

**Improving Patient Safety: Medication Allergies and Adverse Drug Effects**  
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**Problem:** The accuracy of adverse drug events reporting is essential to proper documentation and patient safety. Over 50% of prescriptions are used improperly and lead to preventable medicine-related illnesses that account for over \$75 billion/year in costs and adverse drug reactions are the 4-6<sup>th</sup> leading cause of death in the U.S. Unreported allergies and ADE increase the risk of medical/medication errors.

**Evidence:** Approximately 770,000 Americans are hospitalized and suffer ADRs which cost hospitals over \$5.6 billion yearly. While many thousands of deaths may occur from medication errors, the accurate number of ADR caused deaths is not known. In 2006, The Institute of Medicine estimated that 1.5 million of these ADR in the United States could be prevented. In our system, over 600-900 adverse drug events are reported per month, but less than 1% are reported by staff nurses, while physicians, pharmacists, and advanced practice nurses reported about 30% of ADRs monthly. Baseline: A retrospective review of chart documentation reflected that from 20% to 50% of patients had a medication allergy that was incomplete or incorrectly recorded. The nurse's lack of knowledge of the drug and its effects is the most common source of ADRs.

**Strategy:** An educational campaign replicating a best practice was designed to improve allergy records, reduce ADR, and improve nurse knowledge and documentation included: (1) Allergy Awareness Campaign; (2) Staff Nurse Training on documentation of allergies/ADRs; and (3) Patient Oriented Brochures to encourage allergy reporting and ADRs; and (4) Fact Sheet about ADRs. Brochures were distributed in ambulatory care, pharmacy, rehabilitation and outpatient clinics. The most effective distribution was done in pharmacy.

**Results:** Post-intervention, the documentation of medication allergies and adverse drug reactions improved. Nurses' documentation of ADE increased five fold. Over 400 patient allergy questionnaires were returned and 30% reported allergies that needed to be updated in computer documentation. The most common allergies reported were codeine, morphine, penicillin, and other antibiotics. 90% of the patients rated the brochures highly satisfactory and 10% rated them good. In the process of verifying allergy reports and computer data, we learned that about 10-15% of patients have allergies documented in the chart that they do not remember so changes in documentation were only done after family verified accuracy.

**Recommendations:** This patient and nurse education project improved knowledge and awareness of the importance of reporting medication ADE and allergies. Most patients were highly satisfied with the materials and reported them as very good/excellent. Training improved staff nurse's knowledge and documentation of ADE. The nurse education component should be included in nursing orientation and yearly mandatory training. Patient education brochures should continue.

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