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Medication/Drug Errors

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Primers

Medication Administration Errors
Paul MacDowell, PharmD, BCPS, Ann Cabri, PharmD, and Michaela Davis, MSN, RN, CNS | March, 12 2021
Medication administration errors are a persistent patient safety problem. Increasing the safety of medication administration requires a multifaceted, system-level approach that spans all areas of health care delivery, such as primary, specialty, inpatient, and community-based care.

Patient Engagement and Safety
September, 7 2019
Efforts to engage patients in safety efforts have focused on three areas: enlisting patients in detecting adverse events, empowering patients to ensure safe care, and emphasizing patient involvement as a means of improving the culture of safety.

All Library Content

Older patients' engagement in hospital medication safety behaviours.
Tobiano G, Chaboyer W, Dornan G, et al. Aging Clin Exp Res. 2021;33:3353-3361.
Medication safety, particularly among older adults who may have complex medication regimens, is an ongoing safety concern. This study explored medication safety behaviors among young-old (65-74 years), middle-old (75-84 years) and old-old (>85...

How can patient-held lists of medication enhance patient safety? A mixed-methods study with a focus on user experience.
Garfield S, Furniss D, Husson F, et al. BMJ Qual Saf. 2020;29:764-773.
This mixed-methods study of patients, caregivers and healthcare professionals explores how patient-held medication lists (such as paper medication lists, medication diaries, or apps) can support patient safety. Patient-held lists can improve...

The role of organizational and professional cultures in medication safety: a scoping review of the literature.

Machen S, Jani Y, Turner S, et al. Int J Health Care Qual. 2019;31:g146-g157.
This scoping review discussed how organizational and professional culture influences medication safety practices. The authors reviewed over 40 articles and identified four themes influencing medication safety: (1) professional identity, (2) fear of...

Smart pumps improve medication safety but increase alert burden in neonatal care

Melton KR, Timmons K, Walsh KE, et al. BMC Medical Inform Decis Mak. 2019;19:213.
Smart pumps have been adopted as one approach to preventing medication errors, but less is known about their use in pediatric populations and contribution to NICU alert fatigue. This study examined NICU smart pump records from 2014 to 2016 and found...

The Leapfrog Hospital Survey.

Leapfrog Group.
This website offers resources related to the Leapfrog Hospital Survey investigating hospitals' progress in implementing specific patient safety practices. Updates to the survey include increased time allotted to complete computerized provider order...

The Institute for Safe Medication Practices.

5200 Butler Pike, Plymouth Meeting, PA, 19462. 215-947-7797.
The Institute for Safe Medication Practices (ISMP) is a nonprofit organization whose focus is to help health care practitioners understand medication error from a systems perspective, collect reports of errors, and disseminate ...

Optimizing medication safety in the home.

LeBlanc RG, Choi J. Home Healthc Now. 2015;33:313-319.
Patients who receive home care services are vulnerable to adverse events, as they are generally chronically ill and take many prescribed medications. This preliminary study reports on a home care–based intervention to enhance medication safety...

Safety enhancements every hospital must consider in wake of another tragic neuromuscular blocker event.

ISMP Medication Safety Alert! Acute Care Edition. January 17, 2019;24:1-6.
This newsletter article reports on the findings of a government investigation into the death of a patient during a positron emission tomography scan. A neuromuscular blocking agent was mistakenly administered instead of an anti-anxiety medication...

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National Patient Safety Goals.
The Joint Commission.
The National Patient Safety Goals (NPSGs) are one of the major methods by which The Joint Commission establishes standards for ensuring patient safety in all health care settings. In order to ensure health care facilities focus on preventing major...

The Case for Medication Safety Officers (MSO).
Horsham, PA: Institute for Safe Medication Practices; 2018.
Medication safety is a concern in various settings across an organization. This white paper discusses the role of a medication safety officer to oversee reporting and analysis of medication errors and coordinate improvement efforts. Responsibilities...

Six Building Blocks: A Team-Based Approach to Improving Opioid Management in Primary Care.
MacColl Center for Health Care Innovation at the Kaiser Permanente of Washington Research Institute, University of Washington.
In light of the current opioid crisis, the use of opioids to manage noncancer-related chronic pain in the ambulatory environment has been targeted for improvement. This AHRQ-funded initiative offers a six-element multidisciplinary redesign approach...

ISMP Medication Safety Alert® Acute Care Edition.
Plymouth Meeting, PA; Institute for Safe Medication Practices. ISSN 1550-6312.
The Institute for Safe Medication Practices' (ISMP) signature bi-weekly newsletter recounts actual experiences with medication errors reported to the ISMP. Feature articles here also present thoughtful reviews of error reduction strategies. Portions...

Institute for Healthcare Improvement.
53 State Street, 19th Floor, Boston, MA 02109. 617-301-4800, info@ihi.org.
The Institute for Healthcare Improvement (IHI) is a not-for-profit organization promoting health improvement by advancing the quality and value of health care. Current IHI initiatives include a white paper collection, an international conference...

Medication safety in neonatal care: a review of medication errors among neonates.
Krzyzaniak N, Bajorek B. Ther Adv Drug Saf. 2016;7:102-119.
Medication errors are prevalent in inpatient care. This narrative review compared medication errors in neonatal care with those across hospitalized pediatric, adult, and elderly patients. Common types of errors among hospitalized neonatal patients...

Safety Considerations for Product Design to Minimize Medication Errors: Guidance for Industry.
Rockville, MD: Center for Drug Evaluation and Research, US Food and Drug Administration; April 2016.
Strategies to prevent medication errors are a continuing focus of ongoing safety initiatives. This guidance outlines factors to consider when creating drug products to reduce design-associated medication errors.

Safety of medication use in primary care.
Olaniyan JO, Ghaleb M, Dhillon S, et al. Int J Pharm Pract. 2015;23:3-20.
This systematic review found that incidence rates of medication errors in primary care ranged between 1% and 90% across included studies, suggesting that further research is needed to identify the true incidence. The authors identified most errors in...

Medication Safety Program.
Atlanta, GA: Centers for Disease Control and Prevention.
This Web site provides information for providers and patients to reduce risks related to adverse drug events, including links to fact sheets, research, and government initiatives.

Adverse drug events after hospital discharge in older adults: types, severity, and involvement of Beers criteria medications.
Kanaan AO, Donovan JL, Duchin NP, et al. J Am Geriatr Soc. 2013;61:1894-1899.
Clinical pharmacists retrospectively reviewed ambulatory records to identify adverse drug events following hospital discharge among patients aged 65 years and older. As in prior studies, frequent adverse drug events were found involving a wide range...

National Coordinating Council for Medication Error Reporting and Prevention.
National Coordinating Council for Medication Error Reporting and Prevention.
National Coordinating Council for Medication Error Reporting and Prevention (NCC MERP) coordinates a nationwide campaign for medication error reporting and prevention which includes a index on types of medication error. They promote recommendations...

Beyond the prescription: medication monitoring and adverse drug events in older adults.
Steinman MA, Handler S, Gurwitz JH, et al. J Am Geriatr Soc. 2011;59:1513-1520.
This commentary suggests strategies for improving prescribing safety, including linking pharmacy and laboratory data through health information technology.

Adverse drug events resulting from patient errors in older adults.
Field TS, Mazor KM, Briesacher BA, et al. J Am Geriatr Soc. 2007;55:271-276.
This cohort study, conducted within a large health management organization (HMO), examined the frequency of adverse drug events (ADEs) that were attributable to errors elderly patients made in handling their medications. Nearly one-quarter of...

Incidence and preventability of adverse drug events among older persons in the ambulatory setting.
Gurwitz JH, Field T, Harrold LR, et al. JAMA. 2003;289:1107-1116.
This study analyzed more than 1500 adverse drug events and discovered that nearly 28% were preventable. Investigators studied a large population of Medicare enrollees in a single multispecialty group practice capturing events through a number of...

The costs associated with adverse drug events among older adults in the ambulatory setting.
Field T, Gilman BH, Subramanian S, et al. Med Care. 2005;43:1171-1176.
This retrospective cohort study of more than 1200 Medicare enrollees determined that adverse drug events (ADEs) increase the health care costs associated with such events. Building on a previous study in the same patient population, investigators...

Color coded medication safety system reduces community pediatric emergency nursing medication errors.
Feleke R, Kalynych CJ, Lundblom B, et al. J Patient Saf. 2009;5:79-85.
Use of color-coded medications resulted in a reduction in medication errors in simulated pediatric emergency department scenarios.

Information Design for Patient Safety: A Guide to the Graphic Design of Medication Packaging. 2nd edition.
Swayne T. London, UK: National Patient Safety Agency, The Helen Hamlyn Research Centre; 2007.
This illustrated report provides guidelines for the packaging of pharmaceuticals along with an information design checklist for minimizing medication error.

Characteristics of medication errors and adverse drug events in hospitals participating in the California Pediatric Patient Safety Initiative.
Takata GS, Taketomo CK, Waite S, et al. Am J Health Syst Pharm. 2008;65:2036-2044.
Hospitalized children may be particularly vulnerable to medication errors given differences in dosing and monitoring of medications. This study, conducted at five California children's hospitals, used several medication error detection methods to...