives
ACPE #: 0204-9999-17-738-H05-P 0204-9999-17-738-H05-T **CE Hours:** 3.5 **Activity Type:** Application-based The American Society of Health-System Pharmacists designates this enduring material for a maximum of *3.5 AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.	**Title: The Intersection Between Medication Safety and Technology: Review and Analysis of the Medication Management Process** Faculty: • **Karen P. Zimmer, M.D., M.P.H.,** Associate Professor of Pediatrics, Jefferson University • **David Classen, M.D.,** Professor of Medicine, University of Utah This activity discusses the opportunities and challenges associated with technology solutions throughout various stages of the medication use process. **Learning Objectives:** • Describe the landscape of medication errors prior to Computerized Prescriber Order Entry (CPOE). • Identify some of the governmental efforts to address medication safety. • Discuss the benefits, improvements, and errors associated with CPOE and electronic prescribing (e-prescribing). • Describe the overall process model steps in medication safety. • Identify failure points, process interventions, and technology solutions. • Distinguish the stages at which the greatest potential for error and harm may occur. • Explain the importance of monitoring throughout all the stages of the medication process. • Evaluate the benefits and challenges associated with the implementation of smart infusion devices. • Describe specific strategies and technology solutions to address safety concerns at the various stages of the medication use process.

CE Information	Title, Description and Learning Objectives
ACPE #: 0204-9999-17-739-H05-P 0204-9999-17-739-H05-T **CE Hours:** 4.0 **Activity Type:** Application-based The American Society of Health-System Pharmacists designates this enduring material for a maximum of *4.0 AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.	**Title: Pulling it All Together to Successfully Implement and Sustain Safe Medication Practices** Faculty: • **Jamie S. Sinclair, M.S., FASHP,** Mercy Medical Center. Cedar Rapids, IA • **Susan F. Paparella, M.S.N., R.N.,** Vice President, Institute for Safe Medication Practices • **Seth A. Krevat, M.D., FACP,** Assistant Vice President, Safety, MedStar Health, Assistant Professor of Clinical Medicine, Georgetown University School of Medicine This activity summarizes the lessons learned throughout the program and how medication safety leaders can successfully implement and sustain safe medication practices while also providing appropriate disclosure when events occur. **Learning Objectives:** • List the medication safety leader's four major areas of responsibility. • Identify two resources available to assist in the development of a medication safety plan. • Restate three challenges associated with the development or execution of a strategic plan for medication safety. • Evaluate a patient case recognizing and applying appropriate investigative inquiry. • Differentiate between active and latent failures associated with the case study event . • Describe three latent failures of the medication use system that contributed to the case study even.t • Identify the key system element from the case study that had the greatest potential for error prevention. • List strategies to prevent similar events in the case study from occurring in other organizations. • List two reasons a good disclosure process is important for patients and families. • Describe the key components of a good disclosure that occurs after an adverse event. • Discuss the six predictable phases of the second victim recovery process. • List three ways an organization can provide peer support to caregivers after an adverse event.

Methods and CE Requirements

This internet enduring material activity consists of a combined total of 16 learning modules. Pharmacists, pharmacy technicians, and nurses are eligible to receive a total of 51.0 hours of continuing education credit by completing all 16 modules within this certificate program.

Physicians are eligible to be awarded up to *51 AMA PRA Category 1 Credits™* by completing all 16 modules within this certificate program.

Continuing education credits must be claimed within 60 days of being earned.

All participants must complete each module and evaluation, as well as score 70% or higher on the assessment test to earn continuing education credit. Follow the prompts online at the ASHP eLearning portal (http://elearning.ashp.org) to claim or be awarded credit within 60 days of completing the activity.

Pharmacists and Pharmacy Technicians only: Your credits will be reported directly to CPE Monitor. To verify that you have completed the required steps and to ensure your credits hours have been reported to CPE Monitor, we encourage you to check your NABP eProfile account to validate your credits were transferred successfully before the ACPE 60-day deadline. After the 60 day deadline, ASHP will no longer be able to award credit.

System Technical Requirements

Courses and learning activities are delivered via your Web browser and Acrobat PDF. Users should have a basic comfort level using a computer and navigating websites.

View the minimum technical and system requirements for learning activities.

Faculty Information

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Disclosures

In accordance with the Accreditation Council for Continuing Medical Education's Standards for Commercial Support and the Accreditation Council for Pharmacy Education's Standards for Commercial Support, ASHP requires that all individuals involved in the development of activity content disclose their financial relationships. A person has a relevant financial relationship if the individual or his/her spouse/partner has a financial relationship (e.g. employee, consultant, research grant recipient, speakers bureau, or stockholder) in any amount occurring the in the last 12 months with an ACCME-defined commercial interest* whose products or services may be discussed in the educational activity content over which the individual has control.

*ACCME-defined commercial interest: Any entity producing, marketing, re-selling, or distributing health care goods or services consumed by, or used on, patients. The ACCME does not consider providers of clinical service directly to patients to be commercial interests**.**

In keeping with this requirement, ASHP requires that all faculty, planning committee members, content development consultants, authors, reviewers, and staff complete a disclosure form for each program in which they are involved. Anyone who refuses to disclose relevant financial relationships must be disqualified from participating.

In this activity, no persons associated with this activity have disclosed any relevant financial relationships with an ACCME-defined commercial interest.

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