e-Prescribing examined

Tufts Health Plan Pilot Program

Each year, more than 3 billion prescriptions are written in the U.S., the majority by pen and paper. At the same time, medical errors due to improper medication, including prescription errors, lead to more deaths than motor vehicle accidents, breast cancer or AIDS.*

In 2001, Tufts Health Plan in Massachusetts saw an opportunity to substantially increase patient safety, while simultaneously improving operational efficiency. The proposed solution: an electronic prescribing system. Tufts teamed with AdvancePCS and ZixCorp®, formerly PocketScript®, to launch a pilot study to assess the impact of e-prescribing. The study was designed to evaluate the effectiveness of providing comprehensive drug information to the prescriber at the point of care. In addition, it marked the first time e-prescribing software would be available on a wireless Blackberry™ device.

The study focused on three key outcomes: patient safety, overall patient care, and prescribing process efficiency. After more than a year of intensive use, the program's results were extraordinarily positive.

What is e-prescribing?

E-prescribing from ZixCorp brings the accuracy and efficiencies of e-communication to the medical prescription process. Using a handheld wireless device or secure Web site, physicians can electronically write and transmit prescriptions directly from the point of care to any pharmacy. The system also provides prescribers with instant access to comprehensive drug information including patient drug histories, drug-to-drug interactions, and detailed drug lists for multiple formularies.

**1999 Institute of Medicine*

zixcorp®

STUDY OBJECTIVES

The purpose of the pilot was to analyze the impact of PocketScript in three key areas:

- Patient safety
- Overall patient care
- Prescribing process efficiency

METHOD

- Distribution of PocketScript to participating prescriber sites from April through December 2001
- Pilot measurement ceased May 31, 2002
- Study of pilot results conducted using a matched case/control, pre/post study design

STUDY POPULATION

- 15 Physician sites
- 113 THP network providers:
  77 Primary care physicians
  36 Nurse practitioners/
  Physician assistants

SATISFACTION RATINGS

(5 point scale; 5 = very satisfied)

Overall Satisfaction

Prescribers: average rating of 4.25

Office personnel: average rating of 4.10

Pharmacists: average rating of 4.67

Prescriber PDA Feature Satisfaction

E-prescribing: average rating of 4.55

Formulary lookup: average rating of 3.70

Drug interaction: average rating of 3.55

Drug history: average rating of 3.63

STUDY FINDINGS

Improved Patient Safety

For physician groups with access to full drug history:

- Patient safety errors were reduced by 8.93 per physician per year
- Inpatient admissions increased at a slower rate, and hospital days decreased for the pilot group, with an overall reduction in length of stay
- Emergency Department visits decreased in the pilot group while increasing in the control group

"It's a tremendous benefit to me to be able to access my patient's prescription records from home or on the go. I can prescribe with safety and confidence."

Joseph Hazen, MD
The Family Medical Group

Improved Overall Patient Care

Prescribers cited numerous case examples of how e-prescribing and the link to patient history impacted patient safety. Examples included:

- The identification of a diabetic who had not picked up the previous two months supply of insulin
- The identification of a patient not taking the prescribed dosage correctly
- Verification that a patient had filled their narcotic prescription when the patient called for a new prescription claiming the original had been lost

Improved Prescriber/Pharmacist Efficiencies

Prescribers and office personnel reported a decrease of up to two hours per day in total time spent on prescriptions

- Pharmacists reported saving almost an hour per day as a result of e-prescribing
- Reduced telephone and fax volume between physician offices and pharmacies
- Decrease in prescriptions being rejected due to illegibility and drug interactions

Improvement in Healthcare Spend

- An increase in generic prescribing was seen in the pilot group leading to an estimated savings of $0.041 PMPM
- When coupled with the prescribing of preferred drug products, pharmacy cost savings can range from $0.30 and $0.40 PMPM
- Although medical costs increased for both groups during the study period, the increase for the pilot was 19.3% less than the control group

For more information about PocketScript visit www.zixcorp.com, call toll-free 800-413-0579.

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