

Florida 2007 Electronic Prescribing Report

**FLORIDA CENTER FOR HEALTH INFORMATION AND POLICY ANALYSIS
AGENCY FOR HEALTH CARE ADMINISTRATION**

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Executive Summary

Introduction

The Florida 2007 Electronic Prescribing report provides a baseline assessment of the status of electronic prescribing (e-prescribing) in Florida. It presents a review of Agency for Health Care Administration (Agency) activities to promote e-prescribing, baseline Florida Prescribing metrics using data provided by national e-prescribing companies, and recommendations for next steps in 2008.

Electronic prescribing enables the electronic transmission of prescriptions and the recording of medication history for use by prescribing physicians at the point of care. It improves prescription accuracy, increases patient safety and reduces costs. Each of these benefits is derived from the accessibility of the medication history to the prescribing physician at the point of care and from the electronic transfer of the prescription. Accessing patient medication history through electronic prescribing systems enables the physician to better coordinate patient care with other treating physicians, and enhances the disease management initiatives of payers and providers. E-prescribing creates efficiencies and provides cost savings to all participants including physicians, pharmacies, health purchasers and patients.

Florida Electronic Prescribing Clearinghouse

The Florida Electronic Prescribing Clearinghouse (see: <http://www.fhin.net/eprescribe>) is a collection of e-prescribing resources put together by the Agency. The portal provides users a single point of access for e-prescribing activities in Florida. It is designed to meet the requirements of Section 408.0611, F.S., and provides information on developments and trends in e-prescribing, with an overall goal of promoting the adoption of and improving the quality and effectiveness of e-prescribing in the state. The website presents the advantages of electronic prescribing, presents e-prescribing software products and vendors with links to their products, provides links to federal, state and private-sector e-prescribing websites that provide guidance on selecting an appropriate electronic prescribing product; and offers e-prescribing resources, such as news and research articles.

Federal and Other Public Initiatives

The passage of the Medicare Prescription Drug, Improvement, and Modernization Act (MMA) of 2003, expanded the role of the federal government in the administration of prescription drug benefits for Medicare beneficiaries. It required that all participating prescription drug plans be capable of supporting electronic prescribing functionality and included requirements for the Department of Health and Human Services (HHS) to develop rules for uniform standards related to electronic transmittal of the prescription order. In November 2007, the American Health Information Community (AHIC) recommended that the HHS seek authority from Congress to mandate e-prescribing in the Medicare program and HHS Secretary Michael Leavitt indicated support for mandating electronic prescribing.

Florida Medicaid Wireless Handheld Clinical Pharmacology Drug Information Database and E-Prescribing

In 2003, the Agency for Health Care Administration implemented the Wireless Handheld Clinical Pharmacology Drug Information Database and E-prescribing program for Medicaid Providers. The Agency's objectives were to have a positive impact on clinical outcomes and over-

prescribing at the point of care. The program was launched using eMPowerx as its software platform, and targeted the top prescribing Medicaid physicians as participants in a pilot program.

Physicians may use eMPowerx via a PDA or desktop PC to retrieve 100 days of medication history for patients at their point of care. The eMPowerx program permits immediate accessibility for compliance review as well as provision of coverage and restrictions information. It also incorporates an e-prescribing function that permits transmission of prescription authorization to the patient's pharmacy.

As of December 2007, Medicaid providers have sent 850,000 prescriptions across the eMPowerx system. During the 2006 and 2007 program metrics show that:

- Prescribers who used eMPowerx wrote about 25% fewer prescriptions on average than physicians who did not use the system.
- Prescribers who use eMPowerx save an average of \$48 more per month per patient on prescription claims to Florida Medicaid.
- Florida Medicaid reports \$1.8 - \$2 million in monthly savings from electronic prescribing.
- During 2006, eMPowerx users received more than 5,000 drug interaction alerts each week; more than 1,000 of which were of high or very high severity.
- Physicians wrote an average of 4,115 electronic prescriptions per month.

If the success of eMPowerx for the relatively small population of Medicaid beneficiaries can be so clearly demonstrated, then the benefits for commercial payers should be greater.

Private Sector Initiatives

In 2006, key electronic prescribing stakeholders formed ePrescribe Florida. The group seeks to increase patient safety and meet the needs of the Florida public by documenting and promoting an understanding of the benefits and implementation of electronic prescribing. More information about ePrescribe Florida including the extensive list of organizations involved can be found online at: <http://www.ePrescribeFlorida.com>.

There are many organizations and associations working at the national level to promote the adoption of electronic prescribing. Among these are RxHub, SureScripts, the National ePrescribing Patient Safety Initiative, the National Council for Prescription Drug Programs and the American Academy of Family Physicians.

State Electronic Prescribing Advisory Panel

Section 408.0611(3) F.S. provides that the Agency will meet with stakeholders at least quarterly to "assess and accelerate the implementation of electronic prescribing." In the fall of 2007 the Agency formed the State Electronic Prescribing Advisory Panel and invited representatives of relevant stakeholder organizations to participate as appointed members of the panel. Members have provided input into the electronic prescribing clearinghouse website, how the Agency and private sector initiatives such as ePrescribe Florida would coordinate their efforts, metrics that could be used to describe trends in electronic prescribing adoption and the recommendations contained in this report.

Metrics on Electronic Prescribing Implementation

E-prescribing in Florida was on the increase in Florida in 2007, although fewer than one percent of prescriptions written in Florida were electronic prescriptions. Data reported from SureScripts and RxHub for 2007 show 1,546,207 electronic prescriptions were sent in 2007. Some of the conclusions in this section include:

- Across the state, 63% of all pharmacies in the state are actively receiving e-prescriptions.
- During 2007 the number of physicians e-prescribing increased by 80%.
- There was a 199% increase in the number of electronic prescriptions in 2007.
- New prescriptions make up the greatest number of prescriptions in 2007, at about 47.2%
- Prescription refill orders by physicians accounted for 24.5% of all electronic transactions related to e-prescribing.
- The Tampa-St. Petersburg MSA accounts for the largest number of electronic transactions of all types related to electronic prescribing, with 850,619 in 2007.

Legal Barriers to Electronic Prescribing

Electronic prescribing of controlled substances is not permitted at the present time under regulations promulgated by the Drug Enforcement Administration (DEA) and the Department of Justice. As a result, physicians who e-prescribe must maintain dual procedures to prescribe for their patients; one procedure for electronically-based prescriptions and the other for paper-based prescriptions.

Other legal barriers to electronic prescribing are of the type that has been well-described as it relates to health information exchange. These include laws, regulations, contracts and business practices that create a barrier to the exchange of medication histories among treating practitioners.

Conclusions

The implementation of electronic prescribing is likely to be the first large scale system for electronic health information exchange to be implemented in the United States. This report provides a baseline set of measures on electronic prescribing in Florida.

Data from year 2007 indicate that Florida prescriptions sent electronically accounted for only about 1% of all retail prescriptions in Florida.

Cost savings reported by the Florida Medicaid electronic prescribing program in 2006-2007 were approximately \$1.8 - \$2 million per month.

When electronic prescribing systems are fully implemented, physicians will be able to prescribe, renew and check medication histories routinely relying on a secure, private network for these communications.

Recommendations

The State Electronic Prescribing Advisory Panel is encouraged by the recent growth of electronic prescribing in Florida. The Panel recommends that the Agency take the following steps during the next year to further accelerate the adoption of electronic prescribing in Florida:

- 1) Continue to track and report electronic prescribing metrics on a quarterly, and if feasible, monthly basis. Comparable Florida Medicaid prescription statistics should be included. The information should be posted on the Agency's website as part of the Florida Electronic Prescribing Clearinghouse, and on its performance dashboard to obtain maximum visibility.
- 2) Work with the Office of Drug Control and Department of Health to address regulatory barriers that would enable the Agency to conduct a pilot study in Florida.
- 3) Coordinate and facilitate the use of incentive or discount programs for physicians and pharmacies to encourage broad-based implementation of electronic prescribing, including the potential for discounted medical malpractice insurance rates. The Agency should gather information on private incentive programs available in Florida, determine what efforts appear to be most effective, and identify gaps or program needs for physicians and pharmacies in rural or underserved areas. The Agency should include electronic prescribing in programs to promote adoption of electronic medical records.
- 4) With the support of electronic prescribing stakeholders, the Agency should begin to disseminate information on electronic prescribing to the general public. The Agency should cooperate with professional associations to identify physician champions who can speak to the general public about the benefits of electronic prescribing and what patients should expect when their physician e-prescribes.

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Section 1. Introduction

In 2007, the Florida Legislature passed HB 1155, which directed the Agency to collect information on the benefits of electronic prescribing (e-prescribing) and e-prescribing software and disseminate that information through the Agency's website in order to facilitate and promote the adoption of electronic prescribing. Section 408.0611, F.S. provides that the Agency is to collaborate with stakeholders to create an electronic prescribing clearinghouse and coordinate with private sector e-prescribing initiatives. The Legislature also directed the Agency to prepare an annual report on the progress of electronic prescribing implementation in Florida beginning with a first report to be issued in January 2008.

This report provides a baseline assessment of the status of electronic prescribing in Florida. It presents a brief overview of electronic prescribing systems and data exchange across pharmacy networks, a discussion of the benefits of electronic prescribing and a summary of the e-prescribing clearinghouse website created by the Agency. It next presents federal and state-level initiatives, in particular the e-prescribing project initiated by Florida Medicaid and other private sector e-prescribing initiatives. The report concludes with a baseline summary of e-prescribing in Florida based on statistics provided by national e-prescribing companies, a discussion of the barriers to e-prescribing in Florida and recommendations for future steps in 2008.

1.1. What is electronic prescribing?

Electronic prescribing makes use of health information technology that enables the electronic transmission of prescriptions and the recording of medication history for use by prescribing physicians at the point of care. It improves prescription accuracy, increases patient safety and reduces costs primarily because of the critical health care information it makes available to the physician or other prescribing practitioner.

As defined by the National Council for Prescription Drug Programs (NCPDP), electronic prescribing comprises two functions: 1) Two way [electronic] communication between physicians and pharmacies involving new prescriptions, refill authorizations, change requests, cancel prescriptions, and prescription fill messages to track patient compliance; 2) Potential for information sharing with other health care partners including eligibility/formulary information and medication history."¹

Electronic prescribing systems are a form of health information exchange that integrates prescribed medication data from multiple stakeholders, including pharmacy benefit managers, payers, and pharmacies. Through these systems, medication histories are now available for most prescriptions that were originally prescribed on paper. Electronic prescribing systems provide physicians with access to medication history information at the point of care, which enables improved coordination of patient drug therapy and quality of care. Electronic prescribing systems also provide practitioners with a secure means of electronically accessing health plan formulary, patient eligibility and medication history at the point of care.

E-prescribing is accessible to authorized users who do not have an in-office electronic medical record system, so it offers a potential first step toward adoption of electronic health information

¹ John Mack, "Ready or Not: Gearing Up for the Expansion of ePrescribing," *Pharma Marketing News*, Vol. 3, #6. Retrieved from <http://www.pharma-mkting.com/news/pm36-article01.pdf> on January 31, 2008.

systems by currently “non-wired” providers. Because e-prescribing is the cornerstone of clinical electronic medical record systems, and is a piece that is fully operational today, it can be an important digital bridge for the four-out-of-five physician practices in Florida that do not have an electronic medical record (EMR) system.

When physicians use the electronic prescribing systems to send prescriptions electronically, the prescriptions are transmitted through secure, private networks. The e-prescribing system transmits information through the use of encrypted telecommunication transmission channels that ensure secure, bi-directional, electronic connectivity between physician practices and pharmacies. A major benefit of the electronic transfer of the prescription is the elimination of errors caused by miscommunication of the handwritten paper prescription. This one benefit leads to the prevention of fraud and abuse that currently occur due to a lack of secure delivery channel for the prescription to the pharmacy and the inability to audit the paper-based prescribing process.

Pharmacy networks are a crucial part of the electronic prescribing system and are integral to the overall success of electronic prescribing in Florida and the country. These networks connect pharmacies and also connect pharmacy benefit managers with both pharmacies and physicians. Pharmacy benefit managers (PBMs) are third party companies that administer drug benefit programs for employers and health insurance carriers and are responsible for processing and paying prescription claims.

Electronic prescribing and PBMs also play a part in the national certification of electronic health record (EHR) systems by the Certification Commission for Healthcare Information Technology (CCHIT). One element of CCHIT’s electronic prescribing EHR criteria requires sending a query to a PBM for medication history and having the results of that query returned and imported into the EHR. CCHIT’s electronic prescribing criteria were introduced in 2007 and are scheduled for completion in 2009.

Two of the major players in pharmacy networks are SureScripts and RxHub. SureScripts was founded in 2001 by the pharmacy industry. It operates the Pharmacy Health Information Exchange which supports the electronic transmission of prescription information between physicians and pharmacists. More than 95 percent of all pharmacies in the United States are now certified on the Pharmacy Health Information Exchange. SureScripts is working to establish strategic partnerships with pharmacies, physicians, boards of pharmacies, quality-focused health organizations and physician associations.

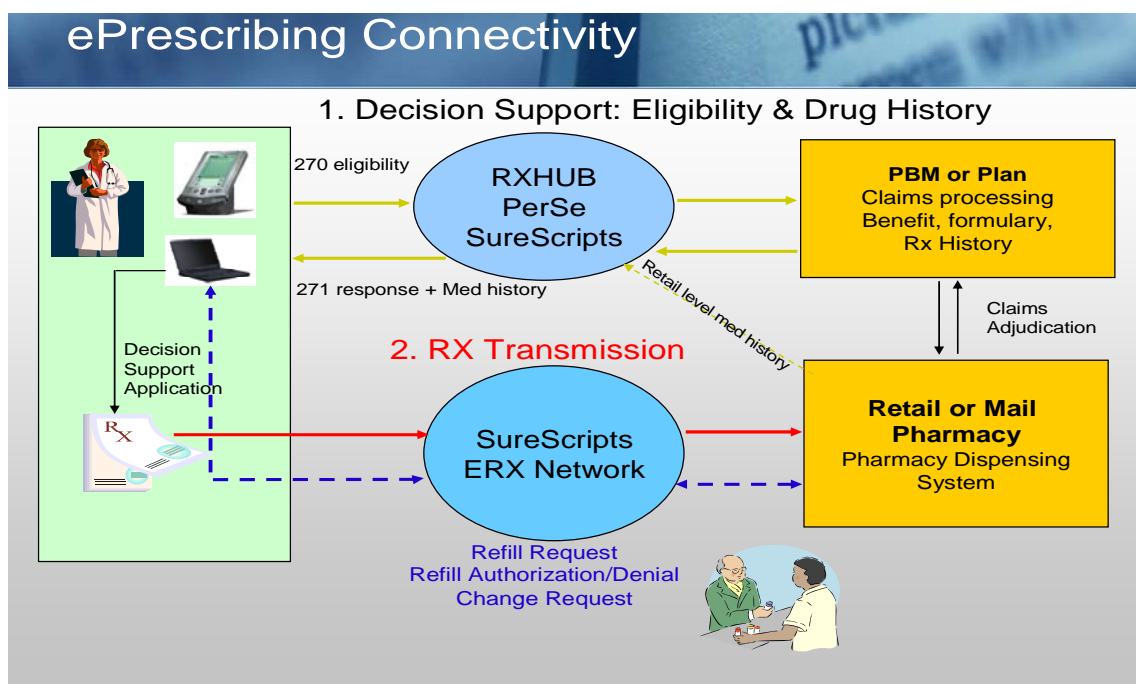
Through its work with community organizations, SureScripts is promoting the awareness and acceptance of electronic prescribing. SureScripts does not develop, sell or endorse specific electronic prescribing software, but does work with vendors that supply electronic health record (EHR) and electronic prescribing applications to connect their solutions to the Pharmacy Health Information Exchange. SureScripts also certifies e-prescribing software by specifying the standard technical format for transmitting prescription information and testing each vendor’s electronic connections to the network. Certified products can be viewed on the SureScripts website at <http://www.surescripts.com>.

RxHub was also founded in 2001 as a joint venture of three pharmacy benefit management companies. RxHub was created as a single point of communication for all participants in the prescription creation and delivery process, and given the primary mission to accelerate the adoption of electronic prescribing. RxHub offers a standardized communication framework that links prescribers, pharmacies, PBMs and benefits plans to exchange prescription benefit information and prescriptions electronically.

RxHub operates the National Patient Health Information Network that enables physicians to access patient prescription eligibility, benefits, formulary, and medication claims history at the point of care. Patient information is transmitted securely over a standardized channel and is subject to strict privacy controls consistent with HIPAA requirements and applicable federal and state laws. Clinicians are then able to transmit electronic prescriptions to the pharmacy of the patient’s choice. The RxHub ensures electronic connectivity among payers, physicians, and pharmacies for the purpose of managing healthcare costs. Information on RxHub is available at the company website at: <http://www.rxhub.net>.

A model depicting the e-prescribing process and medication data flow is displayed in Figure 1, from the point at which a physician requests a medication history for a patient, to the actual prescription being filled at the pharmacy.² The model lays out the process in which a patient’s eligibility is checked through the pharmacy network, which processes transactions for eligibility and retrieves the medication history, which is sent back to the provider. Some e-prescribing software applications include formularies for prescriptions and decision support from licensed drug reference databases, such as the Clinical Pharmacology® used in the Florida Medicaid e-prescribing application, eMPowerRx, to check for drug interactions. Once the physician has determined the correct prescription it is sent to the pharmacy to be filled.

Figure 1: E-prescribing Process and Medication Data Flow Overview



² Elizabeth Bridges, R.Ph, "Selecting an ePrescribing Solution: A Focus on Functions & Features." Presentation at the 1st Annual ePrescribing Summit – Orlando, Florida December 1-2, 2007

Section 2. Benefits of Electronic Prescribing

Electronic prescribing has many potential benefits that continue to be studied and documented as e-prescribing is increasingly implemented. There are three distinct types of benefits:

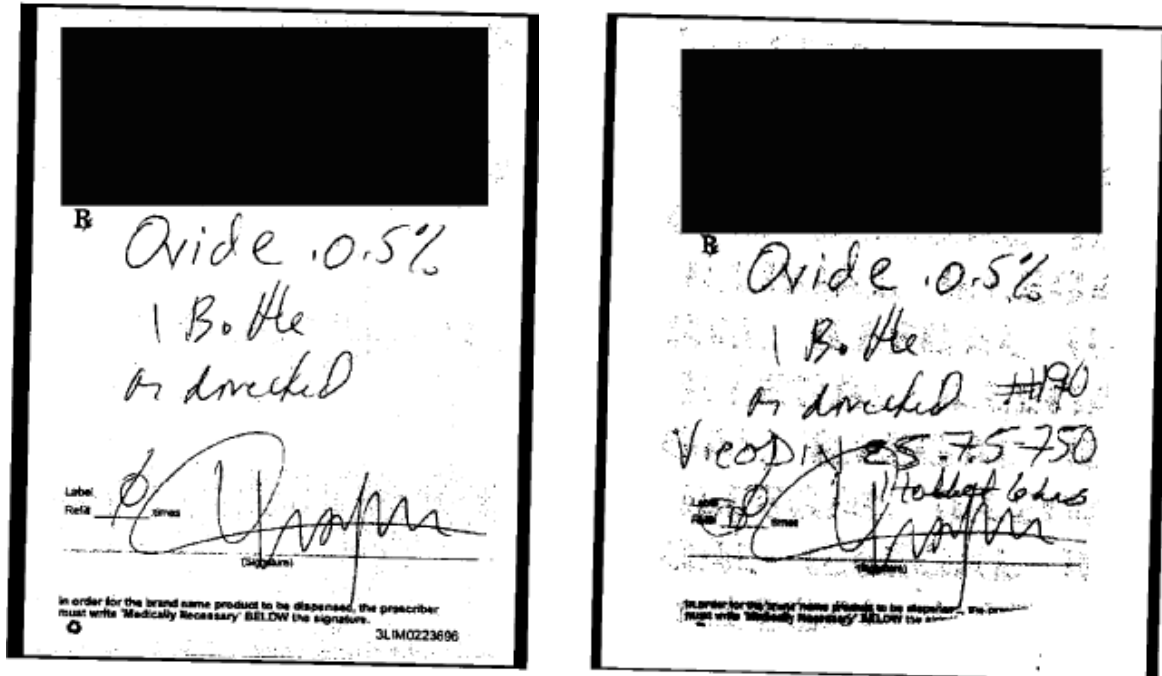
- Security including prevention of prescription drug fraud and abuse;
- Efficiencies and cost savings; and
- Improved patient safety and outcomes.

Each of these benefits is derived from both the accessibility of the medication history to the prescribing physician at the point of care and from the electronic transfer of the prescription.

2.1. Added Security Features

Eliminating paper and handwritten prescriptions from the prescribing process can significantly reduce fraud and abuse through alterations made to the paper prescription, as shown in Figure 2. In this example, a paper prescription for head lice written to a Medicaid recipient was altered to include 190 tablets of Vicodin, a controlled substance. The error was discovered when the pharmacist returned the prescription to the prescribing doctor with a note about his illegible handwriting.

Figure 2. Medicaid Prescriptions Altered to Include a Controlled Substance



E-prescribing provides a complete audit trail of every electronic transaction in the e-prescription process, from the act of e-prescribing in the physician's office to the pharmacy filling the prescription, to the patient picking up the prescription. Prescribing practitioners and pharmacies

must be credentialed and approved before they can participate in the e-prescribing process. They also must securely log on before they can e-prescribe or receive a prescription.

Secure access is possible using a virtual private network (VPN) connection over the Internet, which creates a protected electronic channel for the safe transmission of encrypted medication information. Infrastructure technology partners, vendors and others are bound through strong contracts to ensure the authentication of users, the integrity of prescriptions, and the privacy and security of personal health information that passes through the secure networks. Unwarranted prescription activity can be identified much more readily in the electronic system through the use of embedded auditing features.

Another security benefit of electronic prescribing is the additional back-up of records it affords. Since e-prescribing software offers a robust, integrated system for accessing patient medication history, e-prescribing can also be an important tool in disaster relief, by making prescription information for patients available when paper records are destroyed.³

2.2. Efficiency and Cost Savings

E-prescribing creates efficiencies and provides cost savings to all participants including physicians, pharmacies, health purchasers, and patients. Physician office personnel and pharmacy staff no longer have to spend time on phone calls and faxes to clarify prescription information and authorize or obtain authorization for prescription renewals. The costs associated with these activities are much reduced or eliminated. The result of implementing e-prescribing is more efficient prescribing processes, more accurate medication orders, and less manual intervention and rework at the pharmacy.

Table 1. Practice Efficiency Studies

Study	Results
Health Alliance Plan (Henry Ford Medical Group) 2006	57% physicians believe there is a reduction in time spent by support staff.
Rand (NJEPAC) 2006	80% reduction in callbacks related to coverage issues.
Surescripts (Brown Univ; Midwestern Univ) 2006	90% physicians noted improvement in care efficiency. 50%+ reduction in time consumed to manage refill requests and pharmacy callbacks.
Health Management Technology 2003	\$48,000 saved per year by a practice that automated refills.
Medco 2003	42% reduction in pharmacy calls to practice.
Tufts Healthplan 2002	2 hours per day saved per physician, 30% reduction in phone calls.
BCBS Hawaii 2000	50% reduction in pharmacy phone calls.
Kokomo Family Care 2000	42% reduction in pharmacy-related calls; 84% reduction in calls related to formulary.

³ For example, ICERx.org, "in case of emergency" is an online service developed for healthcare professionals assisting disaster-affected individuals. ICERx.org was created when Hurricane Katrina struck and continues operationally through the present. Through ICERx.org, authorized pharmacists and doctors can obtain records of medications evacuees were using prior to the disaster, including the specific dosages. Armed with this information, healthcare professionals will be able to renew prescriptions for evacuees and effectively assist in the coordination of care while avoiding harmful prescription errors.

Table 1 provides a summary of recently published research regarding the cost savings to physicians and pharmacies of electronic prescribing.⁴ Because of its ability to check formulary and benefit information at the point of care, e-prescribing can assist the clinician with prescribing an on-formulary medication or a therapeutically appropriate alternative, thus saving patients money, helping with medication compliance, and helping to ensure the appropriate regimen is provided for the patient. This in turn will help improve the quality and cost-effectiveness of care for patients with chronic conditions. Patients also benefit from not having to make separate trips to the pharmacy or delays while waiting for communications between the pharmacy and physician office. This is not just a matter of convenience for patients but a savings in time and travel as well.

2.3. Patient Safety

There are an estimated 1.5 million adverse drug events that occur each year.⁵ E-prescribing systems can enhance patient safety and improve outcomes by providing more complete information about the medication history of the patient to the prescribing practitioner. This ability to share health information through electronic prescribing systems enables the physician to better coordinate patient care with other treating physicians, and it supports and enhances the disease management initiatives of both payers and providers. Table 2 provides a summary of published research regarding the quality of care and patient safety impact of e-prescribing.⁶

Table 2. Practice Quality and Safety

Study	Results
Surescripts (Brown University; Midwestern University) 2006	75% of physicians believed patient safety & quality of care improved. 50% of physicians perceived communication with patients improved.
Rand (NJEPAC) 2006	Medication history perceived as very useful & worth the effort.
Health Alliance Plan (Henry Ford Medical Group) 2006	85% of physicians believe e-Rx has improved the practice of medicine at their clinic. 77% of physicians believe e-Rx improves the safety of patient care. 70% of physicians believe e-Rx improves patient satisfaction.
Surescripts & Walgreens 2006	11% improvement in new prescriptions filled by patients 3 months after e-Rx implemented (variable influences patient adherence)

As more physicians adopt electronic prescribing, the functionality of decision support tools that are made available to the prescribing practitioner will improve significantly. Electronic prescribing software not only offers a robust, integrated system for accessing patient medication history, but

⁴ Anthony J. Schueth, "ePrescribing: Why Now?" Presentation at the 1st Annual ePrescribing Summit, Orlando, December 1-2, 2007.

⁵ Institute of Medicine. (2006, July). *Preventing Medication Errors: Quality Chasm Series*. Washington, DC: National Academies Press.

⁶ Anthony J. Schueth, "ePrescribing: Why Now?" Presentation at the 1st Annual ePrescribing Summit, Orlando, December 1-2, 2007.

provides clinical decision support, such as drug-drug interaction alerts and allergy checks. In more sophisticated systems, practice alerts notify the clinician or other authorized user about gaps in care to permit on-the-spot counseling to the patient and corrective measures specified by treatment guidelines. These gap analysis and practice alert systems are especially effective for patients with complex chronic conditions, thereby improving patient outcomes.

Section 3. Florida Electronic Prescribing Clearinghouse

The Florida Electronic Prescribing Clearinghouse is a collection of e-prescribing resources maintained by the Agency in its website. The portal provides users a single point of access for e-prescribing activities in Florida. It is not only designed to meet the requirements of Section 408.0611, but also to provide users important information on new developments and trends in the e-prescribing field with an overall goal of promoting the adoption of and improving the quality and effectiveness of e-prescribing in the state. It is expected that the evolution of the clearinghouse will be supported by recommendations from stakeholders and the State Electronic Prescribing Advisory Panel.

3.1. Statutory Requirements

Section 408.0611, F.S. requires the agency to create a web based clearinghouse of information on electronic prescribing that will convey the process and advantages of provide information regarding the availability of electronic prescribing products, including no-cost or low-cost products. The statute further specifies that the information in the Clearinghouse should:

- Present the advantages of electronic prescribing, including using medication history data to prevent drug interactions, prevent allergic reactions, and deter doctor and pharmacy shopping for controlled substances;
- Provide links to federal and private-sector websites that provide guidance on selecting an appropriate electronic prescribing product; and
- Provide links to state, federal, and private-sector incentive programs for the implementation of electronic prescribing.

The Electronic Prescribing Clearinghouse can be accessed at <http://www.fhin.net/eprescribe/> or by selecting "Florida ePrescribe Clearinghouse" from the top main menu on the Florida Health Information Network (FHIN) home page at <http://www.fhin.net>.

3.2. Clearinghouse Implementation

The Agency rolled out the Electronic Prescribing Clearinghouse website on September 28, 2007. The clearinghouse website architecture incorporates the core requirements of the statute, as discussed above, and additional information of interest on e-prescribing. The core requirements contained in the design of the website include:

- The advantages of e-prescribing;
- Products and services, laid out in an easy to use table with web links;
- E-prescribing resources, categorized as general, guidance, research articles, and medication safety; and
- E-prescribing initiatives and incentive programs at national, private, and state levels;
- The status of e-prescribing in the Florida Regional Health Information Organizations;
- Information on the Florida Electronic Prescribing Advisory Panel; and
- E-prescribing news updates.

The initial webpage for the Electronic Prescribing Clearinghouse introduces e-prescribing as “the computer-based electronic transmission of prescriptions between health care professionals and mail order or retail pharmacies.” It then continues with a listing of the process of e-prescribing using an ideal scenario that tracks the path of the electronic prescription from the physician to the patient picking up the medication. The index page of the website is shown in Figure 3, below. Each of the tabs in the front page will be discussed in greater length in the sections following.

Figure 3. Electronic Prescribing Clearinghouse Home Page

Agency for Health Care Administration
AHCA

Florida Health Information Network
FHIN

Florida Health Information Network (FHIN) | Florida ePrescribe Clearinghouse | Agency for Health Care Administration (AHCA)

Florida ePrescribe Clearinghouse [Contact Us](#) [Site Map](#)

Local Navigation

- [Advantages of ePrescribing](#)
- [Products and Services](#)
- [Resources](#)
- [ePrescribing Initiatives](#)
- [ePrescribing and Health Information Exchange in Florida](#)
- [Workgroup and Stakeholders](#)
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Florida's Electronic Prescribing Clearinghouse Statute


[Section 408.0611, F.S.](#)

Electronic Prescribing News Sites

[U.S. Department of Health and Human Services, e-Prescribe News Releases](#)

[Government Health IT News - ePrescribing](#)

What is electronic prescribing (ePrescribing) and how does it work?

 EPrescribing is the computer-based electronic transmission of prescriptions between health care professionals and mail order or retail pharmacies. However, an ePrescribing system does much more than transmit a medication prescription from a health care professional to a pharmacy. An ePrescribing system allows health care professionals to check medication history, patient allergies, drug interaction alerts, recommended dosage, payor covered drug lists, and much more to ensure that the medication prescribed is the safest and most effective choice for the patient. Pharmacies can also communicate with health care professionals through ePrescribing systems.

Many ePrescribing systems work with or are included in Practice Management Systems or Electronic Medical Record systems. Because of this system interface, little or no manual data entry of a physicians' patient information may be required.

The scenario below shows an example of how an ePrescribing system may work:

1. A health care professional logs into an ePrescribing application that is connected to the Pharmacy Health Information Exchange;
2. The health care professional selects a patient record;
3. Patient health plan/payer eligibility is checked;
4. Information regarding eligibility status and ID numbers of the medications that a health plan/payer will cover is returned;
5. A health care professional selects a drug;
6. The ePrescribing application and exchange check for drug interactions, patient allergies, medication history, etc.;
7. Information is returned to the health care professional with alerts to any potential interactions, allergies, etc.;
8. The health care professional selects the patient's pharmacy of choice and completes the prescription details;
9. The health care professional sends the e-prescription which is electronically transmitted to the selected pharmacy;
10. The ePrescription activity is captured in the patient's record;
11. The pharmacy fills the prescription for patient pickup;
12. When refills are depleted and a patient requests a refill at a pharmacy, the pharmacy can electronically send the refill request to the patient's health care provider;
13. The health care professional can then electronically authorize or enter a rejection code with free text regarding instructions or a reason for the request denial, and
14. As always, the patient still has the option to contact their health care professional directly to request electronic transmittal of a new prescription to their pharmacy of choice for continued refills or new medication.

For more information, click on this [Frequently Asked Questions](#) resource.

Internet 100%

3.3. Advantages of E-prescribing

The section of the website presenting the advantages of e-prescribing stresses the e-prescribing advantages for consumers, health care providers, and pharmacies in order to more effectively address these constituencies' needs. The advantages of e-prescribing include:

- Prevents medication prescription errors caused by events such as illegible hand writing, look-alike or sound-alike drugs, drug-to-drug interactions, incorrect dosing, drug allergy reactions, duplication of drugs, etc. and, thereby, reduces health care and legal costs;
- Eliminates illegible prescriptions;
- Provides for real-time communications between doctors, pharmacies and patients;

- Provides critical drug alerts and patient specific information at the health care professionals' fingertips;
- Provides drug pricing information;
- Provides payer coverage and preferred drug information;
- Creates a complete patient medication history;
- Reduces fraud and crime;
- Increases health care professional work efficiency and reduces administrative costs; and
- Expedites refills.

The electronic prescribing literature also documents information that supports the advantages of e-prescribing. Academic research studies cited in the website were drawn from Google scholar for access by physicians or other researchers not affiliated with a medical school library. Each area in the section for health care providers highlights significant studies, including abstracts on important research and links to these materials. In the pharmacy section, information citing the advantages of e-prescribing for pharmacists is highlighted, as well as the cost savings due to efficiencies brought about by e-prescribing. One website of interest to pharmacists is getrxconnected.com. It takes pharmacists through a technology assessment of how to “get connected” to begin conducting electronic prescribing. Some of the advantages cited include:

- **Improved Efficiency:** Prescription refill authorization requests are sent directly to your computer and all of your requests can be reviewed in one queue. Staff workflow is simplified, allowing for the completion of refill authorizations in much less time than by phone or fax. This frees up staff time for more important and reimbursable tasks.
- **Enhanced Patient Safety:** The prescription information you send is identical to the information that the pharmacies receive. The result is greater accuracy, less chance of dispensing error and fewer calls to your practice for clarifications.
- **Widespread, Secure Coverage:** Over 90% of the nation’s pharmacies are enabled to communicate prescription information electronically with physician practices via a secure network.

3.4. E-prescribing Products and Services

The Electronic Prescribing Clearinghouse Website includes a source for e-prescribing products and vendors available to Florida’s physicians. Some time was spent researching and identifying available e-prescribing products and services on the market, using a list of registered e-prescribing vendors on the SureScripts website. Every vendor listed was contacted directly to ascertain its interest in participating in the clearinghouse. Thirteen (13) vendors expressed interest in actively participating on the website. These vendors are listed in a table with active links to their company websites. The table also includes pricing information for the product and links to demonstrations that the companies might provide on their products.

In addition, an individual web page was built for each of the vendors, highlighting their e-prescribing products and services and any research or white papers that the company wanted to make available. The web page also listed contact information for the vendor marketing or sales department, and other information that the vendor wanted to include. Finally, a link to the SureScripts listing of all 53 e-prescribing products and services is provided, which in turn include links to these companies.

3.5. E-prescribing Initiatives and Incentive Programs

Office of Health Information Technology staff conducted research to locate e-prescribing initiatives and incentive programs across the country. E-prescribing initiatives and incentive programs were divided into three domains; national, private-sector, and state. Each domain has an associated web page assigned to it. The national incentive programs identify Medicare Part D and the private-sector page identifies, describes, and links five programs.

There are a variety of state e-prescribing initiatives. Florida has two e-prescribing initiatives of note. The first is the e-prescribing pilot program undertaken by Florida Medicaid in 2004 and a collaboration of health care companies that created ePrescribe Florida. The Medicaid pilot program is discussed later in this report. ePrescribe Florida was established in 2006 to establish a collaborative framework to help achieve the benefits of e-prescribing across the state. The advisory council of ePrescribe Florida includes Blue Cross and Blue Shield of Florida, Humana, AvMed, RxHub, LLC., Florida Academy of Family Physicians, the Florida Medical Association, SureScripts and Walgreens. ePrescribe Florida promotes an understanding of e-prescribing through outreach programs and education. ePrescribe Florida is currently registering e-prescribing vendors who meet its criteria for full e-prescribing functionality and plans to post the vendors on its website, <http://www.eprescribeflorida.com>, in 2008.

The state resources from the rest of the country are presented on a United States map that let the user select states with active initiatives and incentive programs. Clicking on an active state brings up a window describing the initiative along with a link to that program. States with incentive programs included are also noted, as shown in Figure 4.

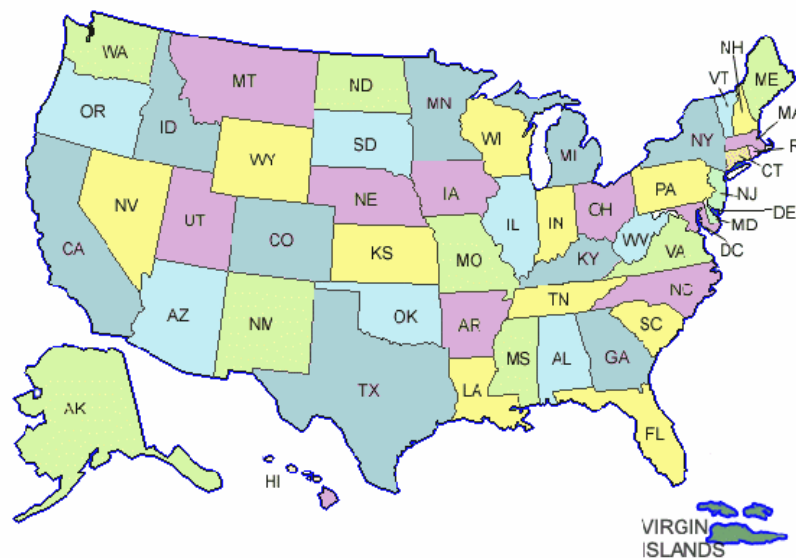
Figure 4. Electronic Prescribing Incentive

ePrescribing Initiatives ▶ Incentive Programs

[National](#) | [Private-Sector](#) | [State](#)

State Incentive Programs

Click each state abbreviation on the map below to show incentive programs for the selected state or click [All State Incentive Programs](#)



[State Abbreviations List](#)

National ePrescribing Patient Safety Initiative [Legislation Facts Sheet](#) (46.7kb .pdf) or http://www.nationalerx.com/media/docs/Leg_fact_sheet.pdf

3.6. Other Information and Future Updates

The Electronic Prescribing Clearinghouse website also includes links to other e-prescribing information relevant to the adoption of e-prescribing in Florida. The first link of note is to e-prescribing programs being used by the Florida Regional Health Information Organizations (RHIOs). Three RHIOs currently use or are planning to implement e-prescribing into their core services. The Tampa Bay RHIO uses eMPowerx from Gold Standard, which is the same application used in the Florida Medicaid e-prescribing pilot. In the Northeast Florida Health Information collaborative the Duval County Health Department uses an electronic pharmacy record system, InterRx. The Big Bend RHIO has integrated an e-prescribing function into its core services.

A second additional link on the website is to pages dedicated to the Florida Electronic Prescribing Advisory Panel. The opening web page lists the panel members, and agendas, minutes and related materials are posted for each Panel meeting.

There is continuing national and international interest in the growth of e-prescribing, tied not only to traditional access, cost and quality issues, but also to its role in the merging global health information technology field. To provide support for and information about the increasing interest in e-prescribing and its emergent technical developments and standards, links are included that provide access to current national and state news stories and media outlets. These include:

- National e-prescribing news stories;
- E-prescribing news by state;
- Electronic prescribing news sites;
- U.S. Department of Health and Human Services, E-prescribe News Releases;
- Government Health IT News – E-prescribing;
- EPN - Electronic Prescribing News;
- Healthcare IT.

Section 4. Federal and Other Public Initiatives

Public policy interest in electronic prescribing has increased in recent years. The passage of Medicare Prescription Drug, Improvement, and Modernization Act (MMA) of 2003, which was implemented in 2006, expanded the role of the federal government in administration of prescription drug benefits for Medicare beneficiaries. This new responsibility combined with the prescription coverage provided by state Medicaid programs means that the public sector now has direct oversight as well as a general interest in the efficiency and effectiveness of the prescribing and delivery of medications to patients. Electronic prescribing is of interest to policy makers because it is viewed as means to reduce program costs and enhance the quality of care provided to program beneficiaries.

4.1. Medicare

The Medicare Prescription Drug, Improvement, and Modernization Act (Act) contained several provisions related to electronic prescribing requirements, standards, and indirectly, incentives. It required that all participating prescription drug plan be capable of supporting electronic prescribing functionality according to the standards set the Centers of Medicare and Medicaid Services (CMS). Provisions of the Act included requirements for the Department of Health and Human Services (HHS) to develop rules for uniform standards related to electronic transmittal of the prescription order and for uniform standards related to other aspects of the electronic prescribing decision support process such as the electronic transmittal of information on plan eligibility, lower cost alternatives to the drug being prescribed, and the patient's medical history.

HHS was directed to adopt or develop the initial standards by 2005 in coordination with the National Committee on Vital and Health Statistics and test new or emerging standards as necessary through pilot projects to be conducted in 2006. The standards adoption process is expected to be completed in 2008 and implemented next year.

The Act also addressed certain barriers to adoption of electronic prescribing by creating exceptions and safe harbors from prosecution related to third-party purchase of electronic prescribing equipment on behalf of physicians. Prior to the enactment of these provisions and the changed regulations, such support could be prosecuted as a kickback or improper inducement for referrals. While the Act set the stage to remove these barriers, it did not take the additional steps of mandating use of electronic prescribing. Also, the Act did not extend compliance with the standards beyond the Medicare part D program.

Since the passage of the Medicare part D program, there has been several proposals to further incentivize or mandate electronic prescribing. Most recently, CMS finalized a rule which provides that it will no longer permit an exception for computer-generated faxes from the transmission standards for electronic prescribing starting in January 2009. This requirement will require vendors to upgrade their products and is an example of a small step toward mandated standards for the industry.

In November 2007, HHS Secretary Michael Leavitt indicated support for mandated electronic prescribing for the first time and the American Health Information Community (AHIC) recommended that the HHS request authorization from Congress to mandate e-prescribing in the Medicare program. This reflects the increasing receptivity of the present administration toward more decisive regulatory action to speed the adoption of health information technology.

4.2. Florida Medicaid Wireless Handheld Clinical Pharmacology Drug Information Database and E-Prescribing

In 2002, Florida Legislature directed the Agency for Health Care Administration to develop a wireless handheld drug information application for prescribers to use at the point of care. The system was to provide:

- Continuously updated clinical pharmacology information for prescriber reference;
- Reference to the Florida Medicaid Preferred Drug List;
- Individual Medicaid patient medication history;
- Ongoing education and support for prescribers.

In 2003, the Agency for Health Care Administration implemented the wireless handheld PDA program in the Medicaid Pharmacy program. The Agency developed a model in which clinical outcomes and Medicaid “over-prescribing” could be positively impacted at the point of care. The wireless handheld drug information application was launched with a contract to Gold Standard, Inc. in Tampa (see: www.goldstandard.com) to supply personal digital assistants (PDAs) to 1,000 high volume Medicaid providers.

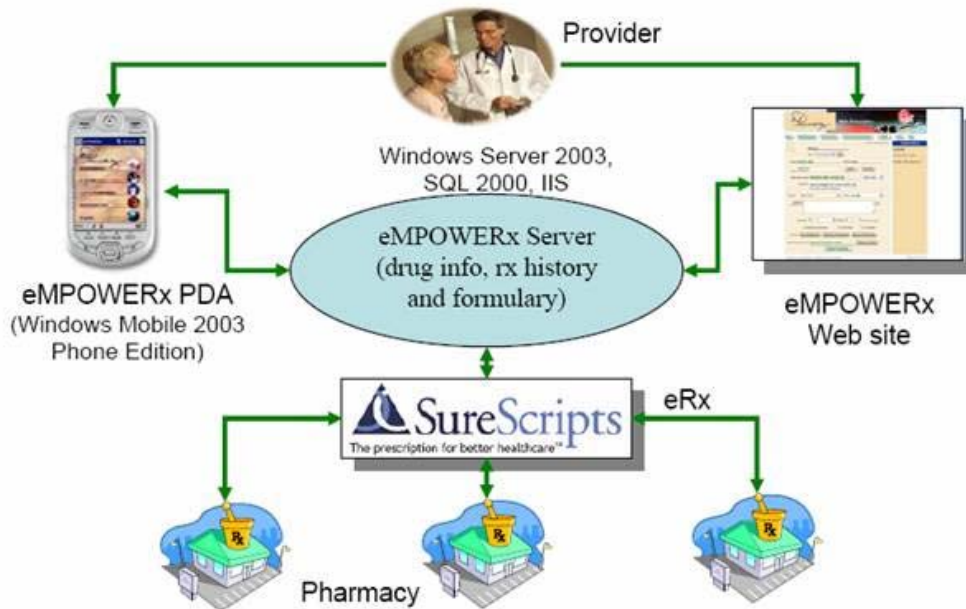
Gold Standard, Inc. deployed eMPowerx as the software platform for the pilot project (see www.empowex.com), working with Informed Decisions, providers of the eMPowerx turnkey solution. Gold Standard, Inc. also deployed encrypted wireless connectivity for the PDAs through a wireless digital connection with Sprint. eMPowerx reported a medication history for each Medicaid beneficiary for the past 60 days via the PDAs, provided the Medicaid Preferred Drug List, presented drug utilization reports (interaction reports, etc.) and included drug pharmacology in the PDA. The pilot project was so successful that in 2004 it was expanded to 3,000 total providers and the medication history was extended to 100-days. The eMPowerx software is currently available to all Medicaid providers in Florida for use on desktop or tablet computers.

The physician using eMPowerx employs the PDA or desktop PC to retrieve a 100 day medication history for the patient at the point of care. The eMPowerx program permits immediate utilization and compliance review and provides information about coverage and restrictions. It also incorporates an e-prescribing function that permits immediate transmission of prescription authorization to the patient’s pharmacy. The eMPowerx prescription program employs Clinical Pharmacology®, a leading drug reference application which empowers clinicians to screen a prescription for adverse effects and reduce the potential for medication errors before they occur. The software allows physician participation in prospective drug utilization review to minimize adverse drug reactions, detect overuse or under use of drugs, detect duplicate therapies and detect potential allergic responses.

eMPowerx allows providers to “write” prescriptions from a desktop computer or PDA. The program will automatically populate the prescription with the patient’s last known pharmacy, but it also allows the physician to send an e-prescription to any pharmacy of the patient’s choice. The prescription is sent electronically to SureScripts, which submits it to the appropriate pharmacy electronically or via fax, depending on whether the pharmacy is activated to receive an e-prescription. A diagram of this process is shown in Figure 5.⁷

⁷ Illustration provided by Informed Decisions.

Figure 5. Wireless Handheld PDA Project Approach



The eMPowerX system is capable of tracking who wrote the prescription, for which recipient, what was ordered, when it was ordered, where it was sent and what time it was filled. If the recipient does not pick up the prescription, the eMPowerX puts an 'X' next to the medication so that the doctor see that it was not picked up. Because of the utility of the program, doctors can track individual patients and can track their prescription status to control compliance, fraud and abuse. Figure 6 shows an example of a listing of duplicate drugs provided by eMPowerX.

Figure 6. Example of Duplicate Drugs Query Using eMPowerX

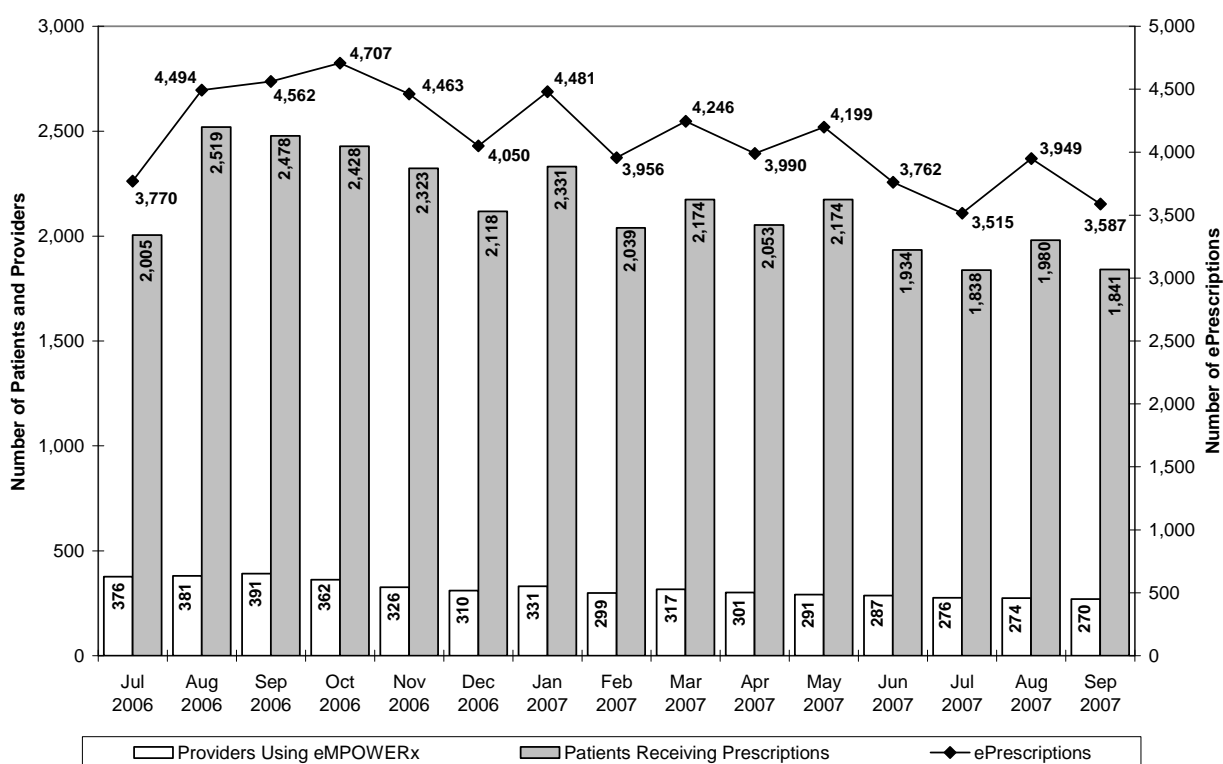
ME0:xxx25	RISPERDAL 3MG TABLET	10/27/2003	60	30
ME0:xxx01	ZYPREXA 10MG TABLET	10/27/2003	60	30
ME0:xxx90	KU-ZYME CAPSULE	10/29/2003	90	30
ME0:xxx90	ZITHROMAX 250MG Z-PAK TAB	10/29/2003	6	4
ME0:xxx90	IBUPROFEN 800MG TABLET	10/29/2003	30	15
ME0:xxx90	ALBUTEROL 90MCG INHALER	10/29/2003	17	30
ME0:xxx47	CEFTIN 500MG TABLET	10/31/2003	20	10
ME0:xxx80	SEROQUEL 300MG TABLET	10/31/2003	60	30
ME0:xxx47	ADVAIR 600/60 DISKUS	10/31/2003	60	30
ME0:xxx47	VIOXX 50MG TABLET	10/31/2003	30	30

The Medicaid wireless handheld PDA program empowers the provider by providing clinical decision support at the point of care. It offers efficiency to the physician and enhances patient safety by providing accurate medication information at the point-of-care, reduces the risk of drug interaction, reduces instances of fraud and abuse through “doctor shopping” and improves medical outcomes for patients.

Outcomes of the Medicaid Wireless Handheld PDA Program

As of December 2007, Florida providers have sent 850,000 prescriptions across the eMPowerX system since the beginning of the program. Not all prescriptions are delivered electronically through the eMPowerX application; some are sent via fax if SureScripts determines the pharmacy cannot receive them electronically. Figure 7 shows the number of Medicaid providers using the eMPowerX system to write e-prescriptions, the number of patients who have had e-prescriptions written using the eMPowerX system, and the number of e-prescriptions sent per month, between July 2006 and September 2007.

Figure 7. Number of Providers Using eMPowerX, the Number of Patients Receiving E-prescriptions and the and Number of E-prescriptions Written Using eMPowerX, July 2006 to September 2007



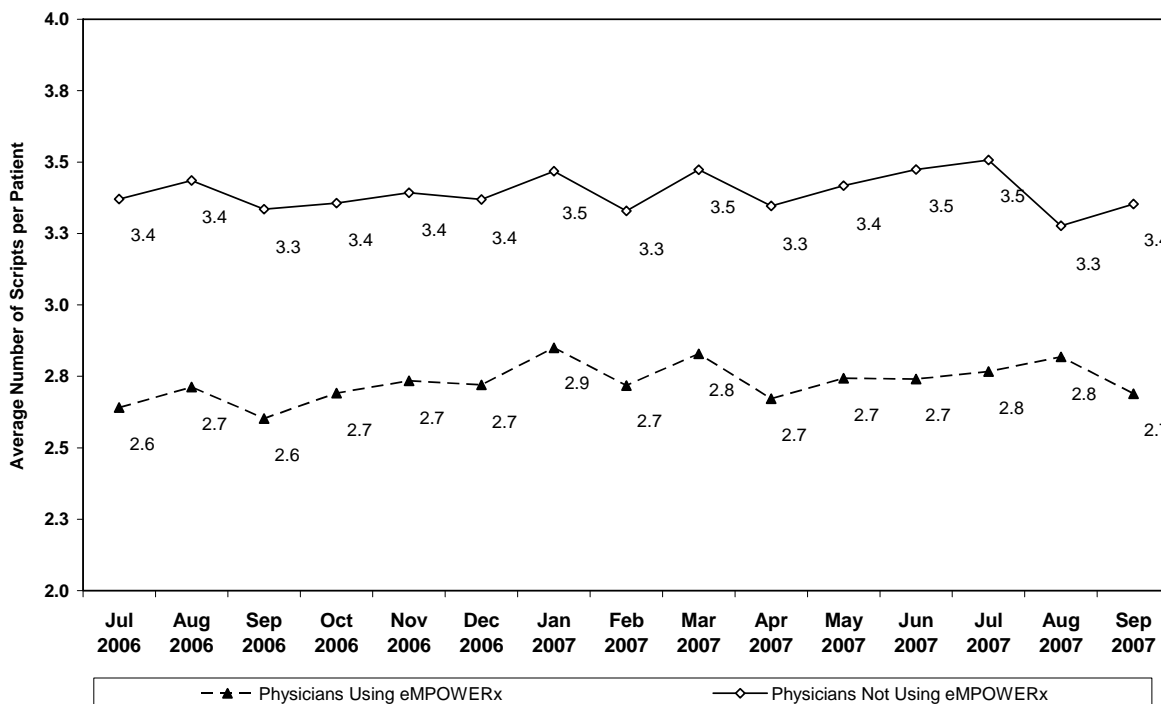
The table shows an average of 319 physicians using eMPowerX to send prescriptions during this 15 month period. The number of Medicaid patients receiving prescriptions through eMPowerX was higher at an average of 2,149 patients per month. The number of prescriptions fluctuated between 3,770 and 4,707, with an average of 4,115 per month across the 15 month period. These data show a steady level of e-prescribing activity between 2006 and 2007, stable but not increasing at any notable rate.

Anecdotal feedback from users continues to be positive. A self-report from a physician in Miami Lakes testifies to its effectiveness in providing updated medication histories and catching potential drug interactions.⁸

“I am part of a four physician group that has been using the eMPowerx program now for over six months. We were the first... practice in the state of Florida to implement the system into our daily routine. We are all very impressed by the accuracy and ease of use of the eMPowerx program. It has helped us to identify medications that the patient is on even when the patient left the long list at home. This helps to eliminate drug interactions and also inform us of various medical conditions that the patient forgot to inform us about. For example, one patient neglected to tell us he was on Coumadin prior to surgery.”

Prescribers who use eMPowerx write about 20% fewer prescriptions on average than physicians who do not use the system. In Figure 8, physicians who use eMPowerx are compared to physicians who do not use the application in terms of the average number of prescriptions written each month. These counts include electronic and paper prescriptions. Upon inspection it is clear that physicians using eMPowerx write fewer prescriptions per patient, at an average of 2.7 prescriptions than those who do not use eMPowerx, with an average of 3.4 prescriptions per patient. This is an average difference of 24.7% between average prescriptions written by the two physician groups, across the 15 month period.

Figure 8. Average Medicaid Prescription Claims per Patient per Provider, eMPowerx-Users and Non-eMPowerx- Users, July 2006 to September 2007



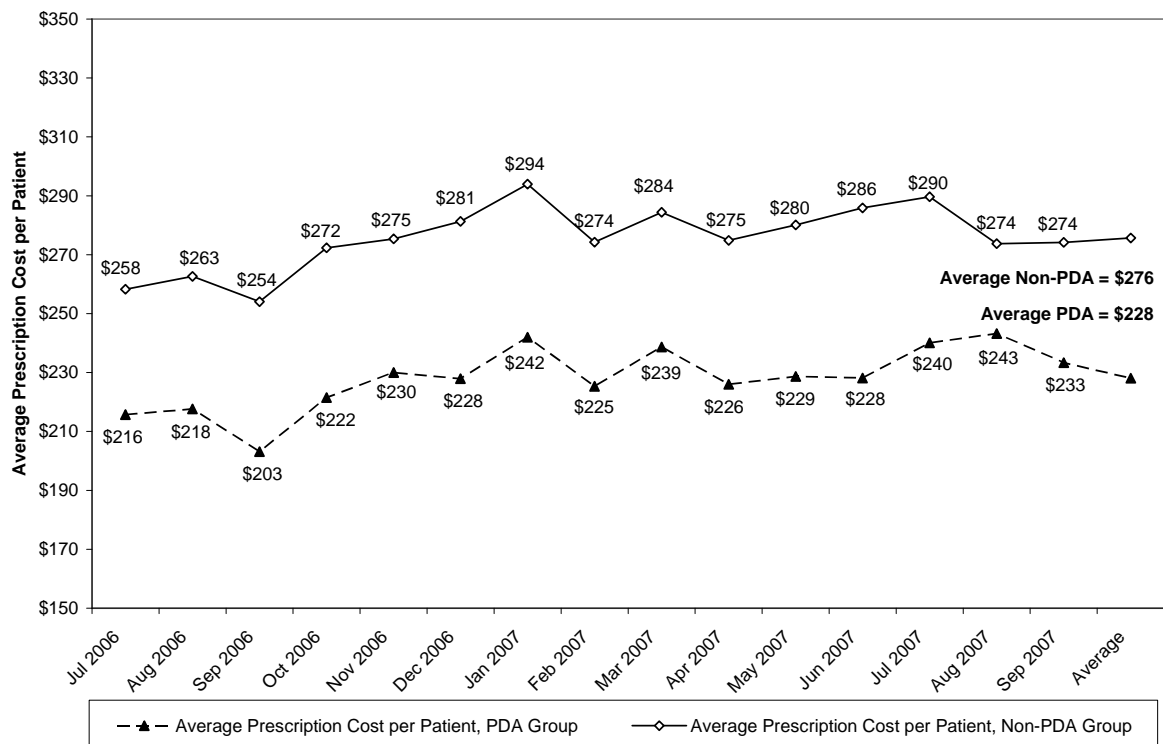
⁸ Personal testimony submitted to Florida Medicaid in a quarterly report from Informed Decisions, the eMPowerx training company, April 2006.

The number of prescriptions written by the eMPowerx group of physicians translates into a lower cost per patient for Medicaid prescription claims payments. Gold Standard, Inc. reports \$1.8 - \$2 million in monthly savings from the eMPowerx program. A 2006 PEW Report noted \$50 million in savings for Florida Medicaid in 2004-2005, which represents a 5:1 Return on Investment on the original allocation from the Legislature.

The savings to Medicaid from the eMPowerx program are attributable to utilization and cost avoidance through the reduced number of scripts being written. Assuming that physicians are only prescribing medically necessary pharmaceuticals, the savings could also be coming from other factors, such as fewer alterations of scripts and fewer duplicated medications. Nonetheless, savings are apparent with the eMPowerx program.

Figure 9 shows the average monthly cost savings per Medicaid patient, from July 2006 to September 2007. The savings per patient parallel the number of prescriptions written per patient, as shown in the previous chart. For the physicians using eMPowerx, the cost per patient to Medicaid for prescriptions fluctuates between a low of \$203 per patient to a high of \$243 per patient, for an average of \$228 per patient during the period. In contrast, for physicians not using eMPowerx, the lowest cost per patient was \$254 and the highest cost per patient was \$294 in the period. The average cost per patient in this group was \$276. This number is an average of \$48 more per month more than the average cost of prescriptions among physicians who used eMPowerx.

Figure 9. Average Monthly Cost Savings per Patient

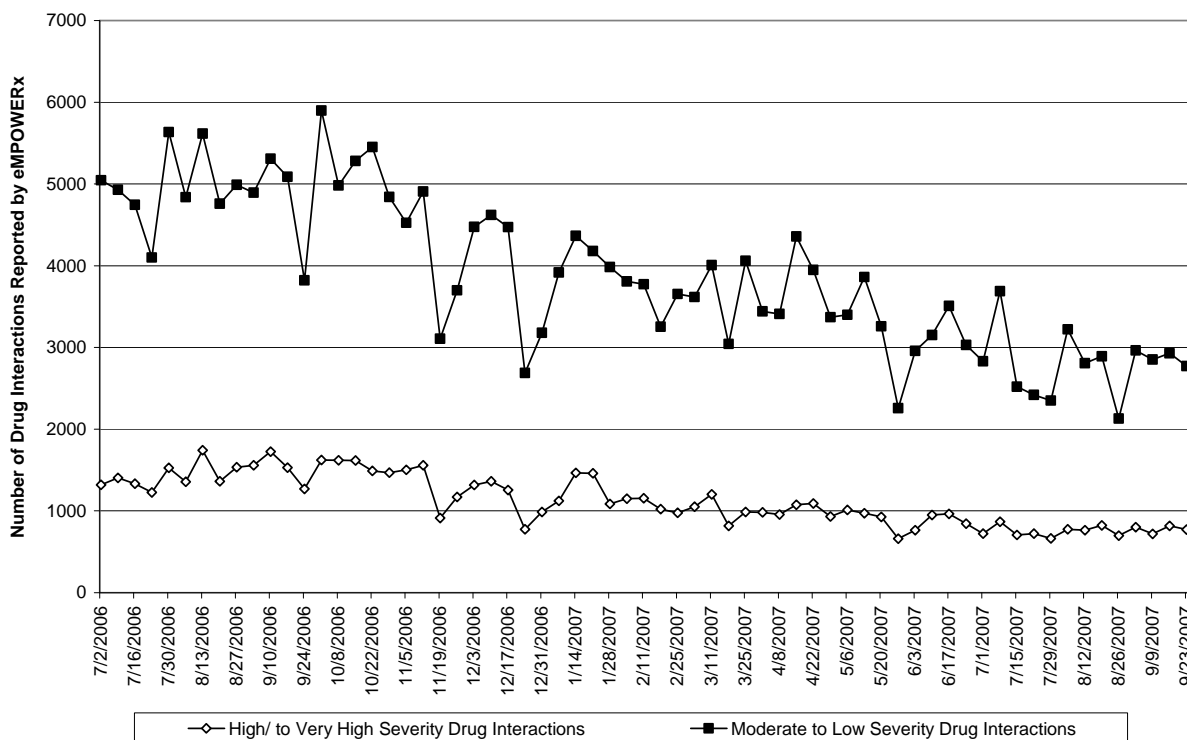


Prescription savings are also realized by minimizing duplicate drug therapy, achieved through real-time, proactive identification. Important cost savings are by reducing medication errors and preventing severe drug interactions. During 2006, eMPowerx users received more than 5,000 drug interaction alerts each week; more than 1,000 of which were of high or very high severity.

The 2006 data, however, do not reflect current drug interaction data, which are much lower. Staff at Informed Decisions attributes the decrease in drug interactions to the educational value of prior alerts and the residual impact of this information, coupled with access to current claims data for providers using eMPowerx. This results in providers prescribing better therapies with fewer drug interaction alerts and better health outcomes.

Figure 10 shows the breakdown of drug interaction alerts by High and Very High Severity compared to Moderate to Low Severity ranking, for the period between July 2006 and September 2007. As can be seen in the figure, the number of drug interactions decreased markedly between 2006 and 2007; the high to very high severity interactions decreased by 41.5% and the moderate to low severity drug interactions decreased by 45%.

Figure 10. Drug Interaction Alerts by Severity Ranking, July-September 2006



Reports from Informed Decisions demonstrate that savings to Florida Medicaid are based on the cost avoidance due to drug interactions before they occur.⁹

Data from published research studies suggest that approximately 5% of preventable drug interactions lead to patient hospitalization.^{10 11} Results from such studies further suggest that hospitalizations resulting from preventable drug interactions are associated with an average increased cost per patient of \$4,685 per incident.¹² This

⁹ Reported in a quarterly report to Medicaid Pharmacy from Informed Decisions, August 2006.

¹⁰ Lazarou J, Pomeranz BH, Corey PN. Incidence of adverse drug reactions in hospitalized patients: A meta-analysis of prospective studies. *JAMA*. 1998;279:1200-1205.

¹¹ McDonnell PJ, Jacobs MR. Hospital admissions resulting from preventable adverse drug reactions. *Ann Pharmacother*. 2002;36:1331-1336.

¹² Bates DW, Spell N, Cullen DJ, et al. The costs of adverse drug events in hospitalized patients. Adverse Drug Events Prevention Study Group. *JAMA*. 1997;277:307-311.

cost per incident is also in agreement with an average hospital stay of 3-4 days based on the Medicaid daily hospital payment of \$1,300 per day. Based on these results, if 5% of the high and very high drug interactions identified by eMPOWERx would have otherwise led to patient hospitalization at a cost of \$4,685 per incident, the implementation and use of the eMPOWERx system saved the State of Florida \$4,095,392.75 in hospitalization costs alone during the first quarter of 2006.

From the data presented above, it should be clear that implementing e-prescribing software such as eMPOWERx, has many efficiency and cost saving benefits. Physicians gain the benefit of accurate medication reporting, a pharmacology tool that checks for drug interactions, a medication listing that reduces duplication of prescriptions and identifies patients who might be attempting to obtain prescriptions fraudulently, and clear cost savings for Medicaid. If the success of eMPOWERx for the relatively small population of Medicaid beneficiaries can be demonstrated so clearly, then the benefits for commercial payers should be greater.

Section 5. Private Sector Initiatives

5.1. ePrescribe Florida

In 2006, key electronic prescribing stakeholders formed ePrescribe Florida. The group seeks to increase patient safety and meet the needs of the Florida public by documenting and promoting an understanding of the benefits and implementation of electronic prescribing. The organization is composed of the leading health plans, provider organizations and associations, retail pharmacy chains, and electronic prescribing infrastructure and application vendors.

The mission of ePrescribe Florida is being achieved through educational and outreach programs and promoting health plan and other incentives for adopting e-prescribing technology. This includes educational programs and tools that provide an informational resource so prescribing practitioners can understand the options and opportunities that exist at all levels of electronic prescribing. The organization also serves as a resource to help promote and communicate the various incentive programs offered through participating health plans, vendors, or other grants and funding opportunities as they materialize.

More information about ePrescribe Florida including the extensive list of organizations involved can be found online at <http://www.ePrescribeFlorida.com>.

5.2. National Private Initiatives

There are many organizations and associations working at the national level to promote the adoption of electronic prescribing. Among these are RxHub, SureScripts, the National ePrescribing Patient Safety Initiative, the National Council for Prescription Drug Programs and the American Academy of Family Physicians.

RxHub provides authorized clinicians with secure access to real-time, patient specific prescription information. Prescription eligibility, formulary and benefits, and medication history information is provided for consenting patients to authorized clinicians at the point of care. This real-time decision support information is used by clinicians to effectively manage the patient's use of medications and enables the most clinically appropriate and cost effective medication therapy to be electronically prescribed for the patient. RxHub partners with prescription payers, technology providers, and pharmacy networks to improve patient safety, increase workflow efficiency and reduce the overall cost of health care delivery.

Founded by the pharmacy industry in 2001, SureScripts operates the Pharmacy Health Information Exchange, which facilitates the secure electronic transmission of prescription information between physicians and pharmacists and provides access to lifesaving information about patients during emergencies or routine care. Working collaboratively with health plans, health systems, technology vendors and health policy leaders, SureScripts is committed to improving the safety, efficiency and quality of the prescribing process. More information about SureScripts is available on its website at: www.surescripts.com.

The National ePrescribing Patient Safety Initiative (NEPSI) offers free e-prescribing software to physicians and pharmacies. The software is provided without cost by the electronic prescribing vendor, Allscripts and NEPSI coalition members. More information is available on the organization's website at: www.nationalerx.com.

The National Council for Prescription Drug Programs (NCPDP) creates and promotes standards for the transfer of data to and from the pharmacy services sector of the healthcare industry. The organization provides a forum and support that enables a diverse membership to develop and maintain these standards through a consensus building process. The organization offers its members educational opportunities and database services to better manage their businesses. More information is available on the organization's website: www.ncpdp.org.

The American Academy of Family Physicians (AAFP) established the Center for Health Information Technology (Center) to provide technical expertise, advocacy, research, and member services associated with medical office automation and computerization. The Center works to increase the availability and use of low-cost, standards-based information technology among family physicians through consultative, educational, and outreach activities. The Center provides step-by-step educational materials to assist physicians in the successful implementation of electronic medical record systems in their practices including the adoption of electronic prescribing functionality. More information about the Center is available on its website at: www.centerforhit.org

Section 6. State Electronic Prescribing Advisory Panel

The legislation that directed the Agency to create the electronic prescribing clearinghouse also provided that the Agency was to collaborate with private sector electronic prescribing initiatives, Regional Health Information Organizations (RHIOs), and other stakeholder groups described in the legislation. Section 408.0611(3) F.S. provides that the Agency will meet with stakeholders at least quarterly to “assess and accelerate the implementation of electronic prescribing.”

In the fall of 2007, the Agency formed the State Electronic Advisory Panel (panel) and invited representatives of the relevant stakeholder organizations to participate as appointed members of the panel. The Agency scheduled the first meeting of the panel to coincide with the initial release of the electronic prescribing website. The first meeting of the panel was held on October 4, 2007

At the October meeting, members of the panel reviewed the content and features of the clearinghouse website. Members of the panel also presented on the benefits of electronic prescribing and described how the Agency and private sector initiatives such as ePrescribe Florida would coordinate their efforts.

The meeting concluded with a presentation on electronic prescribing adoption in Florida from a recent survey conducted by the Florida State University College of Medicine. Members of the panel discussed metrics that could be used to describe trends in electronic prescribing adoption, usage, and impact on patient care, cost savings, and return on investment.

6.1. Members of the 2007 State Electronic Prescribing Advisory Panel

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Section 7. Metrics on Electronic Prescribing Implementation

E-prescribing in Florida was on the increase in Florida in 2007. Both the number of pharmacies activated to receive electronic prescriptions and the number of e-prescribing physicians showed positive growth in the year. However, less than one percent of prescriptions written in Florida were electronic prescriptions – an estimated 0.72% of prescriptions. Statistics reported by the Henry I. Kaiser Foundation indicate that there were 215,869,720 prescriptions written in Florida in 2006,¹³ which can be used as an estimate for the prescriptions written in 2007. Data reported from SureScripts and RxHub for 2007 show 1,546,207 electronic prescriptions were sent in 2007.

Table 3. Pharmacies that are Activated to Receive E-prescriptions and Those that are Actively E-prescribing across All Florida Metropolitan Statistical Areas, Based on 2007 Data from SureScripts

Metropolitan Statistical Area	Number of Pharmacies		E-prescribing Activated		Active in E-prescribing	
	n		n	%	n	%
Punta Gorda, FL MSA	35		29	83%	29	83%
Panama City, FL MSA	40		33	83%	32	80%
Fort Pierce-Port St. Lucie, FL MSA	84		69	82%	67	80%
Gainesville, FL MSA	50		40	80%	39	78%
Fort Myers-Cape Coral, FL MSA	147		117	80%	114	78%
Ocala, FL MSA	73		57	78%	56	77%
Naples, FL MSA	80		64	80%	61	76%
Lakeland-Winter Haven, FL MSA	121		95	79%	92	76%
Jacksonville, FL MSA	308		231	75%	228	74%
Melbourne-Titusville-Palm Bay, FL MSA	123		91	74%	91	74%
Daytona Beach, FL MSA	132		95	72%	95	72%
Orlando, FL MSA	516		385	75%	369	72%
Tallahassee, FL MSA	71		51	72%	50	70%
Sarasota-Bradenton, FL MSA	196		137	70%	133	68%
West Palm Beach-Boca Raton, FL MSA	325		226	70%	218	67%
Rest of Florida	279		194	70%	187	67%
Tampa-St. Petersburg-Clearwater, FL MSA	741		489	66%	476	64%
Fort Walton Beach, FL MSA	44		33	75%	26	59%
Pensacola, FL MSA	109		64	59%	61	56%
Miami-Fort Lauderdale, FL CMSA	1,314		593	45%	572	44%
Total	4,788		3,093	65%	2,996	63%

Among pharmacies across the state, more than half in each Metropolitan Statistical Area (MSA) were active in receiving e-prescriptions. Table 3 shows the MSAs in Florida, the number and

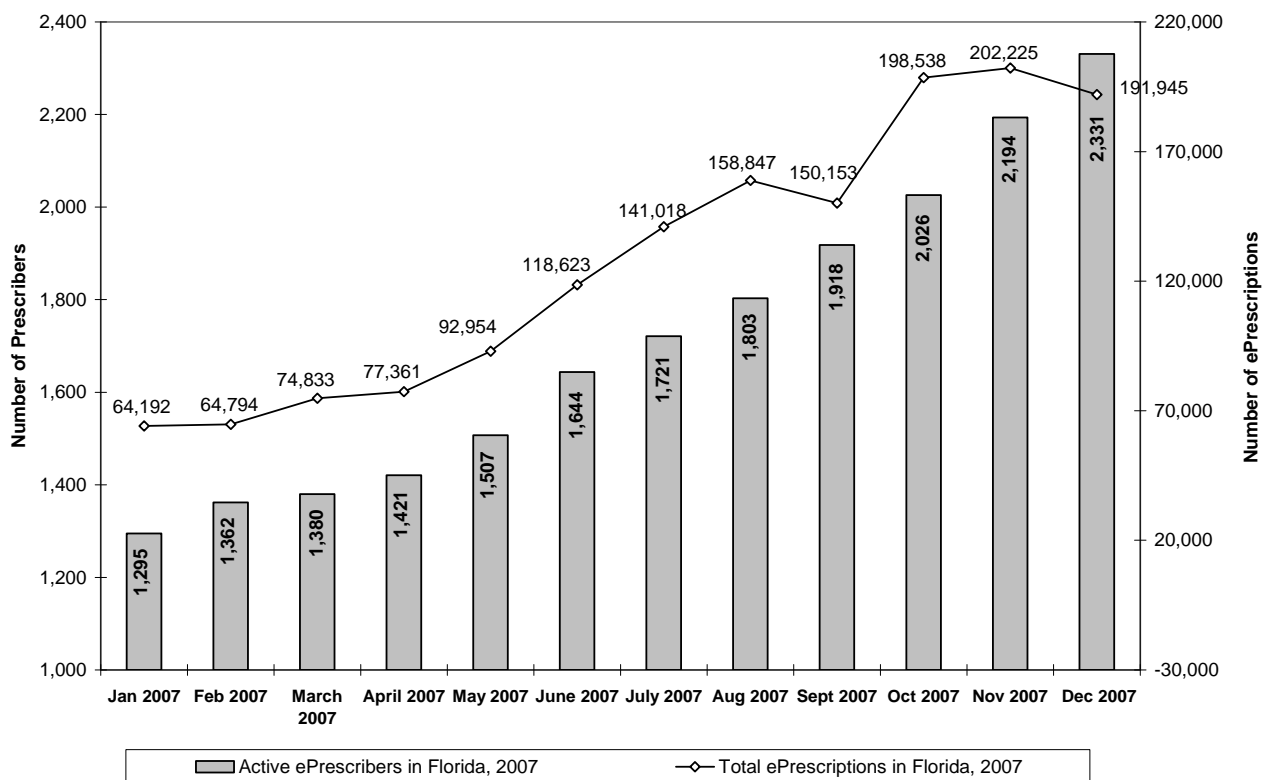
¹³ Henry I Kaiser Foundation, "Florida: Total Number of Retail Prescription Drugs Filled at Pharmacies, 2006." Retrieved from <http://www.statehealthfacts.org/profileind.jsp?ind=265&cat=5&rgn=11> on February 1, 2008.

percentage of pharmacies activated for e-prescribing and the number and percentage of pharmacies actively receiving e-prescriptions. In some cases these totals are not the same, especially in MSAs where e-prescribing adoption among physicians is low.

Table 3 shows that an average of 63% of all pharmacies in the state is actively receiving e-prescriptions. This number is slightly deflated due to the fact that a quarter of Florida's pharmacies are in the Miami-Fort Lauderdale MSA, and only 44% are receiving e-prescriptions in this MSA. In the larger MSAs in Florida a greater percentage of pharmacies are actively receiving e-prescriptions, for example 67% in Tampa, 72% in Orlando and 74% in Jacksonville. Punta Gorda has the highest percentage in the state, with 83% of pharmacies e-prescribing.

The number of physicians who are e-prescribing is also on the rise, almost doubling in 2007, as shown in Figure 11, which is based on statistics provided by SureScripts. The increase in the number of physicians who are e-prescribing shows a steady upward trend that increases its pace toward the end of the year. Between January and June, an average of 58 new practices began e-prescribing, compared to 115 per month between July and December. Over the year, the number of physicians e-prescribing increased by 80%

Figure 11. Number of Physicians Actively E-prescribing and Total Number of New Prescriptions and Refills Sent Electronically via SureScripts

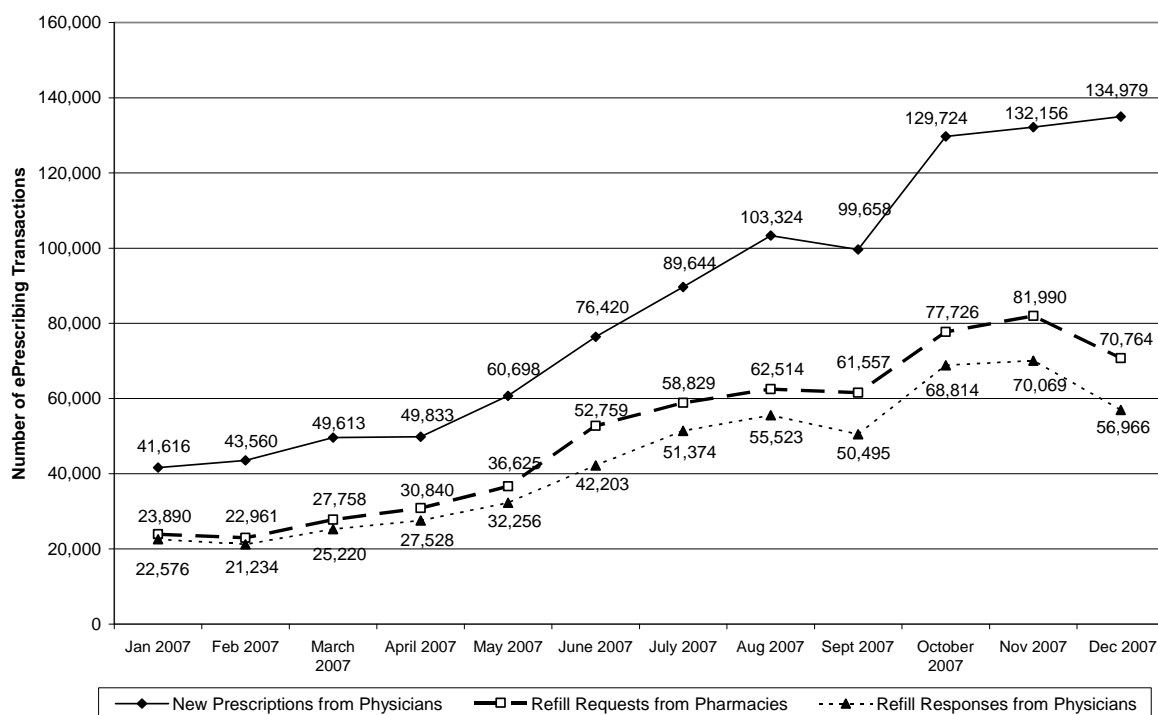


The increase in the number of e-prescribing transactions also shows a marked increase as the number of prescribing physicians grows. Figure 11 shows the number of new prescriptions and prescription refills sent via e-prescribing in 2007. In January there were 64,192 transactions, which increased to a high of 202,225 transactions in November. There was a 199% increase in e-

prescriptions between January and December. The change in transactions also demonstrates an increase in the actual number of e-prescriptions submitted by each physician. In January each physician submitted an average of 50 e-prescriptions per month. By June this had climbed to an average of 72 e-prescriptions per physician, and reached its peak in November with 92 e-prescriptions per physician. These numbers indicate that e-prescribing transactions increased not only because there were more physicians writing them, but because physicians wrote more e-prescriptions throughout the year.

Total e-prescribing transactions do not tell the entire story of e-prescribing, though. There are different types of e-prescribing transactions – for new prescriptions, for refills requests and refill responses. Figure 12 breaks down the e-prescribing transactions into these component types, based on statistics reported by SureScripts. Clearly, new prescriptions make up the greatest number of prescriptions in 2007, at about 47% of all prescriptions. They are also the fastest growing type of transaction, with a growth rate of 224% between January and December. These figures suggest that much of the e-prescribing activity in 2007 came about through physicians moving from writing paper prescriptions into the e-prescribing system as doctors came online. Refills also increased through the year, though at a lower 196% growth rate. To the extent that physicians write prescriptions that need refills, and there are no data at present to check that rate, the number of refills will tend to follow the growth curve of new prescriptions, as is indicated here. Refill responses follow a similar curve as refill requests, though with a smaller number of transactions, indicating that not all prescriptions are refilled. The growth rate through the year for the refill responses is 152%.

Figure 12. E-prescribing Transactions in Florida Broken Down by Transaction Type



The data presented from SureScripts indicates steady growth in the number of e-prescribing providers and electronic prescriptions in 2007. To give some idea of distribution of electronic prescription activity around the state, additional data from two other pharmacy benefit managers, RxHub and eRx show the total number of transactions related to e-prescribing, by Metropolitan

Statistical Area, as shown in Table 4. Several types of transactions are shown in this table. Data from RxHub report the number of eligibility requests the company received combined with the number of medication the company returned to e-prescribers in Florida. It also shows the total number of new prescriptions, refill orders from physicians and refill requests from pharmacies for RxHub, SureScripts and eRx (which submitted on 4th quarter 2007 data). By presenting data on all electronic transactions across Florida, it is possible to build up a picture of network activity that comprises the cycle of e-prescribing, from requesting eligibility to refilling prescriptions.

Table 4. Total 2007 E-prescribing Transactions in Florida by Metropolitan Statistical Area

Florida Metropolitan Statistical Area	Eligibility Requests	New Prescriptions, Refill Requests and Refill Orders, 2007			Total Electronic Transactions
		RxHub	RxHub	SureScripts	eRx 4Q Only
Tampa-St. Petersburg-Clearwater	363,388	1,642	456,421	29,168	850,619
Miami-Fort Lauderdale	162,664	12,667	399,416	3,338	578,085
Jacksonville	218,981	1,492	303,053	2,065	525,591
Orlando	16,172	433	176,000	7,352	199,957
Tallahassee	14,539	43	146,561	707	161,850
West Palm Beach-Boca Raton	56,961	589	110,259	1,073	168,882
Rest of Florida	20,027	21	88,246	2	108,296
Melbourne-Titusville-Palm Bay	79,121	912	69,939	761	150,733
Sarasota-Bradenton	57,824	513	55,912	695	114,944
Fort Myers-Cape Coral	42,590	652	54,490	2,764	100,496
Gainesville	5,868	23	49,422	4,191	59,504
Daytona Beach	61,909	803	45,113	2,558	110,383
Ocala	87,465	523	44,302	1,472	133,762
Lakeland-Winter Haven	36,204	192	41,549	915	78,860
Punta Gorda	9,230	208	38,981	95	48,514
Fort Pierce-Port St. Lucie	7,887	114	26,434	50	34,485
Naples FL	10,959	144	12,910	351	24,364
Pensacola FL	9,279	2,129	10,167	1,031	22,606
Fort Walton Beach FL	7,998	71	9,259	501	17,829
Panama City FL	125,786	367	3,529	6	129,688
Total	1,394,852	23,538	2,141,963	59,095	3,619,448

The Tampa-St. Petersburg MSA accounts for the largest number of transactions, with 850,619 in 2007. This is followed by Miami, Jacksonville and Orlando. The large numbers of electronic transactions in these MSAs are most likely related to their large populations. Nonetheless, they do indicate the volume of e-prescribing activity in Florida in 2007. If the pattern of e-prescribing adoption remains the same, there should be a steady increase in e-prescribing in 2008 as well.

Section 8. Legal Barriers to Electronic Prescribing

Electronic prescribing of controlled substances is not permitted at the present time under regulations promulgated by the Drug Enforcement Administration (DEA) and the Department of Justice. As a result, physicians who e-prescribe must maintain dual procedures to prescribe for their patients; one procedure for electronically-based prescriptions and the other for paper-based prescriptions.

Other legal barriers to electronic prescribing are of the type that has been well-described as it relates to health information exchange. These include laws, regulations, contracts and business practices that create a barrier to the exchange of medication histories among treating practitioners.

8.1 Patient Safety of Electronic Prescribing Proposal

The Agency, in collaboration with e-prescribing stakeholders, recently developed a proposal to conduct a pilot project that would demonstrate the patient safety benefits of the electronic prescribing of controlled substances. As proposed, the partnership of stakeholders including the Agency, Broward Health, RxHub, SureScripts, and Florida Office of Drug Control will demonstrate the patient safety effects of electronic prescribing among a select population of Florida clinicians who are active e-prescribers and clinics connected to Broward Health who will have e-prescribing software installed during the study period. The first major step in the pilot project will be to seek a waiver from the Drug Enforcement Agency (DEA) to allow the e-prescribing of controlled substances pilot to take place.

The project will implement and evaluate an e-prescribing pilot study to demonstrate that the prescribing of controlled substances can be made systematically safer and more secure and specifically, that medication errors can be reduced. The proposed demonstration project will examine patient safety outcomes among comparative groups of clinicians using electronic prescribing technology software with equivalent functionality and a control group with no electronic prescribing implemented. The project will measure the quality and outcomes of patient care, cost of drugs prescribed, and physician satisfaction. The study will identify the effects of the presence of the medication history at the point of care, such as the impact on the prescribing of controlled substances, averting adverse drug-drug interactions, reducing hospitalizations and emergency department visits, and lowering costs through enhanced generic drug use.

8.2. Health Information Exchange Barriers

During 2006 - 2007, Florida participated in a national study of laws and regulations that affect electronic health information exchange called the Health Information Security and Privacy Collaboration (HISPC). In the first phase of the project, a variety of issues were identified as potential barriers to the appropriate exchange of electronic health information. While Florida's laws applicable to electronic health information exchange largely serve to protect an individual's right to privacy with regard to that individual's identifiable health information, it is the number of Florida laws, many of which are not consistent with the HIPAA privacy rule or one another, which appear to create an unintended barrier especially as it relates to the ability of treating physicians to access the information.

There are many Florida laws, designed largely for "paper-based" exchange, which would be considered more stringent than the HIPAA privacy regulation. Accordingly, to lawfully use or

disclose individually identifiable health information in Florida such proposed use or disclosure would need to be appropriately authorized under Florida law, either by the individual or by operation of law. The use or disclosure of information is often times less than efficient due to the current confusion with regard to which law, HIPAA, Florida law or both, is applicable. Such confusion threatens to greatly reduce or eliminate many of the efficiencies created via the electronic exchange of information.

The final report from the first phase of the project contains an analysis of selected health information exchange scenarios including a legal analysis of federal and Florida law. The *Final Assessment of Variations and Solutions Report* is available on the Agency website at: <http://ahca.myflorida.com/dhit/PandSproject/PSassessDevProject.shtml>.

During 2007, phase II of the Florida HISPC Project reconvened its Legal Work Group to extend the analysis of Florida laws applicable to electronic health information exchange. Upon review of the initial statutory analysis, the Legal Work Group identified certain priority areas of law that need to be clarified and harmonized. These are areas for reform that would be most beneficial in enabling appropriate health information exchange. The following areas were identified for reform:

- 1) Align the health information exchange provisions for hospitals and physicians in Chapters 395 and 456, F.S.
- 2) Permit treating physician access in Chapter 483, F.S. related to clinical laboratories
- 3) Create a process for addressing uniform patient consent in law

The Legal Work Group also found that there is a need for continued review and analysis to determine the potential benefits of consolidation of health record laws. The analysis of Florida laws related to health information exchange from the second phase of the project, *Analysis of Florida Statutes Related to Health Information Exchange* is available on the Agency website at: <http://ahca.myflorida.com/dhit/PandSproject/PSprojectIndex.shtml>.

Section 9. Conclusions

The implementation of electronic prescribing is likely to be the first large scale system for electronic health information exchange to be implemented in the United States, and it will be available for millions of patients within the next few years. This report provides a baseline set of measures on electronic prescribing in Florida. These measures can be used to track progress, focus our efforts, and evaluate the impact of electronic prescribing on patient outcomes. Data from year 2007 indicate that Florida is beginning to show rapid growth of electronic prescribing transactions and is ranked among the top 20 states for e-prescribing by SureScripts (see: ¹ <http://www.surescripts.com/safe-rx/default.aspx>). Currently, less than one percent of prescriptions in Florida are sent electronically, but there are steady trends that suggest this proportion will increase substantially in the near future. Florida had growth rates of 80% more physicians and 199% more electronic prescriptions sent during 2007.

One driver of e-prescribing will be cost savings, based on savings of \$2 million per month reported by the Florida Medicaid electronic prescribing program in 2006. The savings are attributable to the reduced number of prescriptions being written, such as fewer duplicated medications as a result of the practitioner's point of care access to a more complete medication history. As electronic prescribing approaches full adoption, the number of prescriptions transmitted electronically will be essentially equivalent to the medication history queries. When electronic prescribing systems are fully implemented, physicians will be able to prescribe, renew and check medication histories routinely relying on a secure, private network for these communications.

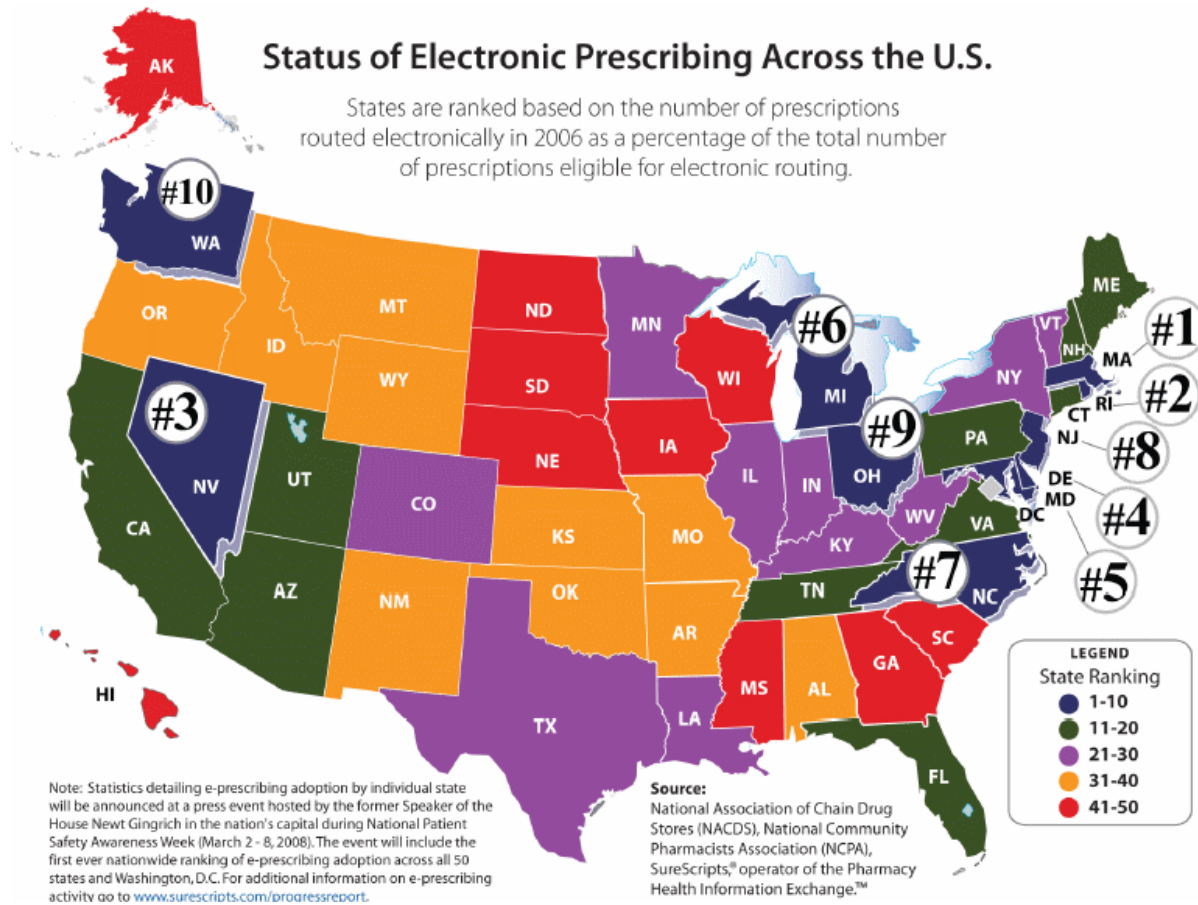
9.1. Recommendations

The State Electronic Prescribing Advisory Panel is encouraged by the recent growth of electronic prescribing in Florida. The Panel recommends that the Agency take the following steps during the next year to further accelerate the adoption of electronic prescribing in Florida:

- 1) Continue to track and report electronic prescribing metrics on a quarterly, and if feasible, monthly basis. Comparable Florida Medicaid prescription statistics should be included. The information should be posted on the Agency's website as part of the Florida Electronic Prescribing Clearinghouse, and on its performance dashboard to obtain maximum visibility.
- 2) Work with the Office of Drug Control and Department of Health to address regulatory barriers that would enable the Agency to conduct a pilot study in Florida.
- 3) Coordinate and facilitate the use of incentive or discount programs for physicians and pharmacies to encourage broad-based implementation of electronic prescribing, including the potential for discounted medical malpractice insurance rates. The Agency should gather information on private incentive programs available in Florida, determine what efforts appear to be most effective, and identify gaps or program needs for physicians and pharmacies in rural or underserved areas. The Agency should include electronic prescribing in programs to promote adoption of electronic medical records.
- 4) With the support of electronic prescribing stakeholders, the Agency should begin to disseminate information on electronic prescribing to the general public. The Agency should cooperate with professional associations to identify physician champions who can speak to the general public about the benefits of electronic prescribing and what patients should expect when their physician e-prescribes.

Appendix A: SureScripts, 2007 Safe Rx Awards

SureScripts, 2007 Safe Rx Awards



<http://www.surescripts.com/safe-rx/default.aspx>