Electronic Prescribing: Lowering Patients' Prescription Drug Costs

$3.26 per prescription
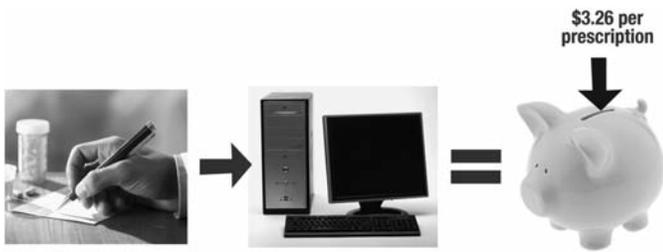
The high cost of prescription drugs drives up the cost of health care and puts much-needed medication beyond the reach of some low-income patients and people with chronic conditions (Chernew, 2008; Kaiser Family Foundation, 2010; Reed, 2008). Physicians may contribute to the problem by prescribing a higher cost drug simply because they are not aware that an equally effective alternative is less expensive.

In response to this issue and to increase patient safety, two health plans in Massachusetts helped physicians to implement an "electronic prescribing (e-prescribing) system" that enables physicians to electronically write and fax a prescription directly to a pharmacy.[14] The system provides real-time information on the relative costs of drugs—or "formulary decision support"—as well as information on drug dosing and drug interactions. Using an ARHQ THQIT grant to evaluate the system, researchers at Massachusetts General Hospital and Brigham & Women's Hospital found that formulary decision support can significantly increase the use of therapeutically equivalent lower cost medications by 3.3 percent and save approximately $3.26 per prescription. Building on this study, the researchers are both investigating how to encourage more physicians to use the system and evaluating the effectiveness of additional system components.

An e-prescribing system with formulary decision support was launched in 2003 by Tufts Health Plan, Blue Cross Blue Shield of Massachusetts, and Zix Corporation. Physicians connect to the system from a handheld device or computer with Internet access. Once logged into the system, physicians review a patient's drug history and electronically fax new prescriptions or refills directly to the patient's pharmacy. Physicians select drugs from a color-coded list indicating the drug's relative cost. The names of medications with the lowest cost sharing appear in green, more expensive medications still covered by the health plans appear in blue, and medications not covered appear in red. All physicians who contract with the Tufts Health Plan or Blue Cross Blue Shield of Massachusetts were invited to participate in the system, and the insurers targeted their recruitment efforts to physicians who prescribe a high volume of medications.

In addition to formulary decision support, the e-prescribing system notifies participating physicians of typical doses for common drugs and alerts them to potential drug interactions. The physicians also received a 1-year license to use the e-prescribing software at no cost, a free hand-held device to run the software, and 6 months of Internet or wireless service. The research team tracked the prescribing patterns of participating and nonparticipating physicians from 6 months before the e-prescribing system was in place through 12 months after it was implemented.

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[14] Unless otherwise cited, the material in this case report comes from Joel Weissman s final report to AHRQ, "E-prescribing Impact on Patient Safety, Use and Cost, for Grant 5 R01 HS015175-02.