Welcome to Telligen's High-Risk Medication ECHO® Series: Adverse Drug Events

We will get started momentarily.

- Using Chat, please enter your organization and state.
  1. Click on the Chat icon.
  2. Select who you want to send your message to (individual or everyone).
  3. Type and send your message.
- Please complete the poll.

Telligen QI Connect™
Partnering to improve health outcomes through relationships and data

Project ECHO®

High-Risk Medication ECHO® Series

Session 2: Adverse Drug Events (ADEs)

Wednesday, February 8, 2023

Chloe Hird, Senior Quality Improvement Facilitator

Denton Chancey, Clinical Pharmacy Specialist, PharmD, MBA

Project ECHO® Disclaimer

- Project ECHO® collects registration, participation, questions/answers, chat comments and poll responses for some ECHO® programs. Your individual data will be kept confidential. These data may be used for reports, maps, communications, surveys, quality assurance, evaluation, research and to inform new initiatives.

Before We Begin

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Begin With the End in Mind

During the presentation, visualize and plan how you will use the information:

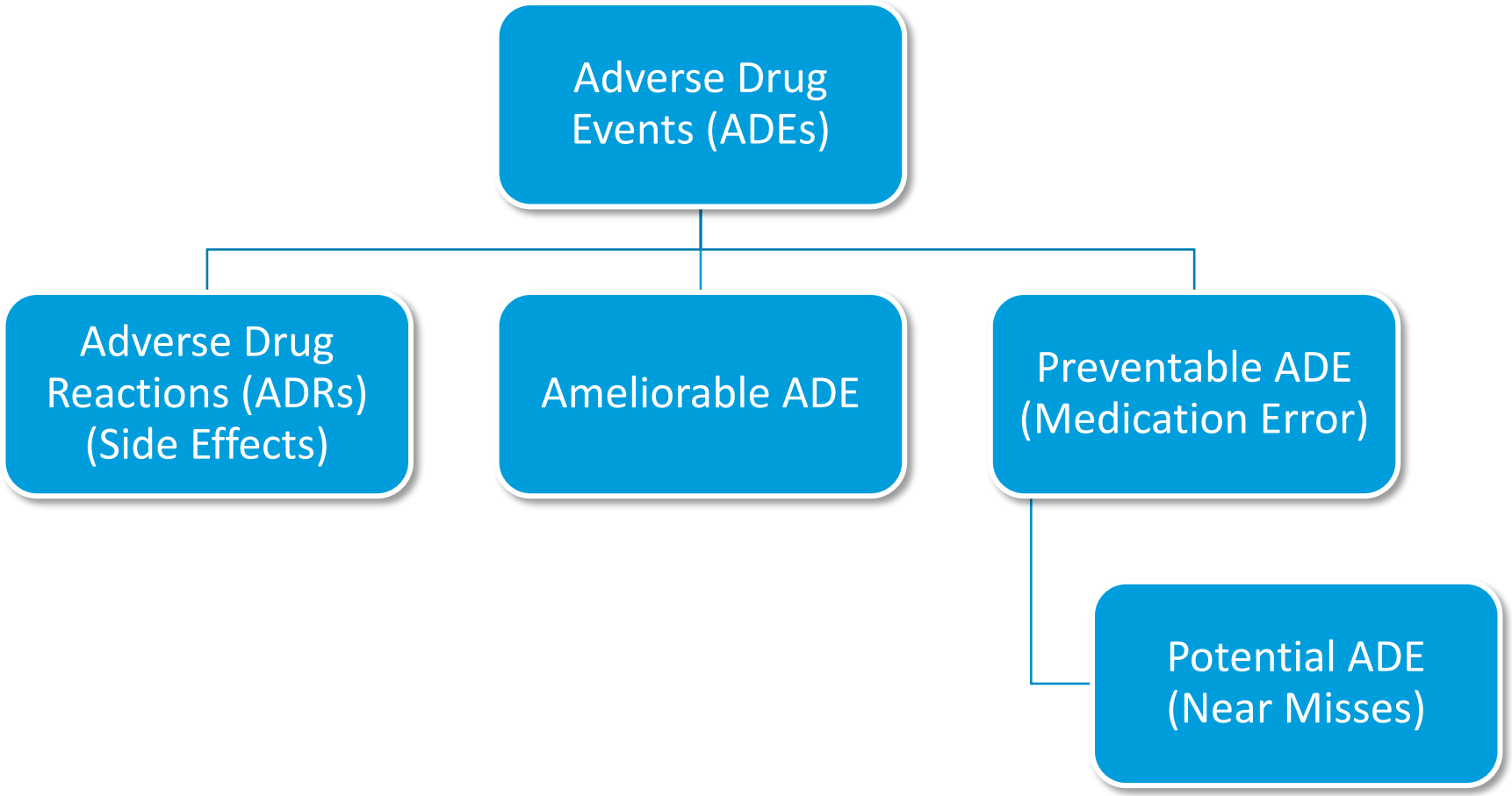
- What impactful actions can you take as a result of the information shared today?
- How are you able to increase collaboration within your network to ensure a true change in patient safety?
- Based on what you heard today, what activities do you currently have underway that can leverage immediate action over the next 30, 60 and 90 days?

Objectives

By the end of this presentation, participants will be able to:

- Classify an adverse drug event (ADE)
- Discuss the impact of ADEs on patients and society
- List interventions to prevent ADEs

What is an Adverse Drug Event (ADE)?



Why Focus on ADEs?

- Impact on patients: falls, suffering and death
- Impact on providers: shame, guilt and legal liability
- Impact on society: economic impact for treatment and loss of productivity

Scope of the Problem

- ADR alone may result in >100,000 deaths annually
- Inpatient ADR incidence rate is 6.7%, fatal incidence rate is 0.32%[1]
- Annual economic impact estimated at $30.1B, or ~1% of healthcare expenditures[2]

1. https://pubmed.ncbi.nlm.nih.gov/9555760
2. https://pubmed.ncbi.nlm.nih.gov/24347988

Medication Use Process and Adverse Drug Events[3]

- Prescribing
  - Conservative prescribing
  - Computerized Provider Order Entry (CPOE) with clinical decision support
- Transcribing
  - CPOE
- Dispensing
  - Clinical pharmacist involvement
  - Automated dispensing cabinets
- Administration
  - Barcode Medication Administration (BCMA)
  - Minimize interruptions
  - 5 Rights

3. https://psnet.ahrq.gov/primer/medication-errors-and-adverse-drug-events

Medication Reconciliation in Preventing ADE

- Ensures appropriateness, prevents duplications and/or omissions
- Most effective if performed **well** at **every** transition of care (building into process?)
- Can reduce ADE incidence by ~70%[4]

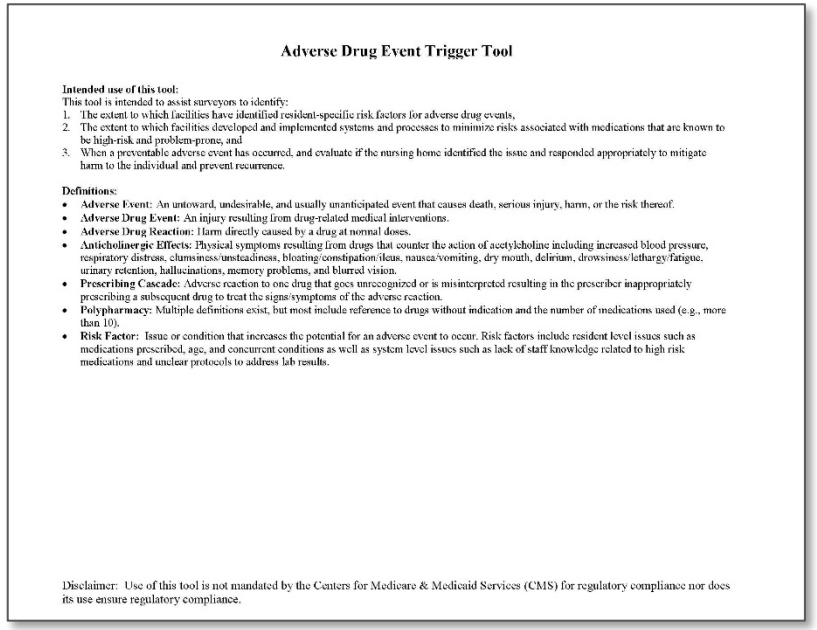
4. https://pubmed.ncbi.nlm.nih.gov/14976907

Case Study

A 78-year-old male resident with a diagnosis of hypertension, peripheral vascular disease, diabetes mellitus and cerebrovascular accident receives anticoagulant therapy with warfarin. The resident develops a nosebleed. Since the resident is on anticoagulant therapy, the MD is notified, and a prothrombin time/international normalized ratio (PT/INR) is ordered and obtained. The results show the INR to be elevated, requiring the resident to receive an injection of vitamin K. CNA #1 stated that two days prior she had noted the resident's gums were bleeding during oral care and thought that maybe he just needed his teeth cleaned, but she did mention it to the nurse. CNA #2 reports that the resident had a medium black tarry stool the night before the nosebleed, but she became busy and forgot to report it to the Charge Nurse. It is later noted that the resident has two less warfarin doses than they should have, and two extra doses of their levothyroxine.

Trigger Tool

- Adverse Drug Event Trigger Tool (Centers for Medicare & Medicaid Services)
- Trigger Tool for Measuring Adverse Events (Institute for Healthcare Improvement)

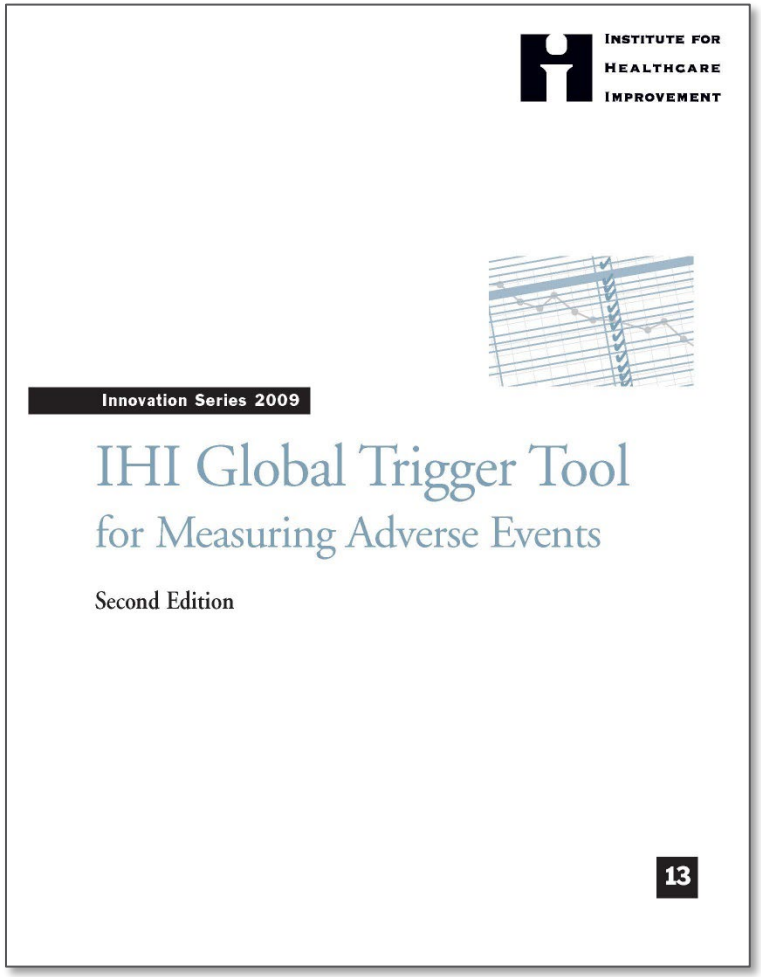


Adverse Drug Event Trigger Tool

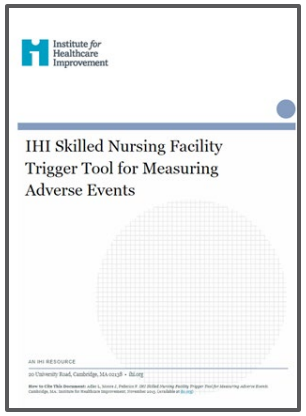
Intended use of this tool:
This tool is intended to assist surveyors to identify:
1. The extent to which facilities have identified resident-specific risk factors for adverse drug events,
2. The extent to which facilities developed and implemented systems and processes to minimize risks associated with medications that are known to be high-risk and problem-prone, and
3. When a preventable adverse event has occurred, and evaluate if the nursing home identified the issue and responded appropriately to mitigate harm to the individual and prevent recurrence.

Definitions:
- **Adverse Event:** An untoward, undesirable, and usually unanticipated event that causes death, serious injury, harm, or the risk thereof.
- **Adverse Drug Event:** An injury resulting from drug-related medical interventions.
- **Adverse Drug Reaction:** Harm directly caused by a drug at normal doses.
- **Anticholinergic Effects:** Physical symptoms resulting from drugs that counter the action of acetylcholine including increased blood pressure, respiratory distress, clumsiness/unsteadiness, bloating/constipation/ileus, nausea/vomiting, dry mouth, delirium, drowsiness/lethargy/fatigue, urinary retention, hallucinations, memory problems, and blurred vision.
- **Prescribing Cascade:** Adverse reaction to one drug that goes unrecognized or is misinterpreted resulting in the prescriber inappropriately prescribing a subsequent drug to treat the signs/symptoms of the adverse reaction.
- **Polypharmacy:** Multiple definitions exist, but most include reference to drugs without indication and the number of medications used (e.g., more than 10).
- **Risk Factor:** Issue or condition that increases the potential for an adverse event to occur. Risk factors include resident level issues such as medications prescribed, age, and concurrent conditions as well as system level issues such as lack of staff knowledge related to high risk medications and unclear protocols to address lab results.

Disclaimer: Use of this tool is not mandated by the Centers for Medicare & Medicaid Services (CMS) for regulatory compliance nor does its use ensure regulatory compliance.



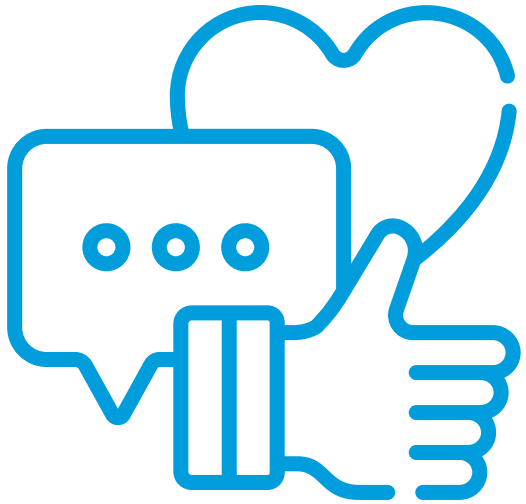
Next Steps – Lead into Action



Investigate	Determine	Develop	Measure	Study
Investigate any trigger to determine if an adverse event has occurred	If an adverse event has occurred, determine the underlying causes of problems impacting larger systems	Following systematic analysis of the adverse event, develop a corrective action plan to prevent recurrence	Measure the effectiveness of those changes	Use the results of monitoring to identify new approaches and continue to monitor and revise as needed

[IHI Skilled Nursing Facility Trigger Tool for Measuring Adverse Events | IHI - Institute for Healthcare Improvement]

How Did We Do? Let Us Know:



Please fill out the poll before logging off.

Upcoming High-Risk Medication ECHO® Series Sessions

Join us on the following Wednesdays, beginning at 7:30 a.m. MST/8:30 a.m. CST.

ECHO® Session Dates and Topics:

- Session 3: 2/22/23 – Behavioral Support for Residents in a LTC Setting
- Session 4: 3/8/23 – Beyond Meds: Meeting the Needs of Elders
- Session 5: 3/22/23 – Gradual Dose Reduction for High-Risk Medications
- Session 6: 4/12/23 – Communication Across the Care Continuum
- Session 7: 4/26/23 – Communicating with Residents and Families

Register here: https://telligen.zoom.us/meeting/register/tZUrd-ioqDojGdYAnCnlmO48fDbLWZyWHsMS

References

1. Lazarou J, Pomeranz BH, Corey PN. Incidence of adverse drug reactions in hospitalized patients: a meta-analysis of prospective studies. JAMA. 1998 Apr 15;279(15):1200-5. doi: 10.1001/jama.279.15.1200. PMID: 9555760.
2. Sultana J, Cutroneo P, Trifirò G. Clinical and economic burden of adverse drug reactions. *J Pharmacol Pharmacother*. 2013;4(Suppl 1):S73-S77. doi:10.4103/0976-500X.120957
3. Medication errors and adverse drug events. Patient Safety Network. https://psnet.ahrq.gov/primer/medication-errors-and-adverse-drug-events. Published September 7, 2019. Accessed January 17, 2023.
4. Whittington J, Cohen H. OSF Healthcare‘s journey in patient safety. Quality Management in Health Care. 2004;13(1):53-59.

Contact Us

- General Inquiries | QIConnect@telligen.com
- Website | www.telligenqiconnect.com
- Nursing Home Team| nursinghome@telligen.com

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