Partnership to Advance Tribal Health (PATH) Huddle Series

Preemptive & Proactive: Anticipating and Addressing Risk to Prevent Patient Harm

June 15-July 27, 2022

This six-part huddle series tackled a new harm topic each week to support health care teams in providing safe and high-quality care. This is the final huddle in the series. Read the key takeaways from the previous huddle sessions.

Session title	Following the Script: Ensuring the Safe Usage of Prescription Medications
Session date	July 27, 2022
Session facilitators	Carrie Sorenson, PharmD, PATH Subject Matter Expert Natasha Green, MBA, RN, Quality Improvement Specialist

Key Takeaways

- Adverse drug events (ADEs) are harms that occur during medical care that are directly caused by the drug, including but are not limited to medication errors, adverse drug reactions, allergic reactions and overdoses
- ADEs are a large public health problem, according to Centers for Disease Control and Prevention (CDC) ADE national statistics.
  - ADEs cause approximately 1.3 million emergency department (ED) visits each year.
  - About 350,000 patients need to be hospitalized for further treatment after ED visits for ADEs every year.
  - ADEs account for about one in every three hospital adverse events.
- Medication safety is a Joint Commission National Patient Safety Goal for hospitals and ambulatory clinics.
- ADE prevention is a patient safety priority, and emphasis should be placed on transitions of care.
- Polypharmacy (taking more medications than clinically necessary) is the biggest risk factor for ADEs.
- Most ADEs are caused by commonly used medications that have risks (largely because of their narrow therapeutic window and need for monitoring) BUT offer significant benefits if used properly.
- Information technology is invaluable when it is customized and staff are adequately educated. However, when sufficient education is not received, these systems can contribute to medication errors and ADEs.
- Fifty percent of ED visits in Medicare patients are caused by these medications: antidiabetic agents (e.g., insulin), oral anticoagulants (e.g., warfarin), antiplatelet agents (such as aspirin and clopidogrel) and opioid pain medications.

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- ADEs should be voluntarily reported via internal policies, as well as to MedWatch and Vaccine Administration Event Reporting System (VAERS) as appropriate.
- Active surveillance through a variety of routes, including international classification of diseases (ICD) codes, antidote administration and lab results, is recommended. Capture additional data, including total exposures, trends, severity and location.
- In ambulatory care, patient-level risk factors are an underrecognized source of ADEs. Both caregivers (including parents of sick children) and patients themselves commit medication administration errors at surprisingly high rates.

Most ADEs are preventable and a patient safety priority!

Recognize Specific Types of ADE Risk Factors

Type 1. Patient-specific: One of the biggest risk factors for ADEs is taking more medications than clinically necessary. Elderly patients are more vulnerable to specific medication adverse effects than younger patients.

Type 2. Drug-specific: The Institute for Safe Medication Practices maintains a list of high-alert medications, which are medications that can cause significant patient harm if used in error. These include medications that have dangerous adverse effects. They have similar names and physical appearance but have completely different pharmaceutical properties.

Type 3. Clinician-specific: Opioid prescribing has increased dramatically over the past several years for a variety of reasons. For example, opioid prescribing after dental procedures and low-risk surgical procedures increased sharply between 2004 and 2012, despite lack of evidence for the benefit of opioids in these situations.

Strategies to Reduce ADEs

- **Prescribing:** Computerized provider order entry (CPOE) systems have been shown to reduce prescribing errors by nearly 50%.
    - Designate providers' work areas to an area where distraction is minimized.
    - Promote a multidisciplinary, coordinated and systematic approach to inpatient medication management, using order sets and dosing protocols.
- **Transcribing:** Use of CPOE to eliminate handwriting errors; electronic scripts
- **Dispensing:** Automated dispensing cabinets without overriders
- **Administration:** Use of barcoding to support the "Five Rights" of medication safety; smart pumps for intravenous medications can help improve accuracy of administration

- **Care transitions:** Accurate medication reconciliation, education of patient/family, hand-off communication to providers and patient follow-up after discharge are critical

PATH is taking action!

Your feedback matters! Your participation in polls, chat communication and post-event evaluations indicate how the PATH team can best support your facilities and help your peers with possible challenges. ADEs are a significant public health problem. During our event, participants shared their experiences with ADEs, both professionally and personally, and gave insights on how they and their facilities are forging ahead to build safer and resilient health care environments.

Participants shared successful strategies their facilities use to prevent ADEs.

- Employing double-check system to ensure proper medication and dosing (insulin, blood and control substances)
- Creating a culture of "see something, say something;" speaking up when recognizing potential for harm
- Using customized technology to reduce risk of medication error (e.g., CPOE, robotic dispensing system, medication barcoding, smart pumps)
- Creating robust patient post-discharge follow-up program to ensure there are no questions surrounding medication once discharged
- Ensuring "Five Rights" are always used (right patient, right medication, right dose, right route and right time)
- Debriefing after significant events and identifying areas where processes can be improved
- Designating daily huddles to bring team members together to talk about situations they have observed where there is potential for an adverse event; identifying processes that can be improved; talking about near misses
- Intentionally, hourly rounding (house supervisor, manager) with stops to talk with staff and patient to promote dialogue and comfort for staff and/or to bring up any issues
- Using tall man lettering to distinguish different types of medication
- Educating staff about differentiation of medications and practicing choosing right medication in automated dispensing system
- Designing processes that can reduce human errors such as using visual cues to help ensure there is another method that can prevent human error

Staff are using process improvement tools to implement patient safety.

- Facilities are using root cause analysis (RCA) to study events that resulted in patient harm and identifying strategies to reduce these harms from happening in the future.
- Health care leaders, along with the incident command team, are working together with frontline staff in all RCA investigations to have better understanding of where the problem is happening and collectively working on recommendations that work for everyone involved in the process.

- Teams are including frontline staff in RCA process from the start, which has had positive results such as consistent follow-through with recommendation plans. Staff are more motivated and use critical thinking in how different things can lead to improvements and help process from start to finish.
- Facilities are building a culture where staff understand the RCA process is not about placing blame on an individual, but rather to identify ways to help system-level processes and prevent errors from reoccurring.
- Facilities are using Failure Modes and Effects Analysis (FMEA) to assess risk of failure and harm in processes and identify the most important areas for process improvement.

References and Resources

- ADE Resources and Tools – Health Services Advisory Group (HSAG)/Hospital Quality Improvement Collaborative (HQIC) ADE roadmaps for opioids, anticoagulants and glycemic management
- Adverse Drug Event Trigger Tool-CMS (CMS.gov) – Centers for Medicare & Medicaid Services (CMS) ADE trigger tool
- Adverse Drug Events in Adults | Medication Safety Program | CDC
- Medication Errors and Adverse Drug Events | PSNet – Agency for Healthcare Research and Quality (AHRQ) risk factors and prevention strategies
- National Action Plan for Adverse Drug Event Prevention
- Patient Safety 101: Computerized Provider Order Entry
- Preventing Adverse Drug Events (ADEs) 2018 Update (patientcarelink.org) – Change package for preventing ADEs
- Reducing ADEs Related to Opioids Implementation Guide|SHM