

## Tools for Optimizing Medication Safety (TOP-MEDS)

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<b>Mechanism:</b>	RFA: HS11-004: Centers for Education and Research on Therapeutics (CERTs) (U19)
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**Summary:** The Centers for Education and Research on Therapeutics (CERTs) demonstration program is a national initiative to conduct research and provide education to advance the optimal use of therapeutics such as drugs, medical devices, and biological products. The program consists of six research centers and a CERTs Scientific Forum, and is funded and run as a cooperative agreement by the Agency for Healthcare Research and Quality (AHRQ), in consultation with the U.S. Food and Drug Administration (FDA).

Drug therapy is the most common medical service patients receive, but it is plagued by risks and hazards. The need for solutions that can prevent or mitigate medication-related harm is critical. Newly released medications may cause unusual side effects in patients that were not identified in pre-marketing research. High-risk commonly used drugs such as opioid analgesics are frequently selected and dosed improperly. Drug name confusion causes patients to receive the wrong drugs. Consumers use drugs unsafely because drug information is limited and/or confusing. Therefore, this project is developing Tools for Optimizing Medication Safety (TOP-MEDS). The project is developing, testing, deploying, and disseminating tools and training materials in four key areas: 1) statistical methods for large-scale studies of comparative drug safety and effectiveness; 2) opioid prescribing and dosing for acute pain; 3) methods for preventing and detecting drug name confusion errors; and 4) patient-centered, language concordant drug information.

Research findings will be disseminated through a network of cooperating organizations with local and national reach. To achieve its educational objectives, the TOP-MEDS CERT will emphasize education in two of its four aims by engaging in broad outreach activities at conferences for health professionals; developing Web-based training programs for in-house staff; creating continuing education programs; producing Web-based content related to the four key areas; and using social media—especially Facebook, Twitter, and YouTube—to disseminate their work. Project staff will also work with payors, accreditors, policymakers, and legislators to identify policy levers that can increase the adoption of patient-safety best practices.

### Specific Aims:

- Develop and apply a multivariate person-time logistic regression model for large-scale adverse drug event screening. **(Ongoing)**
- Improve the safety and effectiveness of inpatient acute pain care by developing and validating a Web-based simulator to train prescribers in the proper selection and dosing of opioids. **(Ongoing)**
- Refine a standard battery of tests for pre-market safety screening of drug names, and develop and test methods for preventing and detecting drug name confusion errors in clinical databases. **(Ongoing)**

- Evaluate an electronic health care-based, low-literacy strategy for promoting safe, effective prescription drug use among English and Spanish-speaking patients in an urban primary care setting. **(Ongoing)**

**2011 Activities:** The project began during the last quarter of 2011 and is in the start-up phase. Because each aim represents a distinct research project, activities are listed by aim:

First aim: The study team is working to establish contracts, organize regular meetings, and develop and refine methods.

Second aim: The primary work has been on refining the scientific protocol for the institutional review board (IRB) to develop the measurement strategy in the inpatient setting.

Third aim: The development of the analytic methods and the battery of tests to identify which drug names are confusing were initiated. Subcontracts were executed and IRB approval was obtained.

Fourth aim: The IRB protocol is complete and will be submitted. The study staff is clarifying components of this aim for AHRQ.

**Preliminary Impact and Findings:** This project has no findings to date.

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**Target Population:** Adults, Low Literacy, Low-SES/Low Income\*, Racial or Ethnic Minorities\*: African-American, Hispanics

**Strategic Goal:** Develop and disseminate health IT evidence and evidence-based tools to improve the quality and safety of medication management via the integration and utilization of medication management systems and technologies.

**Business Goal:** Implementation and Use

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*\* This target population is one of AHRQ's priority populations.*