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About Us

The ICTCR facilitates patient-centered research through the combined strengths of its founders: Mercy Medical Center, and Des Moines University along with its partners Drake University College of Pharmacy and Health Sciences and Mercy College of Health Sciences and welcomes inquiries from interested clinicians and scientists.

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Drake and Mercy Collaboration Aims to Improve Medication Reconciliation Process

Several researchers from Drake University and Mercy Medical Center have teamed up to improve the current medication reconciliation process. The objective of this collaboration is to evaluate the medication reconciliation process to help patients avoid medication discrepancies as they transition across the continuum of care

Whenever a patient is seen in a hospital or clinic a medication list is created or updated by a health care provider in a process known as medication reconciliation. When patients are seen by multiple providers in several institutions information is not always shared and it is difficult to determine which list is most accurate. Previous research has shown inconsistencies between discharge and home medication lists occur in ~40-80% of patients.

The reason errors occur more often during transitions, relate to the frequent changes in patients' condition. Subsequently medication appropriateness and needs vary in relation to these changes. For example, when a patient is hospitalized home medications may be stopped for an acute contraindication, changed to a hospital formulary equivalent or new medications may be started. Upon discharge from the hospital, a patient may not be taking the same medications they were taking prior to their hospital stay.

Community pharmacists are ideally positioned to assist patients in bridging the gap between the hospital and their primary health care home because they oversee patient medication use. Facilitated and streamlined information exchange between health-systems and community pharmacies should reduce medication errors and increase the quality of care patients receive. By combining medication expertise with accessibility, community pharmacists can make these patient transitions easier and safer.

This project started by working with stakeholders within Mercy Medical Center (pharmacists, nurses, and physicians) and several community pharmacies (Medicap and Community Access Pharmacy). Based on these discussions several projects were identified and are in various stages. The first project was a survey looking at perceptions of the current processes. The second project is focused on determining the accuracy of the current medication reconciliation process and looking at the effects of increasing communication between community pharmacies and the hospital.

The teams of researchers from Drake University include, Erik Maki, Jane DeWitt, Sally Haack, Megan Fredrick and Andrew Miesner. At Mercy Medical Center this project could not have happened without the efforts of the nursing staff on 8 North, especially Roxanne Tedder. Additional partners include Sarah Pike from the Emergency Department, the Mercy Hospitalists group and last, but not least, the Pharmacy Department. Finally, the researchers would like to thank Marsha White for her help and guidance with IRB forms and procedures.



Erik Maki (left), PharmD., Assistant Professor, Pharmacy Practice, Internal Medicine, provided this article for the ICTCR Update.



Andrew Miesner is a faculty member at Drake University School of Pharmacy and Health Sciences where he serves as Assistant Professor of Pharmacy Practice. He also served as the principal investigator on the study described in the accompanying article.

The publication of Andrew's article in the *Annals of Internal Medicine* represents recognition of the importance of this topic to thought leaders in the health care industry, the Federal Government and in the private sector.

The timeliness of the study described here is underscored by a statement released by the Institute of Medicine in 2009 regarding Conflicts of Interest where many recommendations about industry and physician relationship were discussed. In addition to points about medical ghostwriting, physician involvement in studies ostensibly to support marketing efforts and transparency in physician meetings with pharmaceutical industry representatives, the report specifically mentions the importance of limiting the acceptance of free samples by physicians to very specific circumstances to prevent erosion of public trust.

Taming the Sample Closet

By Andrew Miesner, PharmD, BCPS

Sample medication closets in physicians' offices are predominately occupied by newer, brand-name medications that may affect physician choices due to the convenience of availability. In most circumstances, these brand-name medications are provided by pharmaceutical industry representatives for promotional purposes. While these sample medications are passed on to patients free of charge, they can actually increase the patient's out-of-pocket medication costs in the long term. Many of these medications have less expensive, generic alternatives within their class that are reasonable choices for a given indication; however, they are almost never stocked in sample closets.

Three pharmacists and a physician chose to study the effects of limiting sample medications at Lakeview Internal Medicine clinic; an Iowa Health Physicians clinic in West Des Moines. The main objective of this study was to measure the effect on rates of generic prescriptions written after free samples from just three classes of medications were removed from the clinic. These classes included all brand-name statins (a common type of cholesterol-lowering medication), levothyroxine products (the most common type of thyroid hormone replacement), and selective serotonin re-uptake inhibitor [SSRI] antidepressants. Additionally, the effect on generic prescribing for all classes of medications prescribed at the clinic, sustainability, and changes in sample usage were studied.

All prescribers attended an educational session reviewing current best evidence on the study classes. Six medications (Crestor®, Lipitor®, Lescol XL®, Synthroid®, Levoxyl®, and Lexapro®) were removed from the clinic for 90 days. Data from a large insurance company was used to compare generic prescribing rates during the sample-free period and a matched 90-day period prior to sample medication removal.

After removing the six brand-name sample medications, generic product prescribing increased by 16.4% in the statin group, 1.2% in the levothyroxine group, and 7.7% in the SSRI group. Overall, generic prescriptions written at the clinic increased by 4.1%.

At the end of the study, the clinic physicians were given a choice to leave the six samples out of the medication closet or to have them returned. They elected to leave these samples out. Ninety days after the end of the study, generic prescribing continued to increase. Generic statin prescriptions increased by 22.8% from baseline, generic levothyroxine prescriptions increased by 3.1% from baseline, and generic SSRI prescriptions increased 9.7% from baseline. Combined, the three study classes significantly increased by 11.9% from baseline. All generic medications prescribed from the clinic increased by 7.1%.

This study successfully demonstrated that removal of select sample medications from a sample closet can affect generic medication prescribing rates in the private practice setting. Following this study, Lakeview Internal Medicine

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Additional recent references on free drug samples:

Chimonas S, Kassirer JP (2009) No More Free Drug Samples? PLoS Med 6(5): e1000074. doi:10.1371/journal.pmed.1000074 (Open Access Article)

Medicare Beneficiaries and Free Prescription Drug Samples: A National Survey
Jennifer Tjia, Becky A. Briesacher, Stephen B. Soumerai, Marsha Pierre-Jacques, Fang Zhang, Dennis Ross-Degnan, and Jerry H. Gurwitz J Gen Intern Med. 2008 June; 23(6): 709–714. Published online 2008 March 7. doi: 10.1007/s11606-008-0568-2. PMID: PMC2517874 (Full text through PubMed Central)

Characteristics of Recipients of Free Prescription Drug Samples: A Nationally Representative Analysis
Sarah L. Cutrona, Steffie Woolhandler, Karen E. Lasser, David H. Bor, Danny McCormick, and David U. Himmelstein
Am J Public Health. 2008 February; 98(2): 284–289. doi: 10.2105/AJPH.2007.114249. PMID: PMC2376889 (Full text through PubMed Central)

chose to close the clinic sample closet entirely. According to Dr. Dan Allen, a physician at Lakeview, “What it boils down to is the lack of a drug closet. It keeps providers from going to the closet first to initiate therapy and it helps patients get started on the right drug from the start.”

Dr. Carrie Koenigsfeld, the clinic’s pharmacist and associate professor of pharmacy practice at Drake University, says this study has also changed the way the clinic interacts with representatives from the pharmaceutical industry. “We have seen a decrease in the number of pharmaceutical representatives visiting the clinic solely for product distribution and encouraged a continued relationship via more science-based discussions.”

The results of this study were published in the July 13th, 2009 issue of the Archives of Internal Medicine.

Mercy Brain and Spine Center Show the Value of Disease Registries with Assistance of Summer Research Medical Student

Maureen Darwal, student at Lake Erie College of Osteopathic Medicine mined data from a registry of pediatric brain procedures and under the guidance of physicians from the Mercy Brain and Spine Center, evaluated the characteristics of brain re-expansion after evacuation of subdural hematomas in cases categorized as acute, subacute and chronic and stratified by age, gender, and type of procedure.

Dr. Chris Karas, who served as mentor for the student, indicated that the availability of data from clinical practice offers a rich source of information that can benchmark current practices and their outcomes and can serve as the source of information that elicits novel questions that can be answered through clinical and basic science studies.

Maureen Darwal concluded as a result of her evaluation of 36 hematoma evacuations over an 18 month period that while the substances refilling the hematoma space have an influence on brain re-expansion, demographic and procedure type has a role as well. The study suggests that long term radiographic analysis of the evacuated site will be important additions to the available short term observations that occur immediately before and immediately after surgery. The results will also benefit from subsequent analyses when a larger cohort of treated patients has been acquired.

Statement of Purpose

The ICTCR is a research enterprise that facilitates productive research collaboration between its partners by sharing intellectual and infrastructure resources for the purpose of advancing patient-centered research that seeks better health for our communities and education and research opportunities for our faculty, staff, students and trainees. We believe the comprehensive training of medical students, residents and other health care professionals must be accompanied by a working knowledge of clinical research methods and best practices and that the best way to accomplish this is through active research endeavors. The ICTCR is dedicated to ethical and compassionate care for all individuals who participate in clinical research studies and actively supports the principles of autonomy, beneficence and justice in clinical research programs.