Adverse Drug Events and Medication Safety Environmental Scan Overview

Preventing Adverse Drug Events through Improved Medication Safety and Care Coordination

The Great Plains Quality Innovation Network (QIN) assists communities to improve medication safety and reduce and prevent adverse drug events. The goal is to form community collaboratives that implement evidence-based and/or proven best practice strategies and tools that improve care coordination and medication safety.

Interventions target high risk individuals with chronic conditions taking three or more medications, including one from the high risk categories of anticoagulants, diabetic agents, and opioids. Interventions may involve: medication therapy management, medication reconciliation, health information technology, evidence-based practices, community barriers, screening for adverse drug events or other interventions to meet the needs of the community.

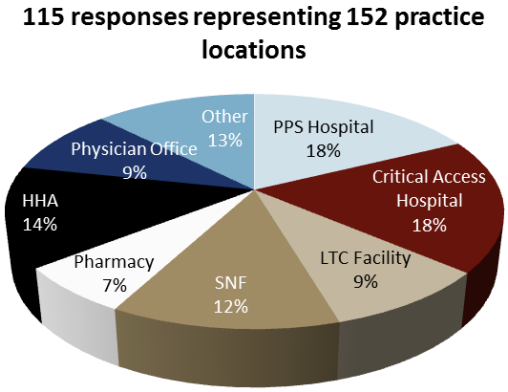
Environmental Scan Overview

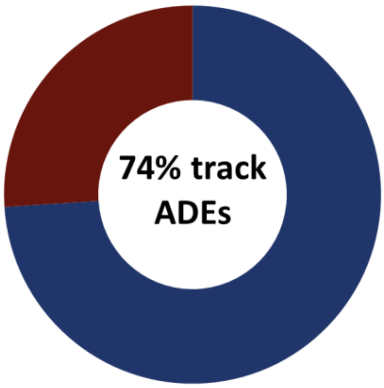
WHAT: A tool to collect information regarding current status of medication safety efforts to detect and prevent Adverse Drug Events (ADE) within the Great Plains Quality Innovation Network (QIN)

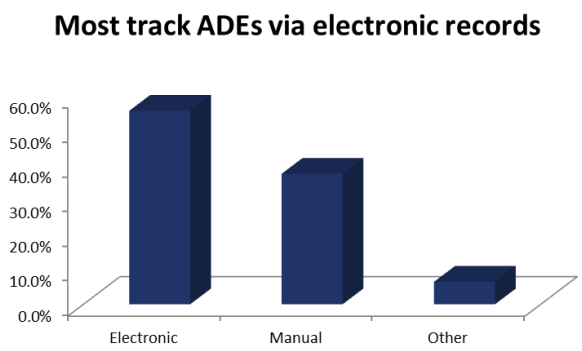
HOW: Link to environmental scan placed on the Great Plains QIN website during July and August 2015 and emails sent to providers and stakeholders

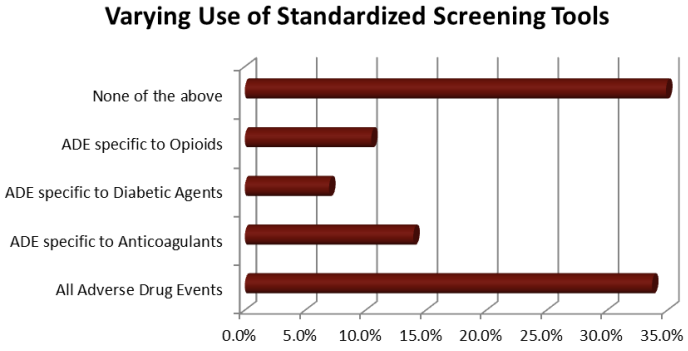
WHO: Distributed to providers and stakeholders within the Great Plains QIN (Kansas, Nebraska, North Dakota and South Dakota)

Key Findings







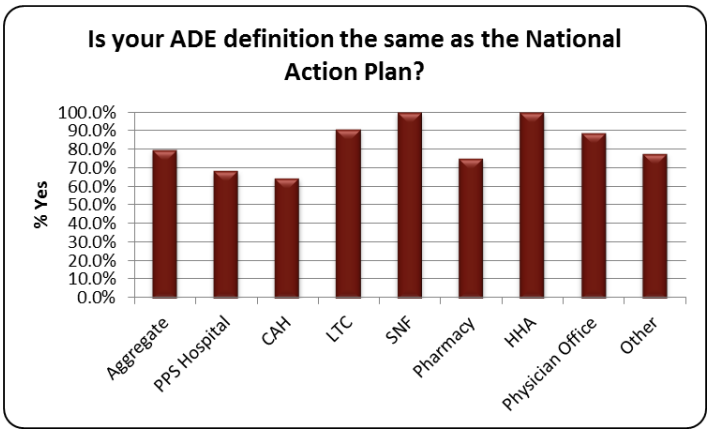


Environmental Scan Details

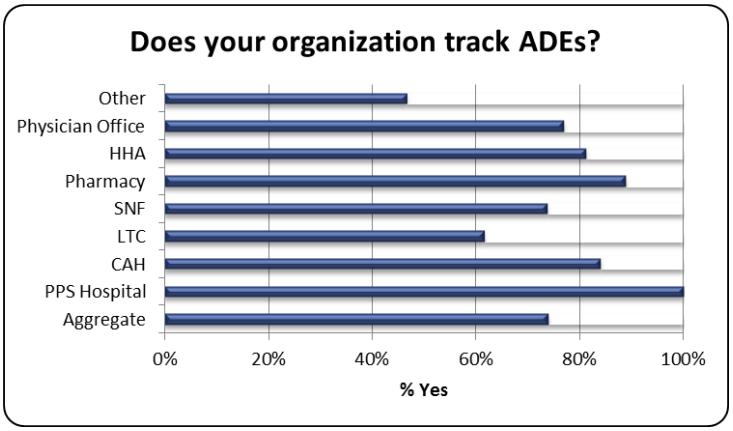
Select questions, their associated responses, and interpretation are reported below by healthcare setting.

PPS hospitals and pharmacies were most likely to have a standardized definition for adverse drug events. Critical access hospitals and skilled nursing facilities had less standardization in their ADE definitions.

Of respondents that did have a standard definition for ADEs, skilled nursing facilities and home health agencies had the highest proportion using the same definition as the National Action Plan for Adverse Drug Event Prevention, "an injury resulting from medication intervention related to a drug." Hospitals and pharmacies had the lowest percentage utilizing the definition from the National Action Plan. Alternative ADE definitions provided focused on adverse drug reactions or medication errors and included definitions from World Health Organization and American Society for Health System Pharmacists.



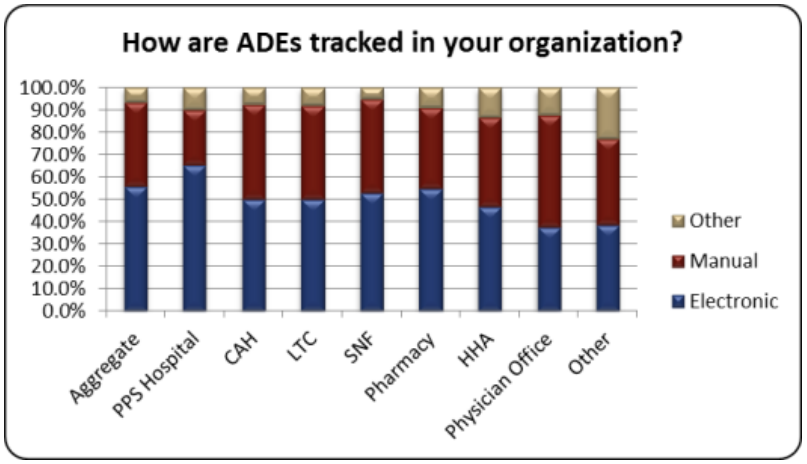
Alternative ADE Definition	Provided by
Any event in which the patient did not receive the medication as ordered or scheduled.	PPS hospital in Nebraska
Adverse Drug Reaction is defined as any detrimental response that is undesired, unintended or unexpected and results in discontinuation and/or change in drug therapy or the administration of another medication to minimize the effect.	PPS hospital in North Dakota
A deviation in the medication use process (prescribing, dispensing, administering) OR an undesirable clinical manifestation that is the result of the administration or omission of medication.	Physician office in Nebraska
Any response to a drug which is unexpected, undesirable AND unintended, and which occurs at doses used in humans for prophylaxis, diagnosis or therapy, excluding failure to accomplish the intended purpose." – [Adopted from WHO; ASHP and Karch and Lasagna definitions]	Acute care hospital in North Dakota



Hospitals and pharmacies are most likely to track adverse drug events. Varying regulatory requirements likely contribute to the variation in responses.

While a majority of organizations track ADEs through electronic health records, there is need for manual review involving post event record review and incident reports.

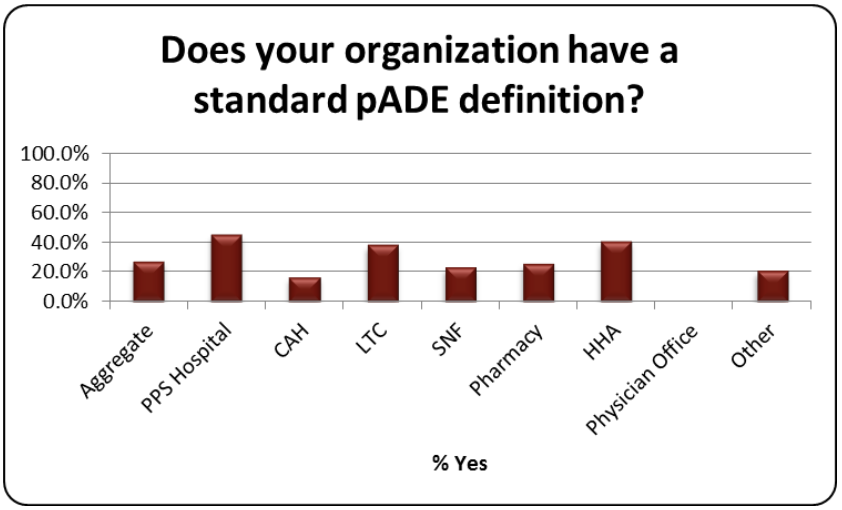
The next two tables include responses to open-ended questions to understand how organizations use their ADE data and barriers to using the data. A common use of ADE data is review and action by safety committees. Common barriers include voluntary/under reporting and data extraction.



How is ADE data used to advance medication safety and reduce ADEs?	Provided by
Notification of prescribing MD of ADE so that this is reported in patient medical record and for med changes. Additional reporting to MedWatch ADE and VAERS.	Kansas Home Health Agency
All ADE data is reviewed at medication committee meetings and then presented at nurse's meetings. This way the ADE data can be used for educational purposes.	North Dakota Critical Access Hospital
We use the information in our Pharmacy Oversight meetings that are held quarterly & discuss in our monthly QAPI meetings.	Nebraska Skilled Nursing Facility
The event is reviewed including circumstances of the event, staff input, and potential contributing factors. If indicated, education is prepared and shared with staff.	South Dakota PPS Hospital
The ADE form is reviewed by the Director of Nursing and the Pharmacist within 24-48 hours. Each month they are reviewed at the medical and nursing staff meetings. Annually they are reviewed again for trends and to develop action plans to further reduce ADEs that cause harm. We also keep track of "near misses" to act on any system or process issues that should be addressed before this type of error reaches a patient.	Nebraska Health System

What barriers exist regarding collecting and using ADE data?	Provided by
Medication errors are voluntarily reported and are difficult to benchmark as you want to encourage staff to report but not discourage by noting increase in events.	North Dakota PPS Hospital
Standard definitions are always difficult to obtain in the beginning. Once the standard is set, it is easier for the organization to use the data from many organizations to effectively benchmark their process.	Nebraska Critical Access Hospital
Complexity and time of using software that is unable to adapt to facility needs.	South Dakota Specialty Hospital
Data is hard to extract & very time consuming. Delays in data extraction due to staffing constraints.	Nebraska Health System

There was less utilization of data specific to potential adverse drug events (pADEs). One contributing factor is that many facilities indicated that their definition of ADE includes both potential and adverse drug events.



The majority of respondents indicated that their organization participated in medication safety initiatives, led by PPS hospitals and pharmacies. Physician offices and home health agencies had lower participation in medication safety initiatives. Medication reconciliation and technology were initiatives cited by multiple organizations. Time, resources and staff turnover were commonly shared barriers to medication safety initiatives (see tables below for samples of responses).

Describe medication safety initiatives at your organization	Provided by
Clients, or their family, who have experienced adverse drug events are encouraged to report these events to the hospital and/or their primary care physician after they occur.	South Dakota Senior Care Management
Automated dispensing unit, pharmacist verification of all inpatient orders prior to administration and bedside barcode administration.	Nebraska Critical Access Hospital
Recently had pharmacy in-service regarding opioid use and use of naloxone if needed.	North Dakota Skilled Nursing Facility
Increase communication of medication side effects score. Increase medication reconciliation reviews within 24 hours after admission. Review bar code scanning compliance. Review of HCAPHS scores with goal of better patient satisfaction in relation to medications.	North Dakota PPS Hospital

Describe your biggest barriers to medication safety and ADE reduction efforts	Provided by
Medication reconciliation challenges and budgetary barriers to implementation.	Nebraska PPS Hospital
Constant nursing turnover and no 24 hour on-site pharmacy.	North Dakota Critical Access Hospital
EHR only provides drug interaction alerts on initial entry of the medication.	Nebraska Skilled Nursing Facility
Having the time for patient/caregiver teaching and communication with other providers caring for the patient about medication issues.	Kansas Home Health Agency

Summary

The ADE environmental scan has allowed a better understanding of current efforts to improve medication safety and barriers faced by providers and stakeholders within the Great Plains QIN. While response variation exists between different healthcare settings in identification and tracking of adverse drug events, there is also similarity regarding medication safety initiatives and barriers that create opportunities for community-based interventions to improve medication safety and reduce adverse drug events.

Contacts

If you have questions or need additional information, please contact a member of our care coordination and medication safety staff.

Kansas: Vanessa Lamoreaux, BA, vlamoreaux@kfmc.org, 785/271.4120
Nebraska: Paula Sitzman, RN, BSN, paula.sitzman@area-a.hcqis.org, 402/476.1399, Ext. 512
North Dakota: Sally May, RN, BSN, CH-GCN, sally.may@area-a.hcqis.org, 701/852.4231
Jayme Steig, PharmD, RPh, jayme.steig@area-a.hcqis.org, 701/852.4231
South Dakota: Linda Penisten, RN, OTR/L, linda.penisten@area-a.hcqis.org, 605/444.4124

Quality Improvement Organizations
Sharing Knowledge. Improving Health Care.
CENTERS FOR MEDICARE & MEDICAID SERVICES
Great Plains Quality Innovation Network

This material was prepared by the Great Plains Quality Innovation Network, the Medicare Quality Improvement Organization for Kansas, Nebraska, North Dakota and South Dakota, under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services. The contents presented do not necessarily reflect CMS policy. 11S0W-GPQIN-ND-C3-31/0915