

Electronic prescribing system may encourage physicians to choose lower-cost drugs

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Clinicians using an electronic prescribing system appear more likely to prescribe lower-cost medications, reducing drug spending, according to a report in the December 8/22 issue of Archives of Internal Medicine, one of the JAMA/Archives journals.

"Prescription drug costs account for a significant proportion of medical spending and have been increasing rapidly," the authors write as background information in the article. One method for encouraging use of lower-cost medications is a tiered copayment system. Insurers identify preferred medications, such as generic drugs, and designate them "tier 1" with the lowest copayment. Moderately priced brand-name medications may be designated second-tier and assigned a higher copayment, and third-tier drugs represent expensive brand-name medications for which generic alternatives are available and have the highest copayment.

"A key limitation of tiered copayment systems is prescribers' inability to keep track of differing copayment tiers across insurance plans' formularies," the authors write. Michael A. Fischer, M.D., M.S., of Brigham and Women's Hospital and Harvard Medical School, Boston, studied an electronic prescribing (e-prescribing) system designed to address this issue. In April 2004, two large Massachusetts insurers began using the system, which provided community-based practices with free wireless devices and access to a secure web portal that color-coded drugs by copayment tier. Using 18 months of data, the researchers compared the change in proportion of prescriptions for the three tiers before and after e-prescribing began, and also compared the prescription habits of

clinicians using the e-prescribing system to those of controls.

Between October 2003 and March 2005, more than 1.5 million patients filled 17.4 million prescriptions. After implementation of e-prescribing, tier 1 prescriptions increased by 3.3 percent and second- and third-tier prescriptions decreased accordingly among clinicians using the system. E-prescriptions of tier 1 medications increased 6.6 percent, compared with a 2.6 percent increase among prescriptions from the control group.

Among clinicians using the new system, e-prescriptions accounted for 20 percent of prescriptions. These clinicians prescribed more tier-1 medications than the control group even when not e-prescribing; however, prescriptions of lower-cost medications were most common among e-prescriptions.

Based on average medication costs for private insurers, the researchers estimate that using such an e-prescribing system at this rate could result in savings of \$0.70 per patient per month, or \$845,000 annually per 100,000 insured patients filling prescriptions. "The potential savings increase with more availability and use of e-prescribing; for complete e-prescribing use, the projected savings are \$3.91 million per 100,000 patients per year," the authors write.

"Our results suggest that there are important economic gains achievable through the broader use of e-prescribing with formulary decision support but that merely providing e-prescribing systems to clinicians will not necessarily achieve those savings," they conclude. "Rather, prescribers need to adopt the e-prescribing systems fully for these gains to be realized. Making those changes represents an important goal for physicians, insurers and all those with a stake in the cost of prescription medications."

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