Health Evolution Partners' Outlook

Safety and Value in Electronic Drug Prescribing

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Health Evolution Partners' Point of View

Electronic prescribing will see strong adoption due to ongoing utilization and cost trends, new regulatory and technology changes, and continued benefit to payers.

Electronic prescriptions have been forecasted to replace handwritten prescriptions for more than a decade. Electronic prescriptions enable physicians to access information about medications, and help make care safer and more affordable. Physician concerns about workflow and time, lack of technical infrastructure and incomplete regulations have limited progress toward electronic prescribing. For these reasons, prescriptions today are driven more by marketing than science, leading to inefficient and unsafe practices. Growing concerns among payers about prescription costs, an increasingly complete electronic prescribing regulatory paradigm and a functioning technical infrastructure are now driving electronic prescribing toward strong adoption.

Facts and Findings

A. Healthcare Spending and Quality Factors

The overall cost and utilization of prescription medications continue to rise, especially with Medicare Part D. Quality and safety concerns are significant given current practices for prescribing.

Over three billion prescriptions are written by physicians every year, and over 90% of people over 65 are taking a prescription medicine.[i] Since 1994, the number of prescription drugs purchased has increased 71%[ii], and Medicare Part D coverage[iii], the aging of the population and the burden of chronic illness are all accelerating this trend. In addition to these increases in the utilization of prescription drugs, the average price per drug has increased over 7.5% annually for the last 12 years, outpacing both the Consumer Price Index and Medical Price Index by a wide margin.[iv] While overall healthcare cost trends moderated in 2006, prescription drug spending growth accelerated to 8.5%, partly driven by Medicare Part D.[v]

In addition to the new cost burden for the federal government with Medicare Part D, private payers have seen their share of the nation's prescription drug expense increase from 26% to 47% over the last 15 years.[vi] Taken together, utilization and price increases mean that over $200 billion a year is spent in retail pharmacy, and prescription drugs account for 10-11% of total healthcare spending.[vii]

There are nearly nine million adverse drug events in the non-hospital setting every year, with more than three million being preventable.[viii] Twelve percent of Americans never fill their prescriptions, another 12% do not take the medication after they buy it,[ix] and the average physician deals with 16 different sets of health plan rules related to prescription drug prescribing[x], including formulary compliance, prior authorization, and co-pays. Nearly half the 105 "blockbusters" on the market (products with annual sales exceeding US$1 billion) are complex medicines for specialty care.[xi] This shift toward specialty medications will continue in the future. The Blue Cross and Blue Shield Association reports that between 325 and 400 new specialty therapies could reach the market by 2010.[xii] Without complete automation of the process, the challenges of accurate, safe and cost effective prescribing will only intensify.

Probably one of the most overlooked advantages of electronic prescribing is the transparency it promotes. Because information is electronically stored and available for shared transmission, electronic prescribing enables the development of common treatment pathways among teams of doctors and other care-givers. This is particularly important in chronic disease care, where coordination and transparency are critical determinants of safety and efficacy due to multiple doctors being engaged in care of a single patient.

B. Consumer Attitudes and Preferences

Consumers value prescription drugs and are increasingly burdened by out of pocket costs for medications. Consumers believe electronic prescribing addresses these issues to a large degree and expect their physicians to use electronic tools.

The majority of consumers feel medications are effective and useful. At least half of all Americans take one or more prescription drugs, with nearly 20% taking four or more.[xiii] At the same time, changes in coverage have consumers feeling the effects of increases in total out of pocket cost for drugs. Over 80% of patients surveyed say that increased personal health care spending in the last year has led them to choose generic drugs when available[xiv], and the national rate of generic dispensing has reached 63%.[xv]

Drug use is highest in the elderly, and well over 90% of seniors want physicians to use health information technology to check for drug coverage and review medication history before writing a prescription[xvi]. Furthermore, over 90% of seniors want their physician to send prescription orders electronically to their pharmacy.[xvii]

C. Physician Attitudes and Preferences

Physicians appreciate the potential value of electronic prescribing, but few make use of it, largely because of cost and workflow concerns. Nonetheless, physician uptake is increasing -- at the lower end of the cost spectrum with stand-alone systems and at the higher end as part of integrated electronic medical record systems.

Physicians overwhelmingly feel electronic prescribing is a good idea, and most state they could productively use the information provided by such systems to make better choices for their patients.[xviii] Physician support for electronic prescribing may even increase after physicians have direct experience with the tools. In one post-pilot survey of physicians using electronic prescribing, 90% stated electronic prescribing met or exceeded their expectations, 80% of all prescriptions were completed electronically, 70% of offices reported a reduction in workload, and 40% of the physicians used electronic prescribing exclusively.[xix]

However, at present, less than 2% of all prescriptions are completed electronically.[xx] No more than 10-14% of all physicians use any kind of electronic prescribing function, and the majority of those that do are in large group practices.[xxi]

Uptake has historically been low largely because of cost. In one survey, two-thirds of physicians state that electronic prescribing is not a priority because of the expense of implementation and the lack of reimbursement for adopting a new system.[xxii] In addition, workflow impact is a significant physician concern, especially for small practices.

According to one study, less than 35% of small physician offices are involved in any workflow redesign efforts, and only 10% can generate any quality of care data.[xxiii] These challenges are compounded by the current licensing model of electronic prescribing vendors, which requires physicians to pay for the application whether they use it or not.

Despite these challenges, use of electronic prescribing tools is growing rapidly, especially as more electronic prescribing tools are built directly into electronic medical record (EMR) systems. Currently, there are nearly 140 technology vendors certified for electronic prescribing through SureScripts, with an ever increasing volume of prescriptions coming from EMR systems. Just three years ago, 95% of electronic prescribers were using stand-alone software. Today there are an equal percentage using stand-alone and EMR systems for electronic prescribing.[xxiv] However, EMRs cost three to five times that of stand-alone electronic prescribing systems and are more complicated to implement and use.[xxv] Therefore, stand-alone electronic prescribing is expected to be an important mode of electronic prescribing in the near term, especially in small physician offices where there is high cost sensitivity.

D. Regulatory and Payer Factors

Recent regulatory and legislative changes significantly increase the importance of electronic prescribing and payers are responding. Early experience provides guiding principles for effective national adoption of electronic prescribing.

Several major factors are contributing to adoption of electronic prescribing. First, Secretary Leavitt's recent call to "mandate" electronic prescribing for Medicare patients has sent an important market signal regarding potential regulatory changes in the near future. According to one leading senator, the Congressional Budget Office has determined that requiring doctors who treat Medicare patients to use electronic prescribing could save the nation $3 billion a year.[xxvi] Based in part on the strength of this finding, proposed federal legislation mandating electronic prescribing in exchange for Medicare payment reduction relief has been introduced (the Medicare Electronic Medication and Safety Protection or E-MEDS Act). Further, the Centers for Medicare and Medicaid Services has issued a final rule establishing additional electronic prescribing standards for the Medicare Part D prescription drug program. Prescribers, dispensers and other providers are not yet required to use electronic prescribing under Medicare Part D, but must comply with the standards when using the technology.

Second, the requirement in the 2003 Medicare Modernization Act that all plans and pharmacies participating in Medicare Part D support an electronic prescription program has driven significant automation activity within health plans. Third, relaxation of the Stark laws has helped reduce the cost and complexity of electronic prescribing tools when affiliated entities such as hospitals support adoption. Fourth, the Drug Enforcement Agency (DEA) is expected to publish regulations this year that allow for

controlled substances to be prescribed electronically, an important commitment as 11-13% of prescriptions are controlled substances.[xxvii] Finally, there is now an appropriate regulatory and legal framework for electronic prescribing in all 50 states.

Payers are accelerating their commitment to electronic prescribing and are key to successful adoption, both as a distribution channel to physicians and as a funding source for capital and ongoing maintenance. A growing body of evidence that electronic prescribing impacts prescription and overall healthcare costs for payers through improved compliance, generic conversion, and patient safety has increased payer interest in electronic prescribing across the country. There are many new electronic prescribing initiatives designed to accelerate adoption and provide financial and implementation support to physicians, including those sponsored by Blue Cross/Blue Shield of Massachusetts, CareFirst in Maryland, Humana, Blue Cross/Blue Shield of Florida, Capital Blue Cross and Horizon Blue Cross/Blue Shield of New Jersey. Many of these initiatives are incorporated into pay for performance programs.

Implementation efforts to date have helped demonstrate the value of electronic prescribing, but have also highlighted many conditions necessary for sustaining and scaling to a national level. Early identification of high volume prescribers and continued financial support by payer-sponsors are necessary to ensure continued use of electronic prescribing. Sponsors must be willing to continue start up and maintenance funding, and also defray some or much of the cost of EMR implementation as electronic prescribing tools become more commonly integrated into EMRs. Finally, focus must be put on solutions that are productivity enhancing for the physician office as well as economically beneficial for the payer.

E. Technology Factors

The "back end" processes necessary to support electronic prescribing have largely been automated, making the physician office the crucial next step.

The industry has taken remarkable strides in just the last few years to improve automation in drug prescribing. Most major health plans and pharmacy benefits managers ("PBMs") are now connected to RxHub, which allows the electronic verification of eligibility, benefits, formulary and medication history at the point of care. The increasing number of Americans with drug benefits under PBMs, the consolidation and automation of those PBMs and the increasing push of PBMs to dispensing channels such as mail order have all driven more prescribing through automated channels. In fact, the three largest PBMs now each cover over 20 million individuals, and nearly 200 million Americans have their prescription drug benefits managed by a PBM.[xxviii]

The other critical infrastructure component for electronic prescribing is the pharmacy health information exchange known as SureScripts which today connects over 70% of

the 57,000 retail pharmacies in the country (nearly 100% of chain pharmacies). This means the vast majority can accept and dispense prescriptions from physicians electronically.[xxix] Besides these links to health plans, PBMs and physician offices, pharmacies have significantly increased their level of internal automation, essentially creating a paper-free environment once the prescription is received. Consolidation of retail pharmacies into large and highly automated chains has further contributed to productivity improvements, and with an increasing number of retail health clinics co-located with chain pharmacies, more prescriptions will be processed electronically in the future.

Automation of the physician prescribing process at the point of care is the major remaining step. Pharmacists make over 150 million calls per year just to physician offices to verify or correct prescriptions, accounting for up to 25% of pharmacists' time[xxx], in addition to taking up a significant amount of physician office staff time. Wide scale testing of electronic prescribing technical standards, certification of consensus standards for electronic prescribing by the Certification Commission for Health Information Technology (CCHIT), improvements in electronic prescribing applications, more intelligent end user devices and cheaper wireless technology all are recent technology improvements that improve ease of adoption and reduce adoption costs for physicians.

Outlook and Insights

Electronic prescribing should see favorable growth in the next five years, dominated by EMR-based tools in large groups and stand-alone tools in small group or solo practice settings.

Key indicators reflecting the broad adoption of electronic prescribing by physicians will include:

- Accelerated growth in the volume of electronic transactions
- Regulations mandating or incentivizing electronic prescribing
- Reimbursement and/or pay-for-performance linked to electronic prescribing adoption
- Retention of high volume prescribers in existing and expanding electronic prescribing programs
- Business models based on number of transactions, and which align vendor profitability with value improvement realized by payers and prescribers
- Implementation of true end-to-end automation so there is no fax or paper steps in the process
- Promotion of electronic prescribing as part of any "basic" service package by physician application service providers, small office EMR applications and national health plans serving Medicare Part D
- Bundling of electronic prescribing capabilities with other physician services such as results look-up and appointment scheduling

In short, the current value proposition for medication prescribing is based on marketing and information asymmetry, not science and value. Electronic prescribing changes that completely by allowing physicians to access complete information regarding safety, alternatives and costs at the point of care. While compelling, this change is not inevitable. The continued surge of complex specialty medications, coupled with the proven safety and cost benefits, are reason enough for physicians and affiliated organizations to finally implement the technology that will make managing the growing complexity and cost of medications feasible.

End notes

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[ii] Kaiser Family Foundation, "Prescription Drug Trends," May 2007; Calculations based on data from IMS Health and Census Bureau.
[iii] The Medicare Part D program provides beneficiaries with assistance paying for prescription drugs. The drug benefit was added to Medicare by the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 and coverage began in January 2006. According to the law, beneficiaries must enroll in a Part D plan offered by one of many private companies, and plans must offer a benefit package that is at least is valuable as Medicare's standard Part D drug benefit. In 2008, this standard benefit includes an initial $275 deductible. After meeting the deductible beneficiaries pay 25% of the cost of covered Part D prescription drugs, up to an initial coverage limit of $2,510. Once the initial coverage limited is reached, beneficiaries must pay the full cost of drugs until total out-of-pocket expenses on formulary drugs reach $4,050. At that point, beneficiaries pay $2.25 for a generic or preferred drug and $5.60 for other drugs, or a flat 5% coinsurance, whichever is greater.
[iv] Ibid 2.
[v] Aaron Catin, Cathy Cowan, et al., "National Health Spending in 2006: A Year of Change for Prescription Drugs," *Health Affairs* 27, no.1 (2008), 14-29.
[vi] Ibid 2.
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[xv] Ibid 5.
[xvi] Linda L. Barrett, "Healthy @ Home," AARP Foundation (March, 2008).
[xvii] Ibid 16.
[xviii] "Survey of Physicians Regarding e-Prescribing," Ayres, McHenry & Associates Inc. (June7-July 6 2007).
[xix] Survey by HaldyMcIntosh & Associates for the Southeastern Michigan ePrescribing Initiative as reported by Molly Merrill, *Healthcare IT News (February* 27, 2008).
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[xxi] "Taking the Pulse v5.0: Physicians and Emerging Information Technologies," Manhattan Research (April 2005).
[xxii] Ibid 18.
[xxiii] Anne Marie Audet, Michelle M. Doty, J Shamasdin, Stephen Carl Schoenbaum, "Measure, Learn, and Improve: Physicians' Involvement in Quality Improvement," *Health Affairs* 24 (May-June 2005), 843-853.
[xxiv] Ibid 20, p. 7.
[xxv] Jane Sarasohn-Kahn and Matthew Holt, "The Prescription Infrastructure: Are We Ready for ePrescribing?" *California HealthCare Foundation iHealth Report* (2006).
[xxvi] Nancy Ferris, "$3 billion annual savings estimated for Medicare e-prescribing," Government Health IT (March 4, 2008).
[xxvii] Kevin D. Hutchinson, "Electronic Prescribing of Controlled Substances: Addressing Health Care and Law Enforcement Priorities," Statement of SureScripts before the Senate Committee on the Judiciary (December 4, 2007).
[xxviii] Marwood Group, *Washington Healthcare Report* 17, no.1 (February 14, 2008), pp 82-85.
[xxix] Ibid 20, p 5.
[xxx] Arthur Andersen, "Pharmacy Activity Cost and Productivity Study," November 1999.