Partnership for Patients

ASHNHA ALASKA STATE HOSPITAL & NURSING HOME ASSOCIATION | Washington State Hospital Association

Medication Safety Action Bundle – Adverse Drug Events (ADE)

All High-Risk Medication Safety

Background

- The Institute of medicine (IOM) estimates that 1.5 million preventable Adverse Drug Events (ADE) occur each year. [i]
- On average, every patient admitted to a hospital is subject to at least one medication error per day, accounting for approximately $3.5 billion additional costs. [ii,iii]
- Based on an events review for ADE database, three high priority preventable ADEs accounted for 50% of all reports including: 1) anti-coagulant overdose and hemorrhagic events; 2) overdose and drug interactions with opioids causing respiratory failure; 3) and hypoglycemic events with inappropriate dosing of insulin.[i]
- According to the United States General Accounting Office (GAO) report from February 2000, individual state studies have shown ADE occurrence rates as high as 0.56 to 3 per 100 hospital admissions. [iv]

Aims

To reduce the incidence of ADE related events by 40% by the end of 2017.

Measures

Outcome: Each category has its own outcome measure[v].

Process: Adherence to specific Safety Action Bundles

Submit: Washington State Hospital Association Quality Benchmarking System[vi].

Core Strategies

Type	Strategies
Leadership	Identify and secure endorsement of administrative, quality and pharmacy leaders to champion ADE reduction strategies. Senior leadership has identified medication safety as a strategic priority and reviews goals and process on a regular basis. Complete a self-assessment gap analysis to identify performance weakness.[vii] Senior leadership is aware of gaps and is supportive of adding necessary resources when appropriate to meet goals. Set aims, goals and timelines for practice changes. Create awareness. Develop training programs on high-alert medications for all providers, pharmacists and nursing staff. Implement high-risk medication policies that clearly delineate roles and responsibilities of providers, pharmacists and nursing. Develop Medication Safety dashboard to show trends to medical staff committees, quality improvement committees, senior leadership, and Boards. Senior leadership supports accessing information technology (IT) resources to support data collection and submission for these measures.

Type	Strategies
Prevent	All High Alert Medications: • Develop order sets, preprinted order forms and clinical protocols that include monitoring parameters to standardize treatment of patients on high risk medications. • Develop a plan to minimize interruptions during the process of profiling, distribution and administration such as a 'No Interruption Zone'. • Pharmacy modules should interface with electronic health records (EHR) to facilitate pharmacist and provider screening of patients: allergies, home medications, duplicate medications, appropriate dosing and contraindications with disease processes.[viii] • Create alerts in the computer system for duplicate medications, high doses for age/weight, renal function, and too frequent dosing, and multiple route or range orders. • Standardize concentrations and minimize dose strengths to limit variability. • Adopt safety practices that prevent errors from look-alike, sound-alike medications, such as separating confusing drugs and using **TALL** man lettering for pharmacy produced labels.[ix] • Minimize override capabilities of automated dispensing machines and monitor override use regularly. • Have a standard process for medication reconciliation across the continuum. • At pre-admission, during the hospital stay and upon discharge, educate patients of the importance of maintaining a list of prescription drugs, nonprescription drugs, homeopathic/herbal medicine, vitamins and minerals that they are taking.
Detect	All High-Alert Medications: • Instruct patients on symptoms to monitor for side effects and when to contact a health care provider for assistance. • Incorporate ease of reporting adverse events to ensure ability to identify trends of high risk errors.
Mitigate	• A rapid response team is available to assist with possible narcotic over-sedation events. • Review and analyze dispensing unit override patterns for high-alert medication use. • Use medication reconciliation process to minimize medication errors during care transitions.[x]

Type	Strategies
Performance and Variation	• Perform root cause analysis based on use of reversal agents or transfer to a higher level of care. • Conduct an interdisciplinary failure modes and effects analysis (FMEA) within your facility to identify organization-specific sources of failure with the use of high-alert medications[xi]. • Present your performance compared to others to the board and other key stakeholder groups.

Moving Towards Zero

Type	Strategies
Leverage Expert Teams and Information Technology to Embed Safety in Process	All High-Alert Medications[xii]. • Develop and implement protocols for vulnerable populations such as elderly, pediatric, and obese patients. • Include pharmacists on multi-disciplinary rounds/high risk patients. • Use up-to-date "smart pumps" and have a policy in place to double check all high alert infusions prior to administration. • Link recent lab values to the medication. • Access information technology (IT) resources to support data collection and submission for these measures.
Patient and Family Engagement	• Engage patients and/or their caregivers to understand how to take their medications, potential drug/food interactions and how to identify symptoms that indicate harm. • Explain the importance of managing medication information when they are discharged from the hospital to patients and/or their caregivers. • Provide patients with a medication list. • Encourage the patient to give the list to their primary care physician; to update the information when medications are discontinued, doses are changed, or new medications (including over-the-counter products) are added; and to carry medication information at all times in the event of emergency situations. • Develop a robust communication plan to share information and to ensure timely follow-up with the next provider at time of discharge from the hospital.

Hardwiring

Type	Strategies
Culture	• Encourage collaboration across ranks and disciplines to seek solutions to patient safety problems[xiii]. • Promote transparency of results from display on units to the board and public. • Regularly share medication safety program data across the organization. • Institute and/or promote 'Just Culture' to allow staff to safely speak about adverse events and issues surrounding safety concerns[xiv].

[i] "How-to Guide: Prevent Harm from High-alert Medications." Cambridge, MA: Institute for Healthcare Improvement 2012. Web February 2013. http://www.ihi.org/knowledge/Pages/Tools/HowtoGuidePreventHarmfromHighAlertMedications.aspx

[ii] Ebbesen .J, Juajordet I., Erikssen J., et al. "Drug-Related Deaths in a Department of Internal Medicine." *Arch Intern Med* 161 (2001) 2317-2323.

[iii] "Anticoagulant Toolkit: Preventing Adverse Drug Events." *IHI* 2008 Purdue University PharmaTap. February 2013. http://www.ihi.org/knowledge/Pages/Tools/AnticoagulantToolkitReducingADEs.aspx.

[iv] Heinrich, Janet. "Adverse Drug Events: substantial problem but magnitude uncertain." United States General Accounting Office. 2000. February 2013. http://www.gao.gov/assets/110/108212.pdf.

[v] Medication Safety Page of WSHA website for more information: http://www.wsha.org/quality-safety/projects/medication/

[vi] Contact decisionsupport@wsha.org for instructions.

[vii] "Institute for Safe Medication Practices: Example of a Health Care Failure Mode and Effects Analysis for Anticoagulants" http://www.ismp.org/selfassessments/Hospital/2011/pdfs.asp

[viii] "The Roadmap for Pharmacy Health Information Technology Integration in U.S. Healthhttps://www.accp.com/docs/positions/misc/HITRoadMap2011.pdf

[ix] "ISMP's List of Confused Drug Names" http://www.ismp.org/Tools/confuseddrugnames.pdf

[x] "Medications at Transitions and Clinical Handoffs (MATCH) Toolkit for Medication Reconciliation" https://www.ahrq.gov/sites/default/files/wysiwyg/professionals/quality-patient-safety/patient-safety-resources/resources/match/match.pdf

[xi] "Institute for Safe Medication Practices: Example of a Health Care Failure Mode and Effects Analysis for Anticoagulants" http://www.ismp.org/Tools/FMEAofAnticoagulants.pdf

[xii] "How to Guide: Prevent Harm from High Alert Medications" http://www.ihi.org/resources/Pages/Tools/HowtoGuidePreventHarmfromHighAlertMedications.aspx

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[xiii] "Institute for Healthcare Improvement: A Framework for Spread: From Local Improvements to System-Wide Change"
http://www.ihi.org/resources/Pages/IHIWhitePapers/AFrameworkforSpreadWhitePaper.aspx

[xiv] "Institute for Safe Medication Practices: Our Long Journey Towards a Safety-Minded Just Culture"-
https://www.ismp.org/newsletters/acutecare/articles/20060907.asp