

# Physician perception of electronic prescribing

## Current state of electronic prescribing

Over the past year, electronic prescribing, or e-prescribing, has been a focal point of the health information technology (HIT) industry. Few dispute that e-prescribing will help improve the safety, quality and efficiency of patient care, yet low adoption rates persist.

## Methodology

In April 2008 the American Medical Association (AMA) commissioned an independent market research firm to conduct an Internet study of 1,000 physicians. The study was designed to quantify and prioritize physician experiences with and perceptions of e-prescribing. The AMA also intended to collect information that would provide a roadmap for overcoming e-prescribing challenges and thus increase adoption of the technology. This study was not intended to monitor adoption rates, but to understand how industry stakeholders could influence a widespread implementation of e-prescribing.

A representative sample comprising 5,081 physicians across all applicable specialties was asked to participate. A total of 1,542 responded, for a response rate of 30.3 percent.

To ensure a representative sample was studied, while focusing on practices with the highest prescribing concentration, quotas were used<sup>1</sup>:

- 800 primary care physicians
- 175 specialists
- 25 emergency room physicians

It should be noted that the number of users versus nonusers that entered and completed the survey was not constrained; the quotas for both groups were allowed to fill naturally.

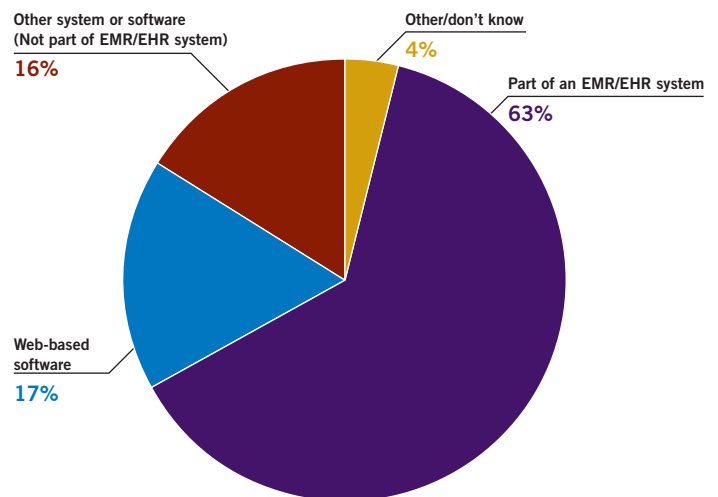
To provide an accurate representation of e-prescribing use, it also was important to identify “true” users. When asked initially, 45 percent reported using an e-prescribing system. After applying a stricter definition for e-prescribing (requiring that physicians actually submit their prescription electronically to the pharmacy), the number dropped to 22 percent.

## Key findings

### Benefits and concerns

Perhaps the most revealing finding was that users of the technology were significantly more satisfied with the general prescribing process than nonusers. Furthermore, users with e-prescribing functionality within an electronic medical record or electronic health record (EMR/EHR) system were significantly more satisfied than those with stand-alone e-prescribing systems. The survey found, however, that of the 63 percent who reported using an e-prescribing function that is part of an EMR/EHR system, more than half (58 percent) do not submit prescriptions electronically.

### Type of electronic prescribing system



The top three e-prescribing benefits were: (1) reduces risk of medication errors, (2) streamlines workflow for physicians and staff, and (3) streamlines refill requests and authorization processes. These were ranked higher than such benefits as increases access to patient medication history, enables checks for drug interactions, drug allergies and contraindications, reduces and eliminates callbacks from pharmacies, and improves formulary adherence. Users ranked access to patient medication history a close fourth, higher than nonusers, who ranked that functionality sixth (see graph 3).

Additionally, nearly half (44 percent) of respondents wrote in other benefits they appreciated, including productivity improvement (e.g., saves time, minimizes paperwork, reduces staff and increases efficiency) and convenience (e.g., faster turnaround, fewer callbacks, fewer misplaced prescriptions and remote accessible).

<sup>1</sup> The survey excluded hospital-based physicians and those providing less than 20 hours of direct patient care per week.

For all respondents, atop the list of concerns were hidden costs and converting existing data into the e-prescribing system. An incomplete patient medication list was ranked the third-highest concern.

Although users and nonusers similarly ranked their e-prescribing fears, the groups placed different weights on specific concerns (nonusers were more concerned about the potential problems with the technology, while users were more neutral).

The majority of nonusers (81 percent), for example, ranked hidden costs as their top concern, while just 55 percent of users agreed. The top-ranking concern for nearly two-thirds (59 percent) of users was incomplete patient medication lists. Users and nonusers agreed on the second-highest concern, converting existing data to the e-prescribing system—57 percent and 74 percent respectively.

### Satisfaction with current prescribing system

	Very Satisfied	Somewhat satisfied	Neutral	Somewhat dissatisfied	Very dissatisfied
Total Physicians	22%	42%	17%	14%	4%
PCPs/pediatricians	22%	43%	16%	15%	4%
Specialists	24%	41%	22%	11%	3%
Emergency medicine	16%	32%	2%	24%	8%
Use e-prescribe system	37%	49%	7%	6%	2%
Do not use e-prescribe system	11%	37%	25%	21%	6%
EMR/EHR system	42%	5%	4%	4%	1%
Web-based/other system	26%	49%	11%	11%	4%

### User perceptions

When asked what functions they currently perform with their e-prescribing system, the three tasks with the highest percentage of completion were: (1) monitoring drug-to-drug, drug-to-allergy checks, (2) creating “favorites” lists of medications, and (3) sending new prescriptions to the pharmacy electronically. All are application functions that do not require external data.

Conversely, key functionalities, such as generating patient medication lists, obtaining patient medication history, receiving refill requests and checking formulary or prior authorization, were available just 40 percent of the time. It should be noted that these functions are dependent upon data from external sources.

When asked to rank the importance of an e-prescribing system’s features, user respondents again weighted features differently than nonusers. The top features for users were:

### Functions able to perform with electronic prescribing system

	Monitor checks for patient safety	Create favorite lists	Send new prescriptions using PDA/computer	Generate lists by medications currently taking	Receive refill requests/send approvals/identicals	Review complete medication lists for patients	Check formulary/authorization information	Receive notification when filled
Total Physicians	81%	72%	71%	58%	57%	55%	46%	31%
PCPs/pediatricians	82%	74%	72%	58%	57%	54%	49%	3%
Specialists	74%	66%	74%	6%	57%	61%	35%	38%
Emergency medicine	71%	57%	14%	57%	43%	43%	0%	29%

(1) alerts for drug-to-drug, drug-to-allergy and other patient safety checks, (2) reviewing complete medication histories, and (3) the ability to send new prescriptions to pharmacy computers using a PDA or computer history.

Although hidden costs were a major concern for both users and nonusers, nearly two-thirds (60 percent) of the respondents reported no cost overruns. Higher-than-anticipated costs were most prevalent for maintenance (60 percent) and training (57 percent).

Although more than two-thirds (71 percent) of users reported they did not receive an incentive to implement an e-prescribing system, those with Web-based or stand-alone systems were more likely than those with EHR/EMR systems to receive an incentive.

Excluding instances requiring a prescription for a controlled substance, more than one-third (36 percent) of users said they rarely handwrite prescriptions, with another third (34 percent) reporting that they occasionally handwrite prescriptions. Equipment/system problems, and medications and pharmacies missing from the system accounted for nearly two-thirds (64 percent) of the instances that required a handwritten prescription.

### Nonuser perceptions

Industry experts expect e-prescribing adoption to triple in 2008 and jump to 13 percent—a definite possibility, considering 58 percent of nonusers (mostly larger practices) plan to implement an e-prescribing system in the next two years. And in January 2009 Medicare will start offering physicians payment incentives of 2 percent for using e-prescribing in 2009 and 2010.

When asked to identify what changes are needed before e-prescribing can be adopted, more than two-thirds (71 percent) reported that local pharmacies need to accept prescriptions electronically and send confirmation of receipt. Connectivity with a practice management system or EMR/EHR (65 percent) and being offered a free or subsidized system (55 percent) rounded out the top three changes needed.

While smaller and suburban practices were the most likely to receive e-prescribing information, a majority (73 percent) of nonusers reported never receiving information about e-prescribing.

### Conclusions

The focus on e-prescribing will become even sharper for years to come. With recent incentives for implementing e-prescribing passed by Congress in July 2008, physicians now have even more reason to adopt the technology. However, there are a few key activities that will help increase e-prescribing use:

- **Collaboration between stakeholders.** At the community level, stakeholders have the resources to further mobilize physician efforts to use e-prescribing and all other HIT.
- **Legal electronic transmission of controlled substance prescriptions.** Stakeholders could begin by ensuring the elimination of the Drug Enforcement Administration's prohibition of prescribing controlled substances electronically.

- **Ensuring that no one stakeholder group is isolated.** This will move the market, and e-prescribing use will increase.
- **Transparency across the industry.** Physicians need information from the vendor community. Vendor processes and product information, including costs, must be more accessible.

These actions will create an environment wherein physicians perceive benefits that compel behavior change. Physicians will then feel a greater sense of control over the adoption of e-prescribing and other HIT, which, in turn, will increase their intent to adopt the technology.

#### For more information:

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The survey was completed by Decision Analyst Inc., a leading international marketing research firm located in Arlington, Texas.

