A Practical Guide to Electronic Prescribing

Guide 3

Minnesota e-Health

MINNESOTA MDH DEPARTMENT OF HEALTH

Minnesota Department of Health | Division of Health Policy / Center for Health Informatics
85 East Seventh Place | P.O. Box 64882 | St. Paul, MN 55164-0882

Phone: 651-201-5979 | Fax: 651-201-3830 | TDD: 651-201-5797 | www.health.state.mn.us/e-health/

i

A companion to:

Minnesota Statewide Implementation Plan, 2008

A Prescription for Meeting Minnesota's 2015 Interoperable Electronic Health Records Mandate

---

Minnesota e-Health Initiative

The Minnesota e-Health Initiative is a public-private collaborative whose Vision is to accelerate the adoption and use of health information technology in order to improve health care quality, increase patient safety, reduce health care costs and improve public health.

INFORMATION ON GUIDES

GUIDE 1:
Addressing Common Barriers to EHR Adoption. A Practical Guide for Health Care Providers
Released June 2008

GUIDE 2:
Standards Recommended to Achieve Interoperability in Minnesota
Updated June 2009

GUIDE 3:
A Practical Guide to Electronic Prescribing
Released June 2009

GUIDE 4:
A Practical Guide to Effective Use of EHR Systems
Released June 2009

ACKNOWLEDGEMENTS

The Minnesota Department of Health thanks the many members of the Minnesota e-Health Initiative for their ideas, their expertise and their time in developing this guide. Please refer to Appendix A for a listing of workgroup members.

Upon request, this material will be made available in an alternative format such as large print, Braille, or cassette tape.

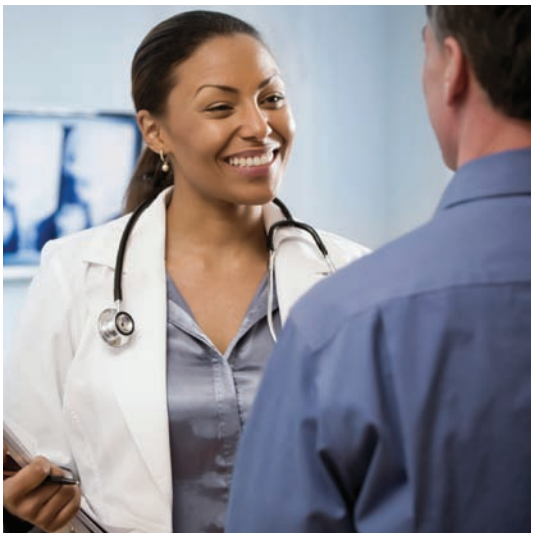


Table of Contents

Preface

A Practical Guide to Electronic Prescribing

This Guide is designed to support prescribing providers, pharmacists and pharmacies, payers or pharmacy benefit managers (PBMs) and others to achieve the quality and safety benefits of e-prescribing, to help prescribing providers become eligible for federal incentives, and to support implementation of and compliance with Minnesota law.

The Guide includes sections on "Strategies for Success in Electronic Prescribing" for each of three groups:

- Prescribing Providers
- Pharmacists and Pharmacies
- Payers or Pharmacy Benefit Managers (PBMs)

The three sections follow the EHR adoption model developed by the Minnesota Department of Health (MDH) and the Minnesota e-Health Initiative.

For each step along the continuum, commonly cited questions, suggested solutions based on the experiences of your peers within Minnesota, and considerations are listed. At the beginning of each section, top action steps that can be taken now are highlighted.

Minnesota law requires that, *"Effective January 1, 2011, all providers, group purchasers, prescribers, and dispensers must establish, maintain, and use an electronic prescription drug program. This program must comply with the applicable standards in this section for transmitting, directly or through an intermediary, prescriptions and prescription-related information using electronic media"* (Minnesota Statutes, section 62J.497).

Executive Summary

Like many states, Minnesota is working to improve the affordability, access and quality of health care, and the health status of its citizens. Among the overall strategies for achieving these ambitious goals is the adoption and effective use of interoperable electronic health record systems and other health information technologies, including electronic prescribing. The transactions that make up electronic prescribing are key components to achieving interoperability in Minnesota.

Electronic prescribing is an important element in improving the quality of patient care because it enables a provider to electronically send an *accurate* and *understandable* prescription directly from the point-of-care to a pharmacy. In addition to prescription routing, when the prescription benefit and formulary and prescription medication history features are used, patient safety and care are much improved.

Electronic prescribing, or "e-prescribing," means secure bidirectional electronic information exchange between prescribing providers, pharmacists and pharmacies, payers or pharmacy benefit managers (PBMs), either directly or through an intermediary network. E-prescribing encompasses routing prescriptions, checking the prescribed drug against the patient's health plan formulary of covered drugs, checking for any patient drug allergies or sensitivities, identifying any drug-drug interactions, accessing patients' prescription medication histories from external sources such as claims databases, and sending or receiving acknowledgement of prescriptions filled. E-prescribing can be done through full-featured EHRs or stand-alone systems.

Of the 54 million prescriptions filled in Minnesota in 2007, an estimated 21 million were eligible for e-prescribing; that is, they were neither preauthorized refills nor controlled substances. Of these, only an estimated 1.2% were transmitted through a fully electronic process[1]. Although the number is growing annually and is a significant increase from previous years, it is still a small proportion of the total number of eligible transactions.

In 2008, approximately 10% of Minnesota prescribing providers and 53% of Minnesota pharmacies were using electronic prescribing transactions through electronic data interchange[2]. Many more prescriptions were transmitted partially electronically with one or more transactions made by fax or phone. Getting these final settings ready to send and receive an e-prescribing transaction is necessary to achieve the state e-prescribing mandate.

Minnesota law requires that, "Effective January 1, 2011, all providers, group purchasers, prescribers, and dispensers must establish, maintain, and use electronic prescription drug program. This program must comply with the applicable standards in this section for transmitting, directly or through an intermediary, prescriptions and prescription-related information using electronic media" (Minnesota Statutes, section 62J.497).

[1] Wolters Kluwer Health Pharmaceutical Source®, National Association of Chain Drug Stores and Surescripts

[2] Minnesota Board of Pharmacy, Surescripts, HealthPartners, and MDH Office of Rural Health and Primary Care

Minnesota's law applies to all prescriptions and all professionals authorized to prescribe in Minnesota; unless otherwise prohibited by federal law. This means that any person or organization involved in prescribing, filling prescriptions or paying for prescriptions, including communicating or transmitting formulary or benefit information, must do so electronically using specified standards by January 1, 2011.

This Guide is designed to support all who write, fill or pay for prescriptions to achieve the quality and safety benefits of e-prescribing, to help prescribing providers become eligible for federal incentives, and to support implementation of and compliance with Minnesota law.

The Guide includes sections on "Strategies for Success in Electronic Prescribing" for each of three groups:

- Prescribing Providers
- Pharmacists and Pharmacies
- Payers or Pharmacy Benefit Managers (PBMs)

The three sections follow the EHR adoption model developed by the Minnesota Department of Health (MDH) and the Minnesota e-Health Initiative. For each step along the continuum, commonly cited questions, suggested solutions based on the experiences of your peers within Minnesota, and considerations are listed. Information resources from around the country are listed at the end of each section. At the beginning of each section, top action steps that can be taken now are highlighted. These top actions are listed here.

Top Action Steps for Prescribing Providers:

- Research all the financial incentives and other sources of funding currently available to you.
- Research the federal and state mandates and regulations that apply to you.
- Seek out information from your peers and your professional and/or trade associations to learn lessons from other settings similar to yours; the path to effective implementation has been made clearer through the work of others.
- Make certain you follow a proven and complete planning process and effectively engage staff / stakeholders in the process.
- Determine how e-prescribing can be part of an EHR system, or if necessary consider a stand-alone e-prescribing product or system.
- Ensure that you plan to use all the e-prescribing system functions to achieve the maximum e-prescribing benefit.
- After you have been operating for six months or more, evaluate your progress and optimize your system to effectively leverage your investment.

Top Action Steps for Pharmacists and Pharmacies:

- Work with your software vendor to upgrade your system or identify other mechanisms to support e-prescribing functions including required transaction standards.
- Ensure your software application is able to receive electronic prescriptions and send electronic prescription renewal requests to prescribers.
- Communicate with prescribing providers in your area to let them know that you are ready and able to receive prescriptions electronically.
- Network with peers to share lessons learned, and engage your professional associations to identify common concerns and work toward viable solutions.

Top Action Steps for Payers or Pharmacy Benefit Managers:

- Analyze how ready you are for electronic exchange. Does your system support all of these transactions using standards established by CMS and Minnesota statute for: patient eligibility, an easily updated formulary, and prescription medication history?
- Use an intermediary for delivery of the above services to help enable availability to a full range of stakeholders and ensure the use of standards.
- Make sure your formulary information is available electronically or as a downloadable form.
- Provide knowledge resources or other tools to help your stakeholders upgrade their systems to support e-prescribing and to effectively use those systems.
- Work with intermediaries to implement uniform processes for maintaining and updating formularies, patient eligibility and prescription benefit information.
- Network with peers to share lessons learned and to engage your professional associations to identify common problems and work toward viable solutions.

Introduction

Like many states, Minnesota is working to improve the affordability, access and quality of health care, and the health status of its citizens. Among the overall strategies for achieving these ambitious goals are the adoption and effective use of interoperable[3] electronic health record systems and other health information technologies, including those for electronic prescribing. The tools and transactions that make up electronic prescribing are key components to achieving interoperability in Minnesota.

Why is electronic prescribing important?

Approximately 3.5 billion prescriptions are written annually[4], one of the largest paper-based processes in the United States. By 2010, prescription volume is expected to grow to 4.1 billion. With increased volume and complexity of prescriptions, there is greater risk for errors.

The Institute of Medicine (IOM) estimated that approximately 7,000 deaths[5] occur each year in the United States due to medication errors. In addition, in its report, Preventing Medication Errors, the IOM estimates more than 1.5 million adverse drug events (ADEs) each year are preventable, and the report's authors consider this a very low estimate[6]. These errors are predominately due to illegibility, unclear abbreviations and dosage instructions, and unclear and ambiguous orders. Missed drug-drug or drug-allergy reactions also contribute to the number of adverse drug events.

[3] The most basic description of "interoperable" is "computers can talk to one another." For a more complete definition and description, see page 8.

[4] Industry Facts-at-a-Glance. 2008. National Association of Chain Drug Stores.

[5] Institute of Medicine, To Err Is Human, 2000.

[6] Preventing Medication Errors. 2006. Institute of Medicine. Pgs. 124-125 http://www.nap.edu/catalog.php?record_id=11623#toc.

E-prescribing is an important element in improving the quality of patient care because it enables a provider to electronically send an accurate and understandable prescription directly from the point-of-care to a pharmacy. In addition to prescription routing, when the prescription benefit and formulary and prescription medication history features are used, patient safety and care are much improved.

Effectively implementing e-prescribing statewide will:

- Reduce medication errors and increase patient safety by routing prescriptions electronically. Illegible handwriting will be a thing of the past.
- Improve quality and reduce adverse drug events through warning and alerts provided with e-prescribing clinical decision support systems.
- Enhance medication management by enabling prescribing providers to more thoroughly examine medication history while prescribing.
- Reduce costs by incenting prescribing providers to review and use patients' drug benefit formularies before prescribing non-covered medications. Greater adherence to a formulary means greater use of

lower-cost generics and fewer call-backs to verify prescriptions, a timesaver that leads to greater efficiencies.

- Reduce costs for pharmacists by reducing the time spent mediating between PBMs and providers, and allow for more time to be spent on medication therapy management and other direct patient care services.

What is electronic prescribing?

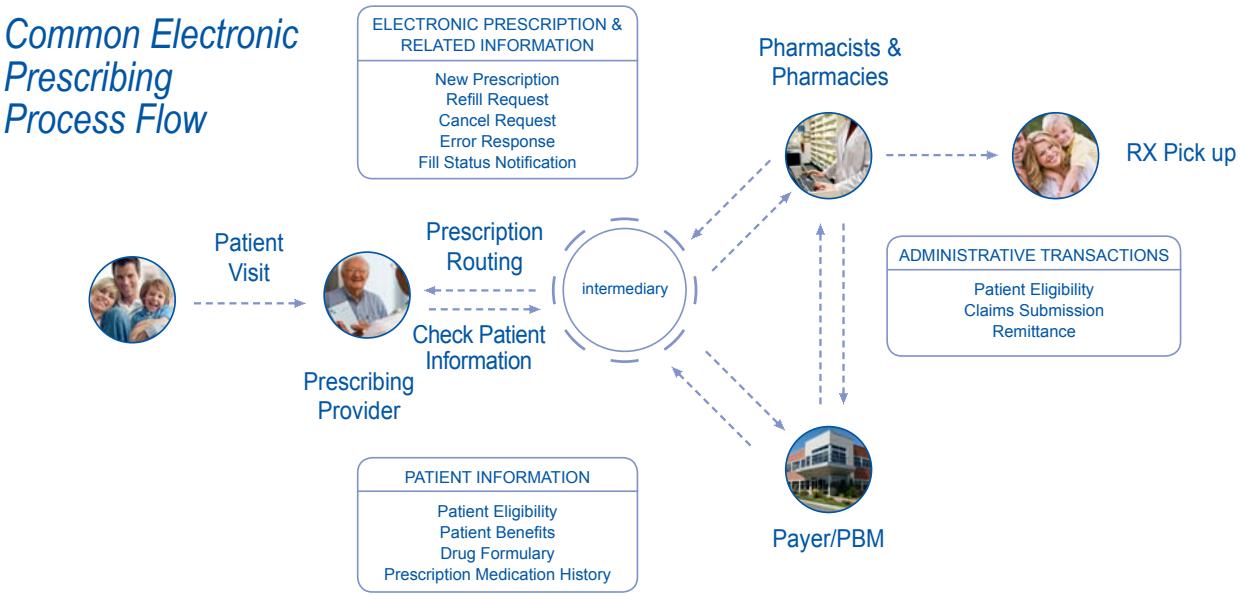
Electronic prescribing, or "e-prescribing," means secure bidirectional electronic information exchange between prescribing providers, pharmacists and pharmacies, payers or pharmacy benefit managers (PBMs), directly or through an intermediary network. E-prescribing encompasses routing prescriptions, checking the prescribed drug against the patient's health plan formulary of covered drugs, checking for any patient drug allergies or sensitivities, identifying any drug-drug interactions, accessing patients' prescription medication histories from external sources such as claims databases, and sending or receiving acknowledgement of prescriptions filled.

E-prescribing can be done through full-featured EHRs or through stand-alone systems. For some smaller practices, stand-alone e-prescribing systems can provide a useful pathway to later full EHR adoption.

A glossary of e-prescribing terms can be found in Appendix H.

E-prescribing replaces paper with two key tools: e-prescribing software that uses standard content and that is enabled for prescribing providers, pharmacists and pharmacies, payers or pharmacy benefit managers (PBMs), and a transmission network that links prescribing providers with pharmacists and pharmacies, often through an intermediary. An example of the common process flow is shown in Figure 1.

FIGURE 1: Common e-prescribing process flow.



The main elements of e-prescribing include:

Electronic Prescription and Related Information: Prescription Routing Transactions

These transactions allow prescribing providers to transmit both prescription orders for new prescriptions and authorizations for prescription renewals directly to pharmacies. Pharmacists and pharmacies can transmit prescription renewal authorization requests directly to prescribing providers for refills/renewals presented at a pharmacy. This is the most utilized e-prescribing transaction and improves patient safety and quality of care tremendously. However, approximately 13% of prescriptions cannot be sent electronically due to restrictions by the Drug Enforcement Administration. This creates a dual workflow process for practices resulting in less than optimal efficiency. (See detail in call-out box on page 4)

Electronic Prescription and Related Information: Fill Status Notifications

These transactions allow prescribing providers to receive an electronic notice from a pharmacy that a patient's prescription was picked up, not picked up, or partially filled. Fill status notifications can help providers monitor medication compliance in patients, especially those with chronic conditions.

Patient Information: Patient Eligibility, Prescription Benefit and Drug Formulary Information Transactions These transactions allow prescribing providers to access information about a patient's eligibility and prescription benefit including formulary information. These transactions may also include information on lower cost alternatives like generic drugs.

Patient Information: Prescription Medication History Transactions

These transactions allow prescribing providers to access information, usually from external sources such as claims databases, about medications previously prescribed for a patient, including by other providers, to help avoid duplication and reduce adverse drug events. The ability to check a patient's prescription medication history is an extremely valuable tool.

Administrative Transactions

These transactions allow pharmacies to remit claims to payers or PBMs using an electronic administrative transaction. Although this is not an electronic prescribing transaction, it allows the pharmacy to receive confirmation that a claim will be paid.

Current status of Electronic Prescribing in Minnesota

Of the 54 million prescriptions filled in Minnesota in 2007, an estimated 21 million were eligible for e-prescribing; that is, they were neither preauthorized refills nor controlled substances. Of those, only an estimated 1.2% were transmitted through a fully electronic process. Although the number is growing annually and is a significant increase from previous years, it is still a small proportion of the total number of eligible prescriptions. While this may

Controlled Substances and e-Prescribing

As of the release of this Guide, the federal Drug Enforcement Administration (DEA) rules still require a written signature for schedule II – IV controlled substances. This precludes use of e-prescribing for these drugs, and requires providers and prescribers to maintain two processes, one electronic and one paper.

While the DEA is evaluating whether to change this requirement, it is not a reason to avoid the move to e-prescribing. This is in part because only about 13% of prescriptions are controlled substances and many specialities write few prescriptions for controlled substances. More importantly, there are Medicare incentives that began in January of 2009 for adopting and using e-prescribing. To qualify for the incentive, "…providers must report the e-prescribing measure for at least 50% of the Medicare Part B (FFS) patients for whom you billed one of the CPT or HCPCS g-codes that appear in the denominator of the measure." Additionally, e-prescribing is required in order for providers to be deemed "meaningful users" and access new EHR incentive payments made available through the American Recovery and Reinvestment Act. (See Appendix D for more information on federal incentives.)

Providers and prescribers can work with their professional associations to advocate and monitor federal DEA activity around the development and issuance of updated requirements for controlled substances.

seem discouragingly low; only a few states (Massachusetts, Rhode Island and Nevada) have electronic prescribing rates greater than 5%. (More information on Electronic Prescribing Adoption in Minnesota is located in Appendix K)

In 2008, approximately 10% of Minnesota prescribing providers[7] and 53% of Minnesota pharmacies[8] were using electronic prescribing transactions through electronic data interchange. Many more prescriptions were transmitted partially electronically, with one or more transactions made by fax or phone. Getting these final settings ready to send and receive an e-prescribing transaction is necessary to achieve the state e-prescribing mandate.

[7] Minnesota Board of Pharmacy, MDH Office of Rural Health and Primary Care, Surescripts, HealthPartners

[8] Minnesota Board of Pharmacy,Surescripts, and HealthPartners

Minnesota's electronic prescribing requirements

While Minnesota currently ranks 26th in the country for the percentage of prescriptions routed electronically, it is the first state to mandate electronic prescribing, demonstrating a clear and focused commitment to widespread adoption and effective use of health information technology.

Minnesota law requires that, *"Effective January 1, 2011, all providers, group purchasers, prescribers, and dispensers must establish, maintain, and use an*

electronic prescription drug program. This program must comply with the applicable standards in this section for transmitting, directly or through an intermediary, prescriptions and prescription-related information using electronic media" (Minnesota Statutes, section 62J.497). (See Appendix B for the complete statutory language, including definitions of "prescriber," "provider," "dispenser," "group purchaser" and other terms used in the statute and Appendix G for examples of prescribers, providers, and dispensers.)

Minnesota's law applies to *all* prescriptions and *all* professionals authorized to prescribe in Minnesota unless otherwise prohibited by federal law. This means that any person or organization involved in prescribing, filling prescriptions or paying for prescriptions, including communicating or transmitting formulary or benefit information, must do so electronically using specified standards by January 1, 2011.

The Minnesota law applies to:

- **Prescribing Providers:** Persons permitted by Minnesota law to issue prescriptions for drugs for human use at all sites of care. Persons including, but not limited to, physicians, osteopaths (duly licensed to practice medicine), dentists, podiatrists, optometrists, advanced practice registered nurses and physician assistants. Sites of care include, but are not limited to, clinics, community clinics, hospitals, nursing facilities, and dental offices.
- **Pharmacists and Pharmacies:** Persons permitted by Minnesota law to provide drug products for human use by prescription in the course of professional practice, including, but not limited to, pharmacists, pharmacies and dispensing physicians.
- **Group Purchasers/Payers:** Persons or organization that purchases health care services on behalf of an identified group of persons, regardless of whether the cost of coverage or services is paid for by the purchaser or by the persons receiving coverage or services. This includes, but is not limited to, community integrated service networks; health insurance companies, health maintenance organizations, nonprofit health service plan corporations, and other health plan companies; and employee health plans offered by self-insured employers.

Standards required for electronic prescribing in Minnesota

All those involved in e-prescribing (prescribing providers, pharmacists and pharmacies, payers or pharmacy benefit managers) will need to standardize

their exchange transaction activities to achieve interoperability, or secure, accurate and verifiable electronic exchange of information. The specific set of transactions covered by Minnesota Statutes, section 62J.497—and the standards required to implement them—are listed in Appendix C. The law does not require a prescribing provider or pharmacy to perform all of these transactions but it does require that if any of these transactions are performed, they must be done electronically using the specified standard.

Guide Structure

This Guide is designed to support prescribing providers, pharmacists and pharmacies, payers or pharmacy benefit managers (PBMs), and others to achieve the quality and safety benefits of e-prescribing, to help prescribing providers become eligible for federal incentives, and to support implementation of and compliance with Minnesota law.

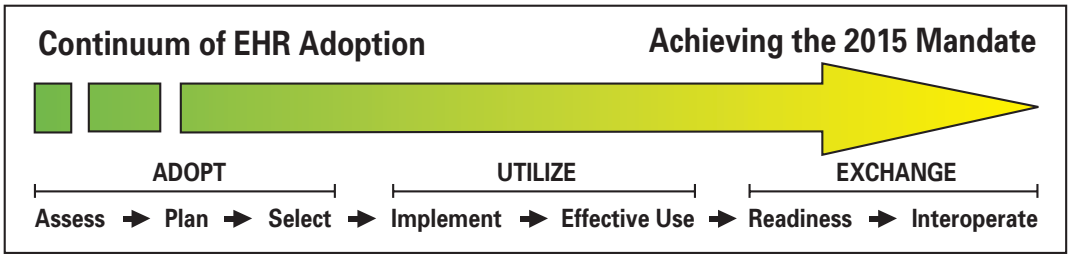
The Guide includes sections on "Strategies for Success in Electronic Prescribing" for each of three groups:

- Prescribing Providers
- Pharmacists and Pharmacies
- Payers or Pharmacy Benefit Managers (PBMs)

The three sections then follow the EHR adoption model developed by the Minnesota Department of Health (MDH) and the Minnesota e-Health Initiative. This model was first published in the statewide plan aimed at helping providers understand and implement Minnesota's EHR mandate. Entitled, *A Prescription for Meeting Minnesota's 2015 Interoperable Electronic Health Record Mandate—A Statewide Implementation Plan,* the plan provides practical guidance for proceeding through the steps of Adoption, Utilization and Exchange. It is available for download at http://www.health.state.mn.us/ehealth/ehrplan.html. A brief summary of the all steps along the continuum for EHR adoption is provided in Appendix I.

For each step along the continuum, commonly cited questions, suggested solutions based on the experiences of your peers within Minnesota, and considerations are listed. Information resources from around the country are included at the end of each section. At the beginning of each section, action steps that can be taken now are highlighted.

FIGURE 2: Minnesota Model for Adopting Interoperable Electronic Health Records



Introduction to Interoperability Within the Context of e-Prescribing

Interoperability of Electronic Health Records (EHR) in Minnesota means the ability of two or more EHR systems or components of EHR systems*, such as e-prescribing tools, to exchange information electronically, securely, accurately and verifiably, when and where needed. Interoperability is comprised of "technical", "semantic" and "process" interoperability, and the information includes transactions and standards as defined by the Commissioner of Health. Technical, semantic and process interoperability are required for the consistent and timely exchange of health information among care providers and other entities.

In the context of e-prescribing, interoperability encompasses:

- The use of the appropriate NCPDP SCRIPT Standard, allowing for system-to-system communication with no human intervention, to enable **technical interoperability.**
- The future adoption of a common vocabulary such as Rx NORM to achieve **semantic interoperability.**
- The integration of common processes where all prescribers are prescribing electronically, completing formulary, benefit and medication history checks with automated drug utilization review (DUR), and all prescriptions are routed electronically to dispensers and are received and filled without manual re-entry will help achieve **process interoperability.**

  Each type of interoperability informs Minnesota's approach to the effective implementation of e-prescribing. More information is available in Appendix J and Guide 2: Standards Recommended to Achieve Interoperability in Minnesota, Minnesota e-Health Initiative, updated June 2009.

Recommendations to Continue Advancing Adoption of Electronic Prescribing

The electronic prescribing workgroup identified two items for future consideration and focus. These were outreach and communication to providers and settings that face particular challenges to e-prescribing implementation and effective use and use of e-prescribing standards.

Outreach and Assessment: Special Settings and Providers

The electronic prescribing workgroup identified specific settings and providers that face particular challenges for electronic prescribing implementation. The workgroup recommended that future communications and education be directed to these groups to help identify actions to advance e-prescribing adoption and help achieve the e-prescribing mandate. The care settings identified included: long term care (see Appendix F for additional information), home health, student health services, community clinics and not for profits, drug assistance programs, and correctional facilities. The providers identified included dispensing prescribers, dentists, podiatrists and optometrists.

The e-Prescribing Workgroup recommends the following items for outreach and assessment:

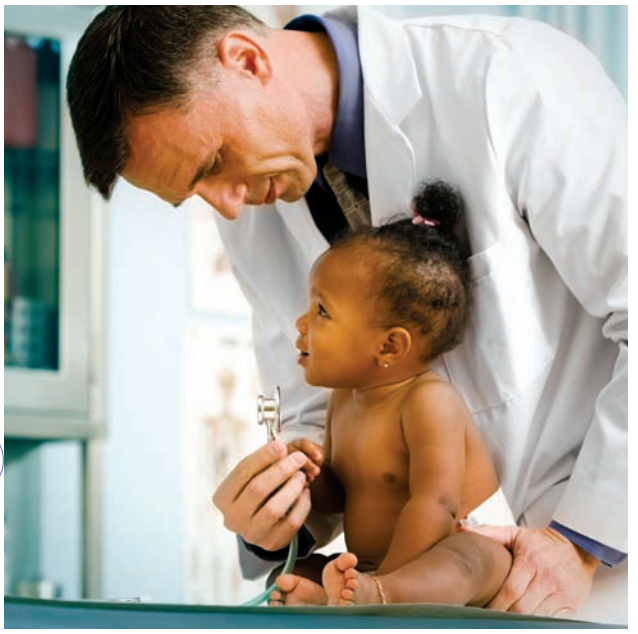
- Develop a communications program to inform prescribing providers, pharmacists and pharmacies, and all other stakeholders about Minnesota's e-prescribing initiative, requirements, and deadlines for readiness.
- Identify a lead organization to bring together stakeholders for the purpose of developing a collaborative approach for monitoring and achieving e-prescribing readiness for 2011.
- Consider the following providers and settings for future focus within communication or educational materials:
  - Providers: dispensing prescribers, dentists, podiatrists and optometrists
  - Settings: long term care, home health, student health services, community clinics and not for profits, drug assistance programs, and correctional facilities

Note on Sources: This Guide is based on comments from the Minnesota Electronic Prescribing Workgroup of the Minnesota e-Health Advisory Committee and a review of several state and national reports. Please refer to Appendix E for a complete listing of resources.

Ongoing Evaluation of e-Prescribing Standards

The e-Prescribing Workgroup recommends that the e-Health Initiative continue to stay abreast of evolving standards for e-prescribing to ensure that Minnesota continues to progress while remaining aligned with standards adopted at the national level.

The workgroup also recommends review and clarification of statutory language regarding use of electronic prescribing transactions in cases where the pharmacy is: a) within a health system; b) a hospital or inpatient pharmacy; c) processing prescriptions for a telepharmacy in rural community; or d) an emergency department or other clinical setting utilizing an automated dispensing machine.



Prescribing Providers

Strategies for Success in Electronic Prescribing

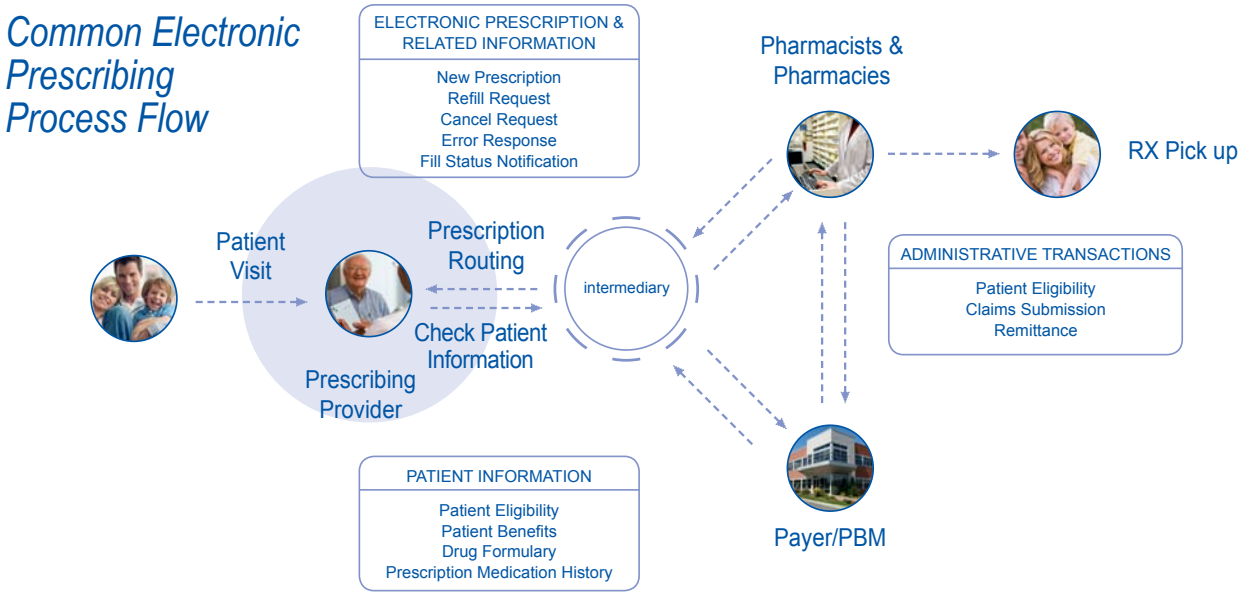
This section is designed to support prescribing providers, as described on page 5, to achieve the quality and safety benefits of e-prescribing, to become eligible for federal incentives and to support implementation of and compliance with Minnesota law.

Section Contents

In 2008, an estimated 10% of prescribing providers in Minnesota were doing so electronically, representing a combination of physicians, physician assistants, and advanced practice registered nurses. This compares to approximately 12% of office-based prescribers nationally who are routing prescriptions electronically.

(Sources: Minnesota Board of Pharmacy, MDH Office of Rural Health and Primary Care, Surescripts, HealthPartners)
More information is located in Appendix K

Common Electronic Prescribing Process Flow



Key Actions and Considerations to Ensure Success

Top Action Steps for Prescribing Providers

- Research all the financial incentives and other sources of funding currently available to you. See Appendix D for more information.
- Research the federal and state mandates and regulations that apply to you. See Appendices B–D for more information.
- Seek out information from your peers and your professional and/or trade associations to learn lessons from other settings similar to yours; the path to effective implementation has been made clearer through the work of others.
- Make certain you follow a proven and complete planning process and effectively engage staff / stakeholders in the process.
- Determine how e-prescribing can be part of an EHR system, or if necessary consider a stand-alone e-prescribing product or system.
- Ensure that you plan to use all the e-prescribing system functions to achieve the maximum e-prescribing benefit.
- After you have been operating for six months or more, evaluate your progress and optimize your system to effectively leverage your investment.

Assessment

Common Questions

- "Do we go with a stand-alone e-prescribing system or a full EHR with e-prescribing capability?"
- "How do we know what's the best e-prescribing tool for our practice?"
- "Can't we just add e-prescribing functionality onto our current system?"
- "We know we have to make this move but are concerned about a period of transition, inefficiency and loss of productivity. How do we minimize that?"

Actions

- A complete and careful assessment can help determine the best path to adoption of e-prescribing in your setting. See resources on page 19 for links to helpful assessment tools.
- Decide whether you wish to choose a stand-alone e-prescribing system or a full EHR system that includes e-prescribing functionality.
- Identify a member(s) of the project team to research the costs and potential financial incentives, subsidies or reimbursement programs available to your practice. This is critical to calculating relative returns on investment between the options. See Appendix D for more information.
- Assess what specific needs you may have related to adopting and using e-prescribing technology, and ensure all affected staff contribute in some way to the planning and implementation phases to make certain their needs are being met.
- Contact health plans you have contracts with to inquire about initiatives they may sponsor or pay-for-performance programs aimed at assisting practices in acquiring e-prescribing and/or EHR systems.

Considerations

- In most settings, adopting a full EHR will be preferred, with e-prescribing one of the first functionalities implemented. For some provider settings, adoption of a stand-alone e-prescribing solution will be an initial option, with a defined plan for advancing to an EHR in the future.
- The current incentives available through the federal government, such as through the American Recovery and Reinvestment Act, may impact your decision, since more financial support is available than ever before for migrating to a full EHR system.

Planning

Common Questions

- "My organization is ready to move forward with adopting and using e-prescribing, but we're reluctant to change to a new system. How do we prepare staff so the transition goes as smoothly as possible?"
- "What will a new system do to our current workflow? How do we adjust?"
- "Will my liability increase or decrease if I have delegated my prescribing authority, or missed/passed over/misinterpreted an alert when using an electronic prescribing system?"

Actions

- Convene staff to carefully analyze your current workflows and processes. Challenge yourself to find the inefficiencies. Then identify ways in which using e-prescribing tools and processes will actually improve the flow of your work. Prudent planning helps ensure maximum Value on Investment.
- IT resource(s) should be enlisted early on to manage the information system issues during the planning and implementation process.
- Designate a champion and point person to coordinate your planning process. Having both a physician and administrative champion is recommended.
- Seek out information from your peers and professional and/or trade associations to learn lessons from other settings similar to yours. This can both further inform your decision, and help you to better understand and frame your organizational needs in the adoption and implementation phases.
- Consider staff training and user support when negotiating agreements with your vendor.
- Document your priorities and use them as part of your 6-month and 12-month evaluations.
- Because liability concerns exist in both the paper and electronic environments, continue discussions with legal counsel to ensure any liability issues are identified and mitigated.
- Consider how you can modify your workflows to ensure processes are in place to provide for continuous quality improvement.
- Training is a critical factor for successful implementation of an electronic prescribing system. In your planning, be sure training needs are identified before going live, and that ongoing needs are also identified. Training is often most effective when it is directed to individual roles, and it is delivered right before going live and as part of just-in-time support.
- Talk with potential vendors about: their training and support programs, including the availability and length of in-office, hands-on assistance, both

on the system and workflow integration; availability of help desks; understandability of manuals and documentation; and crisis support in the event of a system failure.

– Be sure to include plans for security and privacy from the beginning of the planning process.

Considerations

– Spend the time to examine how e-prescribing can be used to improve your workflow, efficiency and care. Prudent planning can help ensure the maximum potential Return on Investment.

– Some current studies (http://archinte.ama-assn.org/cgi/content/short/168/21/2362) indicate that there is a relationship between implementing and using EHRs and reduced malpractice payments. A December 2008 issue of iHealthBeat cited these possible reasons for the trend in the reduction of malpractice payments through EHR implementation and use:

  - Better adherence to clinical guidelines;
  - Improved follow-up of abnormal test results; and
  - Fewer diagnostic errors.

  (2008. *iHealthBeat*. Retrieved on December 1, 2008, from, www.ihealthbeat.org/Articles/2008/12/1/Study-Finds-Link-Between-EHR-Use-Lower-Malpractice-Payments.aspx) These same reasons could be extended to e-prescribing as a component of health information technology.

– Vendors' software applications can address work flow and track the delegation process for e-prescribing. Some applications associate this delegation as part of their role based authentication.

– Patient preferences are increasingly a driver for adoption of health IT. Consider the marketing value of e-prescribing and EHRs with your patients/customers.

Selection

Common Questions

– "How do we choose which stand-alone e-prescribing system or full EHR is best for our site?"

– "Where do we get help with hardware and software selection?"

– "How are the formularies loaded and updated in a system?"

– "How do we know if an e-prescribing system is certified?"

Actions

- Most prescribing providers in Minnesota are transitioning toward using e-prescribing as part of an EHR. If you are considering a stand-alone e-prescribing system, document both the ROI/VOI it can provide and include a timeline and transition plan for evolution to an EHR.
- Be sure to purchase an e-prescribing system that is compliant with CMS rules for e-prescribing under Medicare Part D (see the Resources on page 19).
- Inquire with your professional association to identify consultants who can assist in HIT planning and product selection.
- As you select and engage with an intermediary, request information on how often formulary and benefits information is updated and how you can be sure that your systems are equipped with the latest information.

Considerations

- The American Recovery and Reinvestment Act - HITECH Act requires use of e-prescribing in an EHR for a provider to qualify as a "meaningful user" and so be eligible for incentive payments through CMS. See Appendix D.
- Most prescribing providers in Minnesota are moving to certified EHR and not opting for a stand-alone e-prescribing system.

UTILIZE

Implementation

Common Questions

- "How much training will our staff require?"
- "It is not clear who is authorized to complete electronic prescriptions. Can this responsibility be delegated to other staff such as nurses?"
- "How do we know which vendor product(s) use the standards required by Medicare and Minnesota law?"
- "When we send prescriptions to a pharmacy in the hospital, internal messages can be sent using HL7 standards. When the message goes to an external pharmacy, does it needs to be sent using the NCPDP SCRIPT standard?"
- "How much IT support will our organization need?"

Actions

- Become familiar with the standards required for e-prescribing on both the federal and state level. See Appendix C for more specific information.
- If delegating order entry, create quality assurance processes to verify the accuracy of prescriptions prior to transmission to the pharmacy.
- Collect examples of good practices to follow and adapt them to your setting.

Considerations

- The cost, quality, and efficiency benefits of e-prescribing are dependent on how well the technology is implemented. Successful implementation can require substantial workflow change. Many practices may be challenged to find support and resources to manage that change. In addition, various factors such as practice size, specialty, and patient mix, location (rural, urban), create different needs related to technology implementation.
- Single sign-on standards/technologies are now enabling practitioners to log in once to a single "portal" and gain access to multiple area clinic and hospital systems for which they have rights.
- The use of e-prescribing does not alter who may prescribe legend drugs under Minnesota law. Delegation of order entry is not prohibited, but the responsibility for the accuracy of the prescription remains with the prescribing practitioner.
- The vendors and professional associations have information on best practices and common standards available. The standards relate to both daily operations and to exchange of information. Both are important.

Effective Use

Common Questions

- "How can we realize the full value on our investment?"
- "How do we prevent the alerts from becoming an annoyance and a barrier to use?"

Actions

- Seek out information from your peers and your professional and/or trade associations to learn lessons from other settings similar to yours; the path to effective implementation has been made clearer through the work of others.

- Consider forming a local user's group with others using the same application. The application vendor may have a regional or national user's group that your organization could participate with to optimize use of the system.
- Work with your vendor to configure the sensitivity of your system alert function to:
  - Reduce the number of false positive alerts
  - Reduce the number of repetitive drug-drug and drug-allergy alerts
  - Differentiate between patient allergies and sensitivities to drugs. If your system is unable to be configured this way, work with your vendor and associations to develop and advocate for this capability.
  - Explore whether your current system or one that you are considering adopting has an option for passive alerts,which can be selected by the prescriber, to not pop up on the screen.
  - Examine the patterns in your alerts to identify possible remedies. Some causes cannot be fixed, such as patient mix, but others can be addressed, such as training on issues associated with their prescribing "favorites."
  - Review prescribing patterns if large numbers of alerts are consistently occurring. Engage colleagues to determine which alerts are most important to qualify and how many should be used.

Considerations

- When false positives are high, prescribing providers may pay less attention to true positive alerts, which limits the value of clinical decision support tools.
- It is important that prescribing providers do not bypass alerts or turn this functionality off, because there is an increased risk for missing a significant event like contraindicated drugs or allergic reactions.
- Research on alert fatigue indicates that clinicians override most medication safety alerts, suggesting that current medication safety alerts may be inadequate to protect patient safety. (Arch Intern Med. 2009;169(3):305-311.)
- Prescribers and pharmacists may be less likely to utilize system alert functions to make informed clinical decisions when:
  - There are large numbers of drug-drug and drug-allergy alerts to manage.
  - The alert system cannot differentiate between a patient that has a potential allergy or patient who is sensitive to a drug

Readiness

Common Questions

- "How do we know we are ready to exchange information?"
- "How do we test the system?"
- "What do we need to do to be ready for exchange?"
- "How do we know the transactions are working?
- "What pharmacies have connection options?"
- "How do we know that the information we send to the pharmacy is what was received?"

Actions

- Work with your software vendor to have the product certified to connect with an intermediary.
- Ensure staff are fully trained and include practice with test transactions.
- Inquire with your vendor and intermediary to understand what will occur if there is a disruption during electronic transmission of a prescription.
- Communicate with your local pharmacies to let them know you are implementing e-prescribing.
- Consult with your intermediary to find out which pharmacies in your area are receiving prescriptions electronically.

Considerations

- Proper planning and understanding the necessary standards prior to the purchasing an e-prescribing system can go a long way in ensuring your readiness to exchange upon implementation.
- Pharmacists and pharmacies are working through this transition along with prescribing providers; they can be your partners in working through common concerns.
- The use of the appropriate standards is essential to enable the transmission, and allow for system to system communication. (See Appendix C.)

Interoperate

Three types of interoperability are necessary to achieve the best possible outcomes in implementing health information technology. These include technical, semantic, and process interoperability.

In the context of e-prescribing, interoperability encompasses:

- The use of the appropriate NCPDP SCRIPT Standard, allowing for system to system communication with no human intervention, to enable **technical interoperability.**
- The future adoption of a common vocabulary such as Rx NORM to achieve **semantic interoperability.**
- The integration of common processes where all prescribers are prescribing electronically, completing formulary, benefit and medication history checks with automated drug utilization review (DUR), and all prescriptions are routed electronically to dispensers and are received and filled without manual re-entry will help achieve **process interoperability.**

As we have discussed strategies for prescribing providers in the adoption, implementation, and effective use of e-prescribing, we have covered many of the elements of technical and semantic interoperability. Although standards will continue to evolve, and the adoption of common vocabulary is still underway, the majority of remaining work lies in the area of process interoperability.

Actions

Achieving process interoperability will require on-going collaboration between stakeholders to identify and resolve common concerns and ensure safety and confidence in e-prescribing. To that end, the Minnesota e-Health Initiative recommends that all stakeholders collaborate to achieve process interoperability by:

- Keeping track of common, recurring challenges encountered in practice.
- Sharing information on solutions that better integrate e-prescribing into workflows.
- Identifying and disseminating best practices and common concerns related to e-prescribing.
- Collectively communicating concerns to other stakeholder organizations and/or the Minnesota e-Health Initiative to build understanding and work toward resolution.

Considerations

- Whether you are a prescribing provider, pharmacist, pharmacy, payer or PBM, the transition to electronic prescribing is a significant change, and each stakeholder is critical to achieving technical, semantic and process interoperability.

Resources for Prescribing Providers

ADOPT– Assessment, Planning and Selection

- Stratis Health provides an EHR planning toolkit (DOQ-IT) http://www.stratishealth.org/expertise/healthit/clinics/clinictoolkit.html
- American Medical Association's e-prescribing guide: *An ePrescribing Learning Center for Physicians* http://www.ama-assn.org/ama/pub/erx/home.shtml
- Texas Medical Association has a useful site for getting started with e-prescribing http://www.texmed.org/Template.aspx?id=7354
- Grants, Loans, and other funding opportunities are summarized on a number of organizational web sites. Examples include: http://www.health.state.mn.us/divs/orhpc/funding/index.html http://www.grants.gov
- Information on exceptions to anti-kickback restrictions under the Stark law for e-prescribing and EHRs. Federal Register: August 8, 2006 http://edocket.access.gpo.gov/2006/pdf/06-6666.pdf
- Health Information Management and Systems Society (HIMSS) brief on e-prescribing http://www.himss.org/ASP/topics_eprescribing.asp.
- The National ePrescribing Patient Safety Initiative http://www.nationalerx.com/.
- While somewhat dated, the California Healthcare Foundation's report on e-prescribing contains useful planning guidance. It can be downloaded from http://www.chcf.org/documents/hospitals/EPrescribing.pdf.
- Surescripts information resources include:
  - An e-prescribing guide for physicians http://www.surescripts.com/downloads/EPrescribing%20Guide.pdf.
  - Information on how to get started http://www.surescripts.com/get-connectedphysicians.html
  - A list of Surescripts certified e-prescribing software http://www.surescripts.com/certification-status.html.
  - An e-prescribing buyer's guide that includes a worksheet for comparing different vendors on keye-prescribing features: http://www.surescripts.com/downloads/Buyer's%20Guide_0209.pdf.

UTILIZE- Implementation and Effective Use

- Minnesota Statutes, section 62J.497, governs standards for e-prescribing. A Fact Sheet outlining the required standards can be accessed at http://www.health.state.mn.us/e-health/eprescribing/erxfactsheet08.pdf.
- The Minnesota Board of Pharmacy is developing best practices for prescribers, such as prescription verification and authorization to help eliminate errors. http://www.phcybrd.state.mn.us/guidelines/inpcpoe.pdf
- The Clinician's Guide to Electronic Prescribing is available from the national eHealth Initiative at http://www.ehealthinitiative.org/assets/Documents/e-Prescribing_Clinicians_Guide_Final.pdf
- Information on the CMS regulation for e-prescribing under Medicare Part D, including the incentives, can be accessed at (http://www.cms.hhs.gov/partnerships/downloads/11399.pdf). The complete regulations can be found at http://www.cms.hhs.gov/EPrescribing/Downloads/E-Prescribingfinalruleonfoundationstandards.pdf and at http://www.surescripts.com/downloads/MIPPA%20summary%20sheet.pdf

EXCHANGE - Readiness and Interoperate

- Contact information for local pharmacies can be accessed through the Minnesota Pharmacists Association *Pharmacy Locator* at https://m360.mpha.org/frontend/search.aspx?cs=213
- See the Minnesota Health Information Exchange web page at http://www.mnhie.com/home
- Connected payers and pharmacies: http://www.surescripts.com/connected-pharmacies.html
- Minnesota Medical Association http://www.mmaonline.net
- Minnesota Academy of Family Physicians http://www.mafp.org
- Minnesota Hospital Association http://www.mnhospitals.org
- Minnesota Nurses Association http://www.mnnurses.org
- Minnesota Dental Association http://www.mndental.org
- Minnesota Pharmacists Association http://www.mpha.org
- Minnesota Council of Health Plans http://www.mnhealthplans.org
- Pharmacy & Prescriber E-prescribing Experience Reporting Portal http://www.pqc.net/eprescribe/disclaimer.htm

Pharmacists and Pharmacies

Strategies for Success in Electronic Prescribing

20

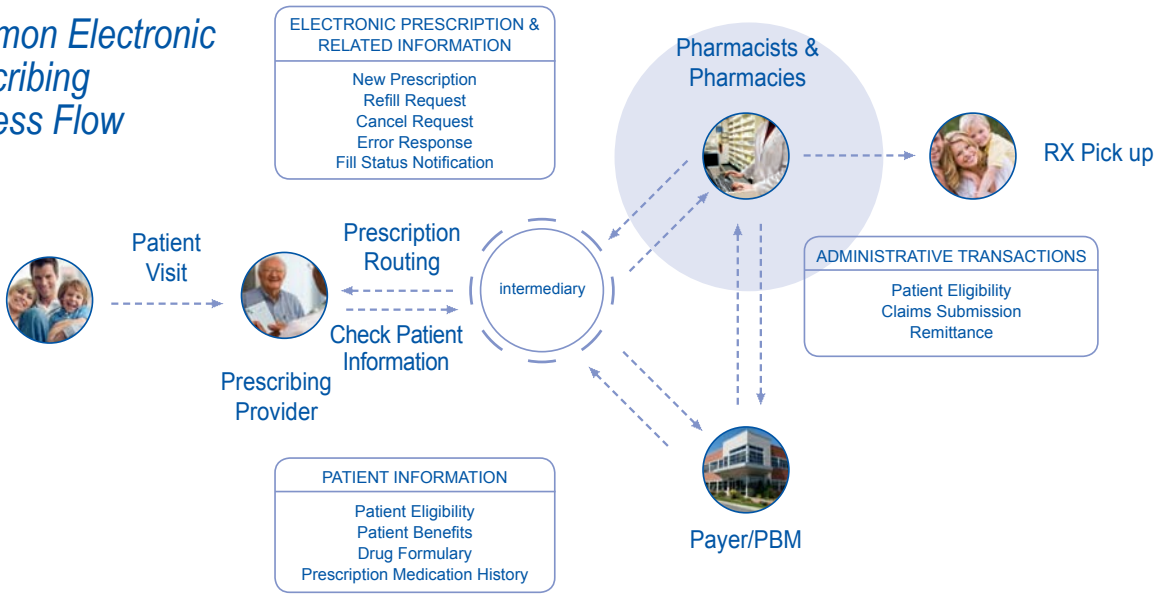
This section is designed to support pharmacists and pharmacies, as described on page 5, to achieve the quality and safety benefits of e-prescribing, and to support implementation of and compliance with Minnesota law.

Section Contents

In 2008, an estimated 53% of the pharmacies in Minnesota were electronically filling prescriptions. These pharmacies, comprised of community chain pharmacies and community independent pharmacies, are electronically filling prescriptions at rates of 86% and 2% respectively. The majority of community independent pharmacies are located in rural Minnesota.

Sources: Minnesota Board of Pharmacy,Surescripts, and HealthPartners (More information is located in Appendix K)

Common Electronic Prescribing Process Flow



Key Actions and Considerations to Ensure Success

Top Action Steps for Pharmacists and Pharmacies

- Work with your software vendor to upgrade your system or identify other mechanisms to support e-prescribing functions including required transaction standards.
- Ensure your software application is able to receive electronic prescriptions and send electronic prescription renewal requests to prescribers.
- Have your software application certified.
- Communicate with prescribing providers in your area to let them know that you are ready and able to receive prescriptions electronically.
- Network with peers to share lessons learned, and engage your professional associations to identify common concerns and work toward viable solutions.

ADOPTION

Assessment

Common Questions

- "What financial incentives or other financial support is available to help us make this transition?"
- "How do we know what systems will fit our needs best?"

Actions

- Calculate the value on investment (VOI) in addition to the return on investment (ROI) that result from implementing and using e-prescribing. See the Resource section on page 27.

– Write down in concrete, clear terms what your business needs are; that is, what you want the e-prescribing software/service to do for you.
– Review what various software vendors provide through their products so you understand what is possible.
– Research the current start up cost to install an e-prescribing system. "Shop around" for the system that meets your needs and your budget.

Considerations

– Your professional associations can help you interpret the new federal incentives for adopting health IT.
– As daunting or as uncertain as taking the first step can be, remember that Minnesota law requires e-prescribing by January 1, 2011.

Planning

Common Questions

– "How do we make sure the financial and other benefits of e-prescribing offset the costs associated with purchasing, implementing and maintaining a system?"
– "Transaction fees are adding up. How can I recover these fees through the process?"
– "With an increased number of prescriptions to manage and the work required to fill them, will the extra volume cover our increased operating costs?"
– "Is this system actually going to reduce the number of callbacks to physicians? We still need to contact the provider to clarify information."
– "How do we modify our workflow to accommodate e-prescribing?"

Actions

– If you don't have a certified e-prescribing system you can research software products to see which: (1) best meets your needs at the right price point for your business; and (2) is certified.
– Identify a member(s) of your project team to research start-up and ongoing costs and potential subsidies or reimbursement programs available. Apply to programs you are eligible for and that fit your needs.
– Pharmacy associations and organizations can support their members in planning for the 2011 mandate by talking about it now and often at meetings, through newsletters, and other communications tools to inform pharmacists, pharmacies and vendors.
– Engage all your staff to identify ways that a new system can streamline workflows.
– Seek information from your peers on lessons learned in effective planning.

Considerations

– Pharmacy application systems have start-up and on-going costs: software application, transaction costs, implementation, training, upgrades and possibly equipment.

- Make sure you understand how the various e-prescribing fees work, including those for the intermediary. These are all important costs—some of them ongoing—to factor into your business plan and ROI calculations.
- A clear plan, with input from all staff, is the best guarantee of successful implementation.
- As you plan, realize that you are not just automating old processes but acting on the opportunity to transform how you do business to be more efficient, and to allow more time for patient counseling and medication therapy management services.

Selection

Common Questions

- "How do we select a software vendor with a product that meets our needs and has a good reputation for supporting its customers?"
- "Are software vendors aware of Minnesota's mandate? Will they be helpful in supporting our need to meet Minnesota requirements?"

Actions

- Once you have your business needs and requirements clearly stated (so you clearly know what you are shopping for), research prospective certified systems.
- Become familiar with the standards required for e-prescribing on both the federal and state level (see Appendix C), to ensure any vendors under consideration are using them.
- Learn from your peers which systems meet requirements like yours and get tips on negotiating vendor contracts.
- Make sure to understand which systems are certified, and purchase/use only those systems. If you have an existing "homegrown" system, determine if your system can be certified for sending transactions on their network (see resources on page 27).
- Ensure adequate staff training is available from your prospective vendor.

Considerations

- Before you select the software applications, it is essential you have your planning complete and your requirements clearly defined.
- When purchasing an e-prescribing system, it is important to consider the version you are buying to make sure it is certified or is in the process of being certified.

UTILIZE

Implementation

Common Questions

- "Is e-prescribing going to reduce the amount of time that I will be able to spend providing patient counseling and providing medication therapy management services?"

– "Electronically generated prescriptions in the computer-to-fax system have generated new types of errors being transmitted to the pharmacy. How can we communicate our experiences with e-prescribing to begin working with prescribers to continuously improve e-prescribing processes?"

Actions

– Ensure adequate hands-on training for all staff before "going live" with your application.

– Contact your professional association to identify opportunities for continuing education related to the use of e-prescribing technology, and other networking opportunities where you can exchange information with peers on practical solutions related to the transition to e-prescribing.

– Report your experiences with e-prescribing to the Pharmacy & Prescriber E-Prescribing Experience Reporting Portal located at: http://www.pqc.net/eprescribe/disclaimer.htm. The experiences reported to this site will be used to identify trends and systems issues that might need to be addressed or mitigated in order to improve the overall quality and operation of the e-prescribing infrastructure.

Considerations

– When considering workflow, roles and responsibilities, it is important to remember that pharmacists are responsible for any drug allergy and drug-drug interactions and medication errors, even if the pharmacy tech is the person interacting with the record.

– By effectively training support staff on the use of e-prescribing technologies and establishing clear workflow processes, pharmacists may actually increase the amount of time available to provide patient counseling and medication therapy management services.

– Automatic eligibility for long term care patients does not exist at this time. Part D plans need to be included in payer and PBM databases.

– Eighty percent of prescriptions are routed through the large plans and PBMs in Minnesota.

– When a prescription is sent and the pharmacy rejects it, the e-prescribing system has a default setting to re-send the prescription as an e-fax. In order to meet the requirements of the 2011 mandate, the prescription needs to be transmitted through a fully electronic process that does not involve the use of a fax machine.

Effective Use

Common Questions

– "How will we know if we are using these systems appropriately to increase medication safety and not increase our liability?"

– "Can we be confident that the prescriptions we receive have been verified by the prescriber prior to transmission?"

Actions

- Update your policy and procedure manual to describe how e-prescribing is incorporated into your workflow and continuous quality improvement program.
- Inquire with your professional organizations to identify model policy and procedures for e-prescribing.
- Participate in networking opportunities to exchange information with peers on the effective implementation of e-prescribing.

Considerations

- Effective use, like quality improvement, is an ongoing commitment and effort. It is what will help your pharmacy stand out.

EXCHANGE

Readiness

Common Questions

- "Where do I need to go, and who will we need to communicate with, to get connected?"
- "We are a rural pharmacy using a homegrown e-prescribing system; will we have issues getting connected?"
- "We are sending refill requests to prescribers but they are not getting them because they do not have that function turned on."
- "I am unable to send electronic refill requests to some prescribers."
- "The receiving system does not receive the data in the same way that it was sent, the translation is not clear and there are errors, such as truncated data or the medication is not recognized by disparate systems."
- "We are concerned we will not use the correct standards. What do we need to use? We don't have time to understand the details of the IT or data standards."

Actions

- Pharmacies in rural areas may need to upgrade their systems to meet the required standards and to be able to receive and process electronic prescriptions.
- Test your ability to receive electronic prescriptions and send electronic prescription renewal requests to prescribing providers and prescribers.
- Communicate with prescribing providers in your area to let them know that you are ready and able to receive prescriptions electronically.

Considerations

- Proper planning and understanding the necessary standards prior to the purchasing an e-prescribing system can go a long way in ensuring your readiness to exchange successfully upon implementation.
- Prescribing providers are working through this transition along with local pharmacists, pharmacies and other dispensers and can be your partners in working through common concerns.

Interoperate

Three types of interoperability are necessary to achieve the best possible outcomes in implementing health information technology. These include technical, semantic, and process interoperability.

In the context of e-prescribing, interoperability encompasses:

- The use of the appropriate NCPDP SCRIPT Standard, allowing for system to system communication with no human intervention, to enable **technical interoperability.**
- The adoption of a common vocabulary such as Rx NORM to achieve **semantic interoperability.**
- The integration of common processes where all prescribers are prescribing electronically, completing formulary, benefit and medication history checks with automated drug utilization review (DUR), and all prescriptions are routed electronically to dispensers and are received and filled without manual re-entry will help achieve **process interoperability.**

As we have discussed strategies for pharmacists and pharmacies in the adoption, implementation, and effective use of e-prescribing, we have covered many of the elements of technical and semantic interoperability. Although standards will continue to evolve, and the adoption of common vocabulary is still underway, the majority of remaining work lies in the area of process interoperability.

Actions

Achieving process interoperability will require on-going collaboration between stakeholders to identify and resolve common concerns and ensure safety and confidence in e-prescribing. To that end, the Minnesota e-Health Initiative recommends that all stakeholders collaborate to achieve process interoperability by:

- Keeping track of common, recurring challenges encountered in practice.
- Sharing information on solutions that better integrate e-prescribing into workflows.
- Identifying and disseminating best practices and common concerns related to e-prescribing
- Collectively communicating your concerns to other stakeholder organizations and/or the Minnesota e-Health Initiative to build understanding and work toward resolution.

Considerations

- Whether you are a prescribing provider, pharmacist, pharmacy, payer or PBM, the transition to electronic prescribing is a significant change, and each stakeholder is critical to achieving technical, semantic and process interoperability.

Resources for Pharmacists and Pharmacies

ADOPT-
Assessment, Planning and Selection

– Information on ROI/VOI for pharmacies is located at: http://www.pharmacistelink.com/index.php?option=com_content&task=view&id=4968&Itemid=9

– Surescripts information resources include:

  • Information on how to get started http://www.surescripts.com/getconnectedpharmacist.html

  • Information on connected payers and pharmacies http://www.surescripts.com/connected-pharmacies.html

  • A comprehensive list of Surescripts certified e-prescribing software http://www.surescripts.com/certified-pharmacysoftware.html

  • A listing of providers and pharmacies that are ready to e-prescribe http://www.surescripts.com/pharmacy-physician-search.aspx

  • Computer Talk magazine e-prescribing, training, data conversion & support table. http://www.computertalk.com/images/profiles/3_erx_training dataconversion_support_table.pdf

  • Computer Talk 2008 Buyer's Guide http://www.computertalk.com/component/option,com_flexadvert/Itemid,140/

UTILIZE-
Implementation and Effective Use

– Information on CMS incentives and disincentives is available at http://www.cms.hhs.gov/ERxIncentive/Downloads/e-rx_incentive_factsheet.pdf

– Surescripts information resources include:

  • Information on how to get started http://www.surescripts.com/get-connectedpharmacist.html.

  • An e-prescribing buyer's guide http://www.surescripts.com/downloads/Buyer's%20Guide_0209.pdf.

  • A comprehensive list of Surescripts certified e-prescribing software http://www.surescripts.com/certified-pharmacysoftware.html

– Pharmacy & Prescriber E-prescribing Experience Reporting Portal http://www.pqc.net/eprescribe/disclaimer.htm

– The vendors and associations have lists of common standards. The standards relate to both daily operations and to exchange of information. Both are important

EXCHANGE-
Readiness and Interoperate

– Minnesota Statutes, section 62J.497, governs standards for e-prescribing. A fact sheet outlining required standards can be accessed at http://www.health.state.mn.us/e-health/eprescribing/erxfactsheet08.pdf.

– Minnesota Medical Association http://www.mmaonline.net

– Minnesota Academy of Family Physicians http://www.mafp.org

– Minnesota Hospital Association http://www.mnhospitals.org

– Minnesota Nurses Association http://www.mnnurses.org

– Minnesota Dental Association http://www.mndental.org

– Minnesota Pharmacists Association http://www.mpha.org

– Minnesota Council of Health Plans http://www.mnhealthplans.org

– Pharmacy & Prescriber E-prescribing Experience Reporting Portal http://www.pqc.net/eprescribe/disclaimer.htm

Payers or Pharmacy Benefit Managers (PBMs):

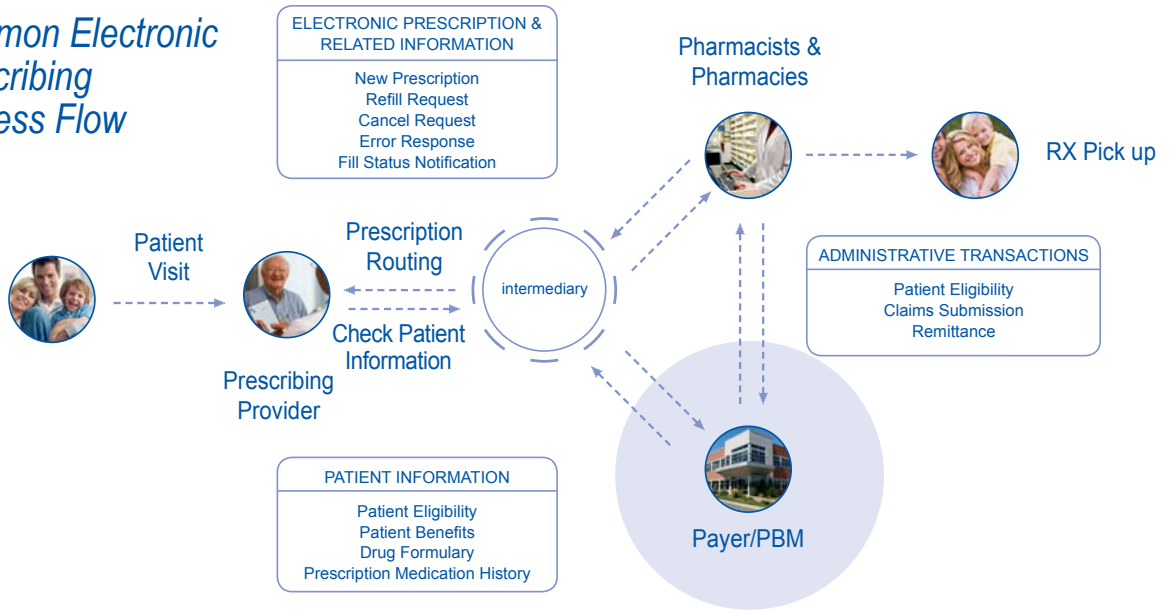
Strategies for Success in Electronic Prescribing

28

This section is designed to support payers or pharmacy benefit managers (PBMs), as described on page 5, to achieve the quality and safety benefits of e-prescribing, and to support implementation of and compliance with Minnesota law.

Section Contents

Common Electronic Prescribing Process Flow



Key Actions and Considerations to Ensure Success

Top Action Steps for Payers or Pharmacy Benefit Managers:

- Analyze how ready you are for electronic exchange. Does your system support all of these transactions for: Patient eligibility, an easily updated formulary, and prescription medication history using standards established by CMS and Minnesota statute?
- Use an intermediary for delivery of the above services to help enable availability to a full range of stakeholders and ensure the use of standards.
- Make sure your formulary information is available electronically or as a downloadable form.
- Provide knowledge resources or other tools to help your stakeholders upgrade their systems to support e-prescribing and to effectively use those systems.
- Work with intermediaries to implement uniform processes for maintaining and updating formularies, patient eligibility and prescription benefit information.
- Network with peers to share lessons learned and to engage your professional associations to identify common problems and work toward viable solutions.

ADOPTION

Assessment

Common Questions

- "How ready are prescribing providers and pharmacies? Shouldn't we wait for more of them to be ready to be activated?"
- "Who pays what costs with e-prescribing?"
- "What factors do we use to determine how ready we are?"

Actions

- Analyze how ready you are for electronic exchange. Does your system support all these transactions: Patient eligibility, an easily updated benefits formulary, and drug medication history using standards established by CMS and Minnesota statute?
- Provide the above services to your customers through an intermediary rather than a stand-alone system.
- Make sure your formulary information is available electronically or in a downloadable form.
- Start to identify where and what the costs are for each stakeholder, identifying potential cost savings.

Considerations

- Payers pay part of the fee and then the rest of the costs are absorbed in the system.
- Coordination of benefits at the provider level may help to reduce costs.

Planning

Common Questions

- "Where do we start? How do we proceed step-by-step so it's not so overwhelming?"
- "How do we make sure we are not increasing our financial or liability risk by moving before most others have?"
- "How do we ensure we are taking the right approach and won't have to re-tool our systems?"
- "How do we support best practices in provider offices and pharmacies without dictating their internal processes?"

Actions

- Collect and distribute best practices for e-prescribing that fit with typical clinic and pharmacy workflows. This approach enables prescribers and pharmacists to learn from their peers.
- Based on your assessment of who has not yet begun, provide information on why and how to get started to help them take the first steps with more confidence.
- Payers and intermediaries could consider developing incentives or reimbursement programs to offset pharmacy costs related to e-prescribing.
- Payers should collaborate with other payers to advance the shared goal of improving medication management. There may be an opportunity to

create or leverage an existing forum for payers to discuss and share best practices and lessons learned regarding solutions to improved medication management. Payers could also collaborate on medication management and e-prescribing approaches.

– Adopting electronic prescribing in physician practices is challenging, and payers can play a key role in smoothing the way. Payers can use their community knowledge and relationships to bring together the right stakeholders and bring economies of scale to bear on the process. Many payers also sponsor programs, including incentives, to spur e-prescribing adoption.
– Inform plan sponsors and employers about the benefits of e-prescribing, such as through a speakers group or developing educational materials.

Considerations

– Remember that e-prescribing is projected to save billions nationally (see the Resource sections on page 37). Providing incentives to prescribing providers or pharmacists could yield significant savings for you as a payer.

Selection

Common Questions

– "Which intermediaries should our organization connect with?"
– "What things should we consider in entering agreements with intermediaries?"

Actions

– Inquire with your professional or trade organization to determine if they have any guidance documents available to assist you in contracting with intermediary organizations.
– Ensure that prescribing providers have the most timely benefit and formulary information by including frequency of updates to this information as a key item in your intermediary contract.

Considerations

– Better medication management can lead to better patient care and cost-efficiencies through chronic care management that will assist in avoidance of more costly encounters.
– Ease of access to complete information on medication history information as well as formulary and benefits will assist prescribing providers in prescribing medications that are consistent with plan formularies.
– In order to achieve effective use of e-prescribing and reap the long term patient care and cost benefits, it is essential that prescribing providers have access to consistent, timely information on medication history as well as formulary and benefits information.

Implementation

Common Questions

- "It is a challenge to relay to health care purchasers the value in paying transaction fees associated with e-prescribing, and the potential return on investment from transmitting master patient index (MPI) files to an intermediary to make available to prescribing providers at the point of care. What are the implications of having incomplete information at the point of e-prescribing?"
- "When an employer opts out of having their employees' prescription information transmitted/included, do they face liability risk because the data were not made available?"
- "Alternatively, what liability does the employer face in the event of a data breech?"
- "Do we need to manage any consent or authorization rules when considering offering e-prescribing to commercial clients?"

Actions

- Provide specific examples to health care purchasers on how savings and improved health outcomes have been achieved through e-prescribing. Significant data exists to illustrate the value of providing prescribers with complete information on formulary and benefits and medication history at the point of care. (see resources on page 36.)
- Medicare Part D regulations have specific consent requirements, and Minnesota statute covers consent and authorization requirements for individuals enrolled in commercial plans. Payers and PBMs should review these consent and authorization requirements with legal counsel when crafting agreements with intermediaries.

Considerations

- The cost, quality, and efficiency benefits of e-prescribing are very dependent on how well the technology is implemented. Successful implementation requires substantial workflow change. Many practices may be challenged to find sufficient support and resources to manage that change. In addition, various factors, such as practice size, specialty mix, patient mix, location (rural, urban), create different needs related to technology implementation.
- Moving toward a completely electronic process for transmission

of prescription information is a significant step forward. Once all stakeholders have implemented e-prescribing, it will be much easier to begin working together to identify best practices and to move cohesively toward effective use.

Effective Use

Common Questions

- "What can payers do to assist prescribing providers, pharmacists, and pharmacies in the effective use of e-prescribing technology?"
- "Are there other resources in addition to payment incentives that payers can employ to encourage the implementation and effective use of e-prescribing?"

Actions

- Structure payment incentives and pay-for-performance programs to include e-prescribing to encourage and assist providers and pharmacies in making this transition.
- In addition to financial incentives, both prescribing providers and pharmacists need assistance with workflow change, care process redesign and optimal use.
- Ensure that timely information is provided to prescribing providers and dispensers through data intermediaries, which will allow them to consistently engage these new resources to improve formulary compliance and enhanced patient care.
- Work through trade associations to achieve uniformity in the way that messages are relayed to providers and pharmacies such as consistent frequency of updates for formulary and benefits information, and methods of identifying preferred, formulary, prior authorization required, or not-covered/non-formulary.

Considerations

- In addition to providing payment incentives, some payers have seen great success by assisting prescribing providers in accessing free e-prescribing hardware and software.
- Other plans have selected one or more e-prescribing technology providers and purchased a number of licenses to cover or subsidize e-prescribing hardware or software.

Readiness

Common Questions

– "If they have been developed, what are the standards that we are required to use?"

– "Which standards apply to which transactions?"

Actions

– Become familiar with the standards required for e-prescribing on both the federal and state level (see resources on page 36).

Considerations

– The health care industry is rapidly moving toward adoption of standards for electronic exchange. While converting existing information systems to use national standards may be expensive, in the long run it will save money for everyone.

Interoperate

Three types of interoperability are necessary to achieve the best possible outcomes in implementing health information technology. These include technical, semantic, and process interoperability.

In the context of e-prescribing, interoperability encompasses:

- The use of the appropriate NCPDP SCRIPT Standard, allowing for system to system communication with no human intervention, to enable **technical interoperability.**
- The adoption of a common vocabulary such as Rx NORM to achieve **semantic interoperability.**
- The integration of common processes where all prescribers are prescribing electronically, completing formulary, benefit and medication history checks with automated drug utilization review (DUR), and all prescriptions are routed electronically to dispensers and are received and filled without manual re-entry will help achieve **process interoperability.**

As we have discussed strategies for payers and PBMs in the adoption, implementation, and effective use of e-prescribing, we have covered many of the elements of technical and semantic interoperability. Although standards will continue to evolve, and the adoption of common vocabulary

is still underway, the majority of remaining work lies in the area of process interoperability.

Achieving process interoperability will require on-going collaboration between stakeholders to identify and resolve common concerns and ensure safety and confidence in e-prescribing. To that end, the Minnesota e-Health Initiative recommends that all stakeholders collaborate to achieve process interoperability by:

Actions

- Keeping track of common, recurring challenges encountered in practice.
- Sharing information on solutions that better integrate e-prescribing into workflows.
- Identifying and disseminating best practices and common concerns related to e-prescribing.
- Collectively communicating your concerns to other stakeholder organizations and/or the Minnesota e-Health Initiative to work build understanding and work toward resolution.

Considerations

- Whether you are a prescribing provider, pharmacist, pharmacy, payer or PBM, the transition to electronic prescribing is a significant change, and each stakeholder is critical to achieving technical, semantic and process interoperability.

Resources for Payers or Pharmacy Benefit Managers

ADOPT- Assessment, Planning and Selection

- Information on the CMS regulations for e-prescribing under Medicare Part D, including the incentives, can be accessed at (http://www.cms.hhs.gov/partnerships/downloads/11399.pdf). The complete regulations can be found at http://www.cms.hhs.gov/EPrescribing/Downloads/E-Prescribingfinalruleonfoundationstandards.pdf. Information on CMS incentives and disincentives are available at http://www.cms.hhs.gov/ERxIncentive/Downloads/e-rx_incentive_factsheet.pdf and www.surescripts.com/downloads/MIPPA%20summary%20sheet.pdf .
- A Guide for Health Care Payers to Improve the Medication Management Process is available from the national eHealth Initiative at http://www.surescripts.com/downloads/eHI_CIMM_Guide_for_Payers.pdf
- Best Practices and Lessons Learned Related to Electronic Prescribing- A Guide for Health Plans, Employers and Statewide Initiatives is available from the national eHealth Initiative at: http://www.ehealthinitiative.org/assets/Documents/BestPracticesFinal010909.pdf
- Surescripts information resources include:
  - Information for payers and PBMs: http://www.surescripts.com/services-payerspbms.html
  - Information on providers and pharmacies ready to e-prescribe: http:// www.surescripts.com/pharmacy-physiciansearch.aspx
  - Information on how payers and pharmacies are connected: http://www.surescripts.com/connected-pharmacies.html
  - An FAQ for payers: http://www.surescripts.com/payer-pbm-faqs.html

UTILIZE- Implementation Resources

- Gorman Health Group "Options to Increase e-Prescribing in Medicare: Reducing Medication Errors and Generating Up to $29 Billion in Savings for the Federal Government": http://www.pcmanet.org/issues/sec/e-prescribing/#research PCMA July 2007
- Visante "American Recovery and Reinvestment Act Will Save Billions and Reduce Medication Errors by Accelerating E-Prescribing" PCMA March 16, 2009: http://www.pcmanet.org/wp-content/uploads/2009/03/final-arra-impact-on-eprescribing.pdf
- Fischer, Vogeli et al. ARCH INTERN MED/ VOL 168 (NO. 22), DEC 8/22, 2008 "Effect of Electronic Prescribing with Formulary Decision Support on Medication Use and Cost." Downloaded from http://www.archinternmed.com at University of Minnesota, on January 13, 2009
- eHealth Initiative e-Prescribing Webinar Series "Transformation at the State Level: What States are Doing to Catalyze e-Prescribing Adoption" Available to eHI Members: http://www.ehealthinitiative.org.
- Information on the CMS regulations for e-prescribing under Medicare Part D, including the incentives: http://www.cms.hhs.gov/partnerships/downloads/11399.pdf. The complete regulations can be found at http://www.cms.hhs.gov/EPrescribing/Downloads/E-Prescribingfinalruleonfoundationstandards.pdf.
- The vendors and associations have lists of common standards available. The standards relate to both daily operations and to exchange of information. Both are important.

EXCHANGE - Readiness and Interoperate Resources

- Minnesota Statutes, section 62J.497, governs standards for e-prescribing. A Fact Sheet outlining the required standards can be accessed at (https://www.revisor.leg.state.mn.us/statutes/?id=62J.497).
- Minnesota Medical Association www.mmaonline.net
- Minnesota Academy of Family Physicians www.mafp.org
- Minnesota Hospital Association www.mnhospitals.org
- Minnesota Nurses Association www.mnnurses.org
- Minnesota Dental Association www.mndental.org
- Minnesota Pharmacists Association www.mpha.org
- Minnesota Council of Health Plans www.mnhealthplans.org
- Pharmacy & Prescriber E-prescribing Experience Reporting Portal http://www.pqc.net/eprescribe/disclaimer.htm

APPENDIX A

Minnesota e-Health Initiative Advisory Committee Members

Jennifer Lundblad, PhD
Advisory Committee Co-Chair;
President and CEO, Stratis Health

Walter Cooney, MA
Advisory Committee Co-Chair;
Execuitve Director, Neighborhood Health Care Network

Alan Abramson, PhD
Senior Vice Presiedent,
IS&T and Chief Information Officer,
Health Partners

Barry Bershow, MD
Medical Director, Quality & Informatics, Fairview Health Services

Laurie Beyer-Kropuenske, JD
Director, Information Policy Analysis Division,
Department of Administration

RD Brown
Consumer Advocate

Don Connelly, PhD, MD,
Professor, Health Informatics,
University of Minnesota

Tim Gallagher
VP Pharmacy Operations
Astrup Drug, Inc.

Raymond Gensinger, Jr., MD
Chief Medical Information Officer
Fairview Health Services

John Gross
Director, Health Care Policy,
Minnesota Department of Commerce

Maureen Ideker
Associate Administrator,
Care Management, Rice Memorial Hospital

Paul Kleeberg, MD,
Medical Director, Clinical Decision Support,
HealthEast Care System

Martin La Venture, PhD,
Director, Center for Health Informatics,
Minnesota Department of Health

Bobbie McAdam
Director, e-Business, Medica

Walter Menning
Vice Chair, Information Services,
Mayo Health System

Brian Osberg
Assistant Commissioner,
Minnesota Department of Human Services

Carolyn Pare
Chief Executive Officer,
Buyers Health Care Action Group

Rebecca Schierman
Quality Improvement Manager,
Minnesota Medical Association

Peter Schuna
Director of Strategic Initiatives,
Pathway Health Services

Joanne Sunquist
Chief Information Officer,
Hennepin County Medical Center

Michael Ubl
Executive Director, Minnesota Health Information Exchange

Bonnie Westra, PhD, RN,
Assistant Professor
University of Minnesota, School of Nursing

Tamara Winden
Healthcare Informatics Consultant,
Healthia Consulting

Mary Wellik
Director, Olmsted County Public Health Services

2008-2009 Minnesota e-Health Initiative Workgroups

Effective Use of EHR Systems Workgroup,
Co-Chairs: **Paul Kleeberg, Bonnie Westra**

Standards Workgroup,
Co-Chairs: **Bobbie McAdam, Mike Ubl**

e-Prescribing Workgroup,
Co-Chairs: Alan Abramson, Tim Gallagher

Minnesota Department of Health (MDH) Staff

Elizabeth Carpenter, Jennifer Ellsworth, James Golden, Michael Hawton, Robert Johnson, Martin LaVenture, Sripriya Rajamani, Anne Schloegel, Karen Welle, and Barb Wills

Electronic Prescribing Workgroup Members

Alan Abramson
HealthPartners, Workgroup Co-Chair

Tim Gallagher
Astrup Drug, Inc., Workgroup Co-Chair

Amber Backhaus
Leonard, Street and Deinard

Daniel Berg
Park View Clinic

Jennifer Boehne
St. Mary's Duluth Clinic

RD Brown

Richard Bruzek
HealthPartners

Shawn Carlson
Merck

Bruce Cunningham
Family HealthServices Minnesota PA

William Davis
Winona Family Medicine

Peter Dehnel
All About Children Pediatrics, P.A.

Amy Double

Sara Drake
Minnesota Department of Human Services

Richard Engleka
CVS

Mike Frakes
Fairview Specialty Services Pharmacy

Steve Franko
CVS

James Golden
Minnesota Department of Health

Tom Groom
Surescripts

Sharon Gruttadauria
CVS

Dave Haugen
Minnesota Department of Health

Alan Heaton
UCare

Maureen Ideker
Rice Memorial Hospital

Howard Juni
Omnicare

Patrice Kuppe
Allina Hospitals and Clinics

Martin LaVenture
Minnesota Department of Health

John Lillie
SISU Medical Systems

Ken Majkowski
Surescripts

Susan Malley
SISU

Frank McKinney
Frank McKinney Group LLC

Lee Mork
Allina Hospitals and Clinics

Glen Olson
Target Corporation

Charlie Oltman
Target Corporation

Phong Pham
Blue Cross Blue Shield of Minnesota

Mary Beth Reinke
Minnesota Department of Human Services

Heather Renteria
Hennepin County Medical Center

Mark Sandvick
SISU Medical Systems

Rebecca Schierman
Minnesota Medical Association

Darrell Schreve
Aging Services of Minnesota

Peter Schuna
Pathway Health Services

Mark Siska
Mayo Clinic

Stuart Speedie
University of Minnesota

Viettia Stanislaus
CVS

Cheryl Stephens
Community Health Information Collaborative

David Swenson
Cerner Physician Practice

Laura Topor
Consultant

Chris Van Horrick
Surescripts

Steve Vincent
Cedar Riverside People's Center

Cody Wiberg
Minnesota Board of Pharmacy

John Wust
Northern Ob/Gyn Associates

Linda Williams
Olmsted Medical Group

Minnesota Statute Relating to e-Prescribing

Minnesota Session Laws

Key: (1) ~~language to be deleted~~ (2) new language

2009, Regular Session

This document represents the act as presented to the governor. The version passed by the legislature is the final engrossment. It does not represent the official 2009 session law, which will be available here summer 2009.

CHAPTER 102--S.F.No. 1890

An act

relating to health; changing provisions for health information technology and infrastructure; establishing an e-health advisory committee; changing electronic health records provisions; changing electronic health record system and revolving account and loan program; modifying electronic prescribing provisions; amending Minnesota Statutes 2008, sections 62J.495; 62J.496; 62J.497, subdivisions 1, 2.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MINNESOTA:

Sec. 3. Minnesota Statutes 2008, section 62J.497, subdivision 1, is amended to read:

Subdivision 1. **Definitions.** For the purposes of this section, the following terms have the meanings given.

(a) "Backward compatible" means that the newer version of a data transmission standard would retain, at a minimum, the full functionality of the versions previously adopted, and would permit the successful completion of the applicable transactions with entities that continue to use the older versions.

~~(a)~~ (b) "Dispense" or "dispensing" has the meaning given in section 151.01, subdivision 30. Dispensing does not include the direct administering of a controlled substance to a patient by a licensed health care professional.

~~(b)~~ (c) "Dispenser" means a person authorized by law to dispense a controlled substance, pursuant to a valid prescription.

~~(c)~~ (d) "Electronic media" has the meaning given under Code of Federal Regulations, title 45, part 160.103.

~~(d)~~ (e) "E-prescribing" means the transmission using electronic media of prescription or prescription-related information between a prescriber, dispenser, pharmacy benefit manager, or group purchaser, either directly or through an intermediary, including an e-prescribing network. E-prescribing includes, but is not limited to, two-way transmissions between the point of care and the dispenser and two-way transmissions related to eligibility, formulary, and medication history information.

~~(e)~~ (f) "Electronic prescription drug program" means a program that provides for e-prescribing.

~~(f)~~ (g) "Group purchaser" has the meaning given in section 62J.03, subdivision 6.

~~(g)~~ (h) "HL7 messages" means a standard approved by the standards development organization known as Health Level Seven.

~~(h)~~ (i) "National Provider Identifier" or "NPI" means the identifier described under Code of Federal Regulations, title 45, part 162.406.

~~(i)~~ (j) "NCPDP" means the National Council for Prescription Drug Programs, Inc.

~~(j)~~ (k) "NCPDP Formulary and Benefits Standard" means the National Council for Prescription Drug Programs Formulary and Benefits Standard, Implementation Guide, Version 1, Release 0, October 2005.

~~(k)~~ (l) "NCPDP SCRIPT Standard" means the National Council for Prescription Drug Programs Prescriber/Pharmacist Interface SCRIPT Standard, Implementation Guide Version 8, Release 1 (Version 8.1), October 2005, or the most recent standard adopted by the Centers for Medicare and Medicaid Services for e-prescribing under Medicare Part D as required by section 1860D-4(e)(4)(D) of the Social Security Act, and regulations adopted under it. The standards shall be implemented in accordance with the Centers for Medicare and Medicaid Services schedule for compliance. Subsequently released versions of the NCPDP SCRIPT Standard may be used, provided that the new version of the standard is backward compatible to the current version adopted by Centers for Medicare and Medicaid Services.

~~(l)~~ (m) "Pharmacy" has the meaning given in section 151.01, subdivision 2.

~~(n)~~ (o) "Prescription-related information" means information regarding eligibility for drug benefits, medication history, or related health or drug information.

~~(o)~~ (p) "Provider" or "health care provider" has the meaning given in section 62J.03, subdivision 8.

Sec. 4. Minnesota Statutes 2008, section 62J.497, subdivision 2, is amended to read:

Subd. 2. **Requirements for electronic prescribing.** (a) Effective January 1, 2011, all providers, group purchasers, prescribers, and dispensers must establish ~~and~~, maintain, and use an electronic prescription drug program ~~that complies~~. This program must comply with the applicable standards in this section for transmitting, directly or through an intermediary, prescriptions and prescription-related information using electronic media.

(b) ~~Nothing in this section requires providers, group purchasers, prescribers, or dispensers to conduct the transactions described in this section.~~ If transactions described in this section are conducted, they must be done electronically using the standards described in this section. Nothing in this section requires providers, group purchasers, prescribers, or dispensers to electronically conduct transactions that are expressly prohibited by other sections or federal law.

(c) Providers, group purchasers, prescribers, and dispensers must use either HL7 messages or the NCPDP SCRIPT Standard to transmit prescriptions or prescription-related information internally when the sender and the recipient are part of the same legal entity. If an entity sends prescriptions outside the entity, it must use the NCPDP SCRIPT Standard or other applicable standards required by this section. Any pharmacy within an entity must be able to receive electronic prescription transmittals from outside the entity using the adopted NCPDP SCRIPT Standard. This exemption does not supersede any Health Insurance Portability and Accountability Act (HIPAA) requirement that may require the use of a HIPAA transaction standard within an organization.

~~(d) Entities transmitting prescriptions or prescription-related information where the prescriber is required by law to issue a prescription for a patient to a nonprescribing provider that in turn forwards the prescription to a dispenser are exempt from the requirement to use the NCPDP SCRIPT Standard when transmitting prescriptions or prescription-related information.~~

Subd. 3. **Standards for electronic prescribing.**

(a) Prescribers and dispensers must use the NCPDP SCRIPT Standard for the communication of a prescription or prescription-related information. The NCPDP SCRIPT Standard shall be used to conduct the following transactions:

(1) get message transaction;
(2) status response transaction;
(3) error response transaction;
(4) new prescription transaction;
(5) prescription change request transaction;
(6) prescription change response transaction;
(7) refill prescription request transaction;
(8) refill prescription response transaction;
(9) verification transaction;
(10) password change transaction;
(11) cancel prescription request transaction; and
(12) cancel prescription response transaction.

(b) Providers, group purchasers, prescribers, and dispensers must use the NCPDP SCRIPT Standard for communicating and transmitting medication history information.

(c) Providers, group purchasers, prescribers, and dispensers must use the NCPDP Formulary and Benefits Standard for communicating and transmitting formulary and benefit information.

(d) Providers, group purchasers, prescribers, and dispensers must use the national provider identifier to identify a health care provider in e-prescribing or prescription-related transactions when a health care provider's identifier is required.

(e) Providers, group purchasers, prescribers, and dispensers must communicate eligibility information and conduct health care eligibility benefit inquiry and response transactions according to the requirements of section 62J.536.

APPENDIX C

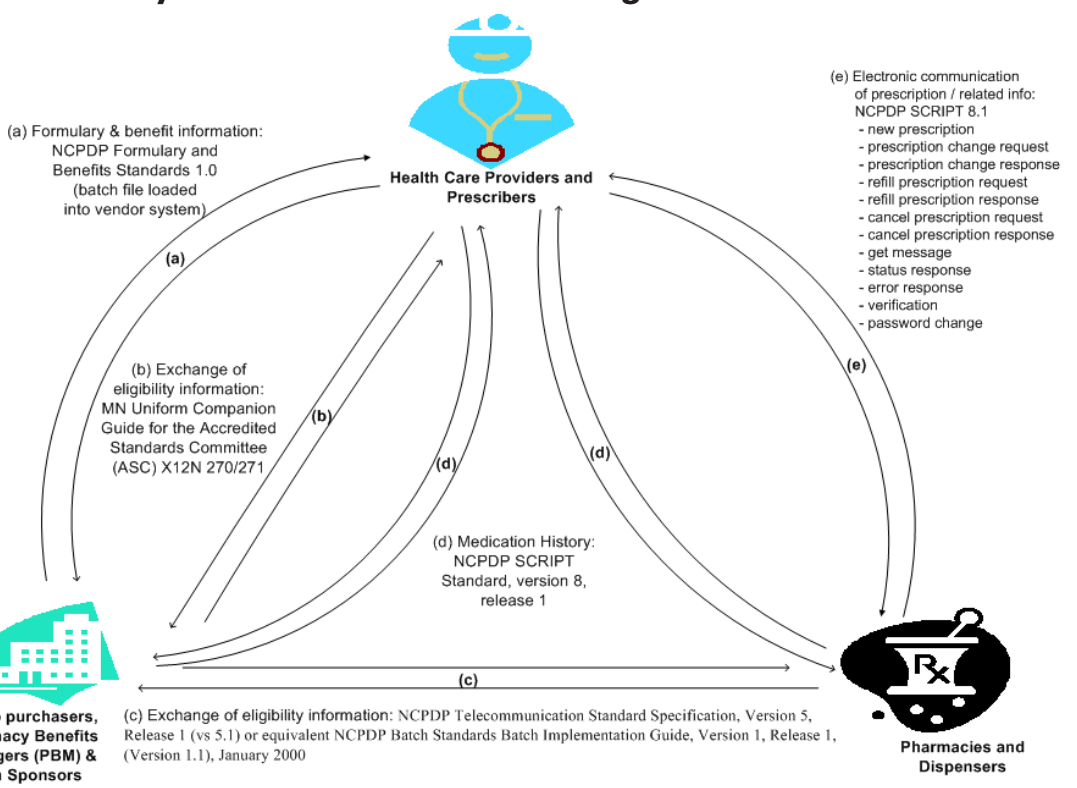
Standards for e-Prescribing in Minnesota

Minnesota Statutes, section 62J.497, requires that when electronically prescribing, the e-prescribing system must use the following transactions standards:

- For **communicating and transmitting formulary and benefit information,** providers, group purchasers, prescribers, and dispensers must use the NCPDP Formulary and Benefits Standard.
- For **exchange of eligibility information,** providers, group purchasers and prescribers must use the MN Uniform Companion Guide for the ASC X12N 270/271—Health Care Eligibility Benefit Inquiry and Response. Identical to administrative simplification transactions required under Minnesota Statutes, section 62J.536.
- For **exchange of eligibility information between pharmacies and PBMs/plan sponsors:** the NCPDP Telecommunication Standard Specification, Version 5, Release 1 (vs 5.1) or equivalent NCPDP Batch Standards Batch Implementation Guide, Version 1, Release 1, January 2000, must be used.
- For **communicating and transmitting medication history information,** the NCPDP SCRIPT standard is required.
- For **electronic prescribing transactions between providers and pharmacies,** the NCPDP SCRIPT standard must be used. This refers to any of the following transactions: get message, status response, error response, new prescription, prescription change request, prescription change response, refill prescription request, refill prescription response, verification, password change, cancel prescription request, cancel prescription response.

NOTE: When transmitting prescription information within an organization/legal entity (e.g., hospital emergency department to the hospital pharmacy), the HL7 standard may be used instead of NCPDP SCRIPT.

Summary of Minnesota e-Prescribing Transaction Standards



APPENDIX D

Federal Incentive Programs Available to Aid e-Prescribing

Tapping into federal incentive programs to aid in the adoption of e-prescribing

One key action step that providers can take is to begin understanding the two federal incentive programs available that may aid in the adoption and effective use of e-prescribing technology. The first was contained in Section 132 of the Medicare Improvements for Patients and Providers Act of 2008 (MIPPA). MIPPA incentives are specifically for e-prescribing and are available to providers right now. The second incentive program was contained in the American Recovery and Reinvestment Act of 2009 (ARRA), and supports e-prescribing as an essential part of accessing incentives available to those who are meaningful users of electronic health records. ARRA incentives will be available beginning in late 2010.

I. MIPPA incentives through CMS for e-prescribing under Medicare

The federal Centers for Medicare and Medicaid Services (CMS) has made e-prescribing a priority for Medicare beneficiaries. The approach CMS was taken to accelerate adoption of e-prescribing through a combination of financial incentives and disincentives.

Section 132 of the Medicare Improvements for Patients and Providers Act of 2008 (MIPPA) authorizes financial incentives for eligible professionals who are successful electronic prescribers, based on the allowed charges for professional services furnished by an eligible professional.

- The incentive amount for reporting years 2009 - 2010 is 2.0 percent; for reporting years 2011 - 2012, 1.0 percent; and for reporting year 2013, 0.5 percent.
- In addition, CMS is reducing reimbursements for covered services to professionals who do not e-prescribe after 2012, reducing by 1.0 percent for 2012, 1.5 percent for 2013, and 2.0 percent for 2014 and each subsequent year.

If you are a "successful e-prescriber" during the calendar year	Your incentive payment is
2009	**2.0%**
2010	**2.0%**
2011	**1.0%**
2012	**1.0%**
2013	**0.5%**

Submit Claims no later than 2 months after the reporting period

To be considered a "**successful** e-prescriber," you must report the e-prescribing quality measure through your Medicare Part B claims on at least 50% of applicable cases during the reporting year. MIPPA allows for future use of Part D data instead of claims-based reporting of e-prescribing quality measures. CMS is considering allowing this for future years. See www.cms.hhs.gov/PQRI/Downloads/2009ERXMadeSimpleFinal508.pdf for additional information.

Information on the CMS regulation for e-prescribing under Medicare Part D, including the incentives, can be accessed at http://www.cms.hhs.gov/partnerships/downloads/11399.pdf.

II. American Recovery & Reinvestment Act Incentives and e-Prescribing

The American Recovery and Reinvestment Act that was passed in early 2009 included several provisions to advance the use of health information technology. These provisions are referred to as the Health Information Technology for Economic and Clinical Health Act or HITECH Act. While the incentives are not specifically targeted to reward providers for implementing e-prescribing, they clearly recognize its value by identifying it as an essential activity in order for providers to be considered eligible "meaningful users" of certified EHR technology, a prerequisite to receiving incentive payments.

Certified EHR technology

Certified EHR technology is defined as a qualified electronic health record that is certified as meeting the standards applicable to the setting (e.g. ambulatory or hospital-based) as adopted by the Office of the National Coordinator for Health Information Technology (ONC). Products certified by the Certification Commission for Health Information Technology (CCHIT) are likely to meet this definition.

"Meaningful" EHR user

The HITECH Act clearly states that physicians applying for incentives must demonstrate that they are meaningful users of certified EHR technology. This ***includes electronic prescribing,*** ability to electronically exchange health information to improve quality of care, and submission of clinical quality measures. Demonstration of meaningful use and information exchange may be satisfied by: 1) an attestation, 2) submission of claims with appropriate coding, 3) survey response, 4) reporting of clinical quality measures, and 5) other means to be specified.

Hospitals applying for incentives must demonstrate that they are meaningful users of certified EHR technology. This includes use of a certified EHR product and ***the product must have e-prescribing.*** Plus it should have the ability to electronically exchange health information to improve quality of care, and submission of data to HHS on clinical quality measures. Demonstrations of meaningful use may include: 1) attestation, 2) submission of claims with appropriate coding, 3) a survey response, 4) reporting of clinical quality data, and 5) other means to be specified. Further details are expected.

Medicare incentive payment schedule for physicians:

Incentive payments become available in 2011, and end entirely by 2016. Physicians demonstrating meaningful use by 2011 or 2012 may collect a maximum of $44,000 over a five year period.* No incentives are available to those adopting after 2014.

	Adopt 2011	Adopt 2012	Adopt 2013	Adopt 2014
2011	$18K	-	-	-
2012	$12K	$18K	-	-
2013	$8K	$12K	$15K	-
2014	$4K	$8K	$12K	$12K
2015	$2K	$4K	$8K	$8K
2016	$0	$2K	$4K	$4K
2017	$0	$0	$0	$0
TOTAL	**$44K**	**$44K**	**$39K**	**$24K**

*Those in a shortage area may collect an additional 10% for a total of $48,400

Physicians who have not adopted an EHR by 2015 will receive a 1% payment reduction, followed by 2% in 2016 and 3% in 2017.

Medicare Incentive payments for PPS Hospitals

Incentive payments for hospitals are based on a formula which includes an initial amount and a per discharge amount for all discharges between the 1,150th and 23,000th factored by the Medicare share and a transition factor.

Base Amount	+	Discharge-related payments	x	Medicare share	x	Transition factor	
($2 Million	+	($200 x 1,150-23,000th discharges))	x	*See below	x	Year 1 (2011-13):	1.00
						Year 2 (2014):	.75
						Year 3 (2015):	.50
						Year 4 (2016):	.25

***Medicare share**

Part A Inpatient bed days	+	Part C Inpatient bed days
Est. total Inpatient bed days	x	Est. total charges less charity care
		Estimated total charges

Medicare Incentives for Critical Access Hospitals

Critical Access Hospitals are eligible for enhanced incentives under cost-based reimbursement. Meaningful EHR users may obtain reimbursement for the undepreciated value of EHR expenditures plus 20 percentage points, provided that the Medicare share does not exceed 100%. Critical access hospitals can enhance bonus incentive value by reaching meaningful user designation as early as possible; those that are meaningful users by 2011 are eligible for 4 years of enhanced Medicare payments with immediate full depreciation of certified EHR costs, which includes undepreciated costs from previous years.

Medicaid Incentives

While Medicare incentives are explicit in their inclusion of e-prescribing as a key element of meaningful use, States have been given authority to determine what will constitute "meaningful use" for incentives delivered through the Medicaid program. Given Minnesota's clear commitment to advancing e-prescribing through the e-Health Initiative and the state mandate for e-prescribing, it is highly likely that Minnesota's Medicaid criteria for meaningful use will carry similar requirements.

Incentive payments

- There is provision for incentive payments for eligible providers who participate in electronic exchange of data, including those who have already invested in an EHR.
- Federal incentive cannot exceed 85 percent of a practitioner's investment. The federal Centers for Medicare and Medicaid Services will determine an average allowable cost. Details will be determined, including how that relates to limits on percent of total investment that can be paid in the first and second year of program participation.
- A practitioner program maximum will be set by the HHS secretary based on a study to be completed by end of 2009. The maximum of 85 percent of $25,000 for initial acquisition/implementation and $10,000 for subsequent years is listed in the act, but the actual payment maximum will be set following the guidance of the study. Maximum program participation is six years.

- The difference for hospital reimbursement for Medicaid is there is no declining percentage in the formula for years two through four, unlike the Medicare arrangement.

Eligible providers

- Select non-hospital based professionals with at least 30 percent patient volume attributable to Medicaid patients, including physicians, dentists, certified nurse midwives, nurse practitioners, and physician assistants in physician-assistant led Federally Qualified Health Centers (FQHCs).
- Non-hospital based pediatricians who have at least 20 percent patient volume attributable to Medicaid patients.
- Children's hospitals regardless of Medicaid population served.
- Acute-care hospitals with at least 10 percent patient volume attributable to Medicaid patients.
- FQHCs or Rural Health Clinics with at least 30 percent of the center or clinic's patient volume attributable to needy individuals.
- Non-hospital based practitioners must choose between the Medicaid and Medicare incentive programs; no double-dipping.
- How Medicaid patient volume will be measured is yet to be determined.

For more information on ARRA HITECH incentives, visit: http://www.health.state.mn.us/e-health/hitech.html

APPENDIX E

Information Resources for e-Prescribing

Information on **Minnesota's e-health and e-prescribing mandates** and standards is available at www.health.state.mn.us/ehealth:

- *A Prescription for Meeting Minnesota's 2015 Interoperable Electronic Health Record Mandate—A Statewide Implementation Plan,* MDH and Minnesota e-Health Initiative.
- Minnesota Statutes, section 62J.497, governs standards for e-prescribing. A Fact Sheet outlining the required standards can be accessed at http://www.health.state.mn.us/e-health/eprescribing/erxfactsheet08.pdf.

Information on the **Medicare regulations and incentives** for e-prescribing are available from the Centers for Medicare and Medicaid Services:

- Information on the CMS regulation for e-prescribing under Medicare Part D can be accessed at www.cms.hhs.gov/partnerships/downloads/11399.pdf. The complete regulations can be found at http://www.cms.hhs.gov/EPrescribing/Downloads/E-Prescribingfinalruleonfoundationstandards.pdf.
- CMS rules for e-prescribing standards under Medicare Part D can be found at www.cms.hhs.gov/eprescribing/.
- Information on CMS incentives and disincentives is available at http://www.cms.hhs.gov/ERxIncentive/Downloads/e-rx_incentive_factsheet.pdf and www.surescripts.com/downloads/MIPPA%20summary%20sheet.pdf.

American Recovery and Reinvestment Act

The **Minnesota Board of Pharmacy** is developing best practices for prescribers, such as prescription verification, authorization, etc; to help eliminate errors. Download the guidance from http://www.phcybrd.state.mn.us/guidelines/inpcpoe.pdf

The following four guides are available from the national **eHealth Initiative** at http://www.ehealthinitiative.org/eRx/:

- *Electronic Prescribing: Becoming Mainstream Practice*
- *A Clinician's Guide to Electronic Prescribing*
- *A Consumer's Guide to E-Prescribing*
- *A Guide for Health Care Payers to Improve the Medication Management Process*

Surescripts provides practical guides for physicians, pharmacists and others as they plan to implement e-prescribing programs.

- *How to Get Started* is available at http://www.surescripts.com/get-connected-pharmacist.html.
- *Best Practices for Pharmacies* are available at http://www.surescripts.com/best-practices-pharmacists.html.
- *Best Practices for Prescribers* is available at http://www.surescripts.com/best-practices-physicians.html.
- *A Buyer's Guide for ePrescribing* is available at http://www.surescripts.com/downloads/Buyer's%20Guide_0209.pdf. It includes a worksheet for comparing different vendors on key e-prescribing features.
- A comprehensive list of certified e-prescribing software is available at http://www.surescripts.com/certified-pharmacy-software.html.

Options to Increase e-Prescribing in Medicare: Reducing Medication Errors and Generating Up to $29 Billion in Savings for the Federal Government, Gorman Health Group

APPENDIX F

Long Term Care Considerations

Excerpted from the Statewide Implementation Plan, 2008.

> Long term care is a complex, highly varied and highly regulated industry. It has complex information management needs due to the many types of settings/services/licenses, as well as complex federal and state requirements. The information needs are different between the two major categories of long term care facilities, skilled nursing facilities/nursing homes and assisted living. What little work has occurred nationally around standards has focused around skilled nursing facilities—the type of facility that is steadily declining in favor of assisted living settings.
>
> Long term care is a setting in which health information exchange, including medication histories, is of crucial importance given the number of health care providers typically seen by seniors, the frequency of hospital admissions, and the frequent back-and-forth migration of individuals between assisted living, skilled nursing and other facilities.

Achieving interoperability through interoperable EHRs that allow providers to access a patient's complete medical record including a full medication history will improve quality and access at all sites of care. Patients at long term care sites, such as skilled nursing or assisted living facilities, will benefit from e-prescribing adoption as well as from adoption of an interoperable EHR. Many of the actions listed elsewhere in this document for prescribing providers, pharmacists and pharmacies and organizations will also apply to long term care.

Within the context of e-prescribing, long term care facilities and pharmacies should consider the top actions listed here.

Top Actions for Long Term Care Facilities

- Start the process of assessing e-prescribing solutions. Look for options that are designed for use in skilled nursing facilities, and use the SCRIPT standard for communication with the pharmacy—rather than proprietary interfaces.
- Determine whether your partner pharmacy can exchange electronic prescription messages (most long term care pharmacies today use software that is SCRIPT-capable). If it cannot, encourage the pharmacy to work with its vendor to become e-prescribing capable by 2011.
- Encourage (referral) hospitals to send patient discharge medications to the long term care facility electronically, the prescribing provider can utilize the facility's EHR/e-prescribing system to prescribe medications for the facility stay.

- Research potential funding opportunities from foundations and the federal government (www.health.state.mn.us/e-health/funding.html).
- Trade and/or professional associations should lead efforts to collaboratively define the business requirements and unique information needs of long term care. This will both communicate requirements and specifications to EHR/HIT vendors and provide an objective basis for product evaluation.
- Work with national trade associations to monitor and help influence standards and/or certification criteria within CCHIT, HITSP or other bodies that will meet the needs of the long term care industry. CCHIT has indicated that a long term care EHR certification process will be available in 2010. E-prescribing is expected to be part of that certification.
- Long term care facilities and associations should work with the Minnesota Legislature and the Minnesota Department of Human Services (DHS) to explore means to ensure adequate resources exist to meet the 2011 e-prescribing mandate and 2015 interoperable EHR mandate.

Top Actions for Long Term Care Pharmacies

- If you accept electronic prescriptions today, determine whether your software utilizes a version of the SCRIPT standard that fully supports long-term care needs (version 10.2 or higher supports long term care; 10.6 is recommended). The majority of long-term care pharmacies today do use software that is capable of exchanging SCRIPT-standard long-term care electronic prescription messages. Additional pharmacy systems are in the process of adding the capability. Minnesota is taking steps to raise awareness of long term care e-prescribing standards that are in place by recommending use of SCRIPT in this setting.
- If you do not accept electronic prescriptions today, work with your dispensing system vendor to ensure you will be able to exchange SCRIPT-based e-prescribing messages by 2011.
- Support the transition between the nursing facility and the patient's home with e-prescribing to community pharmacies.
- Encourage your associations and organizations to support Minnesota's 2011 mandate by talking about it often at meetings, in newsletters, and other communications tools to inform pharmacies and vendors.
- Request that your associations and organizations track the adoption and use of e-prescribing among pharmacies, in particular independents.

Due to the additional stakeholders and communication flows involved in medication management in the long term care setting, a larger set of electronic messages can be used. The table below highlights the key transactions as they relate to each participant. Note that the "Hospital / Other Care Setting" column contains only those messages related to long term care medication management.

Figure 1: Long term care e-prescribing messages.

Transaction	Code	Hospital / Other Care Setting	Prescriber / Facility	LTC Pharmacy	Payer
Chart Summary	HL7 CCD	Send, Receive	Send, Receive	Receive	
Consultation Req/Resp	HITSP IS09	Respond	Send		
Patient Info, Census	CENSUS		Send	Receive	
New Prescription	NEWRX		Send	Receive	
Cancel Request	CANRX		Send	Receive	
Cancel Response	CANRES		Receive	Send	
Change Rx Request	RXCHG		Receive	Send	
Change Rx Response	CHGRES		Send	Receive	
Resupply Open Order	RESUPP		Send	Receive	
Fill Status Notification	RXFILL		Receive	Send	
Med History Request	RXHREQ		Send (Receive**)	Send**	Receive
Med History Response	RXHRES		Receive (Send**)	Receive**	Send
Formulary & Benefits	F&B 1.0		Receive		Send
Eligibility Inquiry	X12 270		Send		Receive
Eligibility Response	X12 271		Receive		Send

* * Using "current medications" option
- Use of Error, Status, Verification, Get Message, Password Change, Eligibility/Claim messages also allowed as in other settings
- Refill Prescription (REFREQ/REFRES) not used in LTC skilled nursing setting
- All message types are part of the NCPDP standard except where HL7, HITSP or X12 are noted in the "Code" column
- All messages may be transmitted via an intermediary rather than directly between parties

APPENDIX G

Examples of Providers Impacted by the 2015 Interoperable EHR Mandate - including but not limited to:

Primary Care Settings
- Family Practice
- Pediatrics and Pediatric Subspecialties
- Retail-Based Clinics
- OB-Gyn
- Community Clinics/FQHCs
- Jail Health/Correctional Facilities
- School-Based Clinics
- Migrant Health

Examples of specialty care clinics, *including but not limited to:*
- Allergy and Asthma
- Bariatrics
- Cardiology
- Cosmetic/Plastic/Reconstructive
- Dermatology
- Gastroenterology
- Infectious Disease
- Internal Medicine
- Neurology
- Oncology
- Ophthalmology
- Podiatry
- Urology
- Family Planning
- Genetic Services
- Anesthesia
- Cardiac
- Head and Neck
- Neurology
- Occupational Medicine
- Osteopathic Clinics
- Sports Medicine
- Pain Management
- Sleep Disorders

Hospitals
- Inpatient
- Outpatient
- Emergency Departments

Pharmacies
- Community
- Hospital-Based

Laboratories
- Clinic-based
- Hospital-Based
- Independent

Radiology
- Radiation Oncology
- Diagnostic Centers

Urgent Care Centers

Ambulatory Surgical Centers

Long Term Care Facilities
- Assisted Living
- Skilled Nursing Facilities

Home Health Agencies
- Hospital/Health System Based
- Independent

Hospice
- Hospital/Health System Based
- Independent

Local Public Health Departments
- Services to at-risk populations (i.e., TB, STD, WIC)
- Population-Based Screening & Other Services
- Surveillance

Habilitation
- Occupational therapy
- Physical therapy
- Recreational therapy

Dental
- General practice
- Oral Surgery

Mental /Behavioral Health
- Mental Health Centers
- Group/Private Practice

Chiropractic Clinics

Complementary Medicine/Care

State Agencies
- Minnesota Department of Health
- Minnesota Department of Human Services
- Minnesota Department of Corrections

APPENDIX H

Glossary of Electronic Prescribing Terms

ADE (Adverse Drug Event): An Adverse Drug Event is an injury resulting from medical intervention related to a drug. Does not necessarily imply medical error; ADEs can include non-preventable incidents such as adverse reactions to properly prescribed drugs (see ADR), as well as preventable incidents due to improper prescribing or other errors.

ADR (Adverse Drug Reaction): An Adverse Drug Reaction is a complication caused by use of a drug in the usual (i.e. correct) manner and dosage.

Advanced Practice Registered Nurse (APRN): Advanced Practice Registered Nurses include certified nurse midwives, certified nurse practitioners, certified registered nurse anesthetists and certified clinical nurse specialists.

Community Pharmacy: Community pharmacy or community retail pharmacy is an independent pharmacy, chain pharmacy, supermarket pharmacy or mass merchandiser pharmacy.

Drug Enforcement Administration (DEA) *registration number system was implemented as a way to successfully track controlled substances from the time they are manufactured until the time they are dispensed to the patient. At the present time, however, the DEA number also is being used as a physician identifier by pharmacies for non-controlled substances, suppliers of durable medical equipment, and insurance companies for reimbursement purposes. Using the DEA number for purposes such as these could lead to the DEA number falling into the hands of people who sell and use drugs illicitly and could lead to use of the DEA number for fraudulent prescriptions* Northern Sierra Rural Health Network http://www.connectup.org/ePrescribing_glossary.html

Drug Utilization Review (DUR) – Study of drug prescriptions to evaluate a medication's usage and cost-effectiveness; may also be used to analyze treatment choices by individual practitioners, to suggest alternative medications, or to update an organization's drug formulary. Northern Sierra Rural Health Network http://www.connectup.org/ePrescribing_glossary.html

EDI (Electronic Data Interchange): EDI is a direct exchange of data between two computers via the Internet or other network, using shared data formats and standards.

Electronic Prescribing or e-Prescribing: Electronic prescribing, or "e-prescribing," means secure bidirectional electronic information exchange between prescribing providers, pharmacists and pharmacies, payers or pharmacy benefit managers (PBMs), directly or through an intermediary network.

Fill Status Notifications: Informs when Rx filled, not filled, or partially filled. It includes provider, patient, and drug segments of SCRIPT message. Not yet generally used. Northern Sierra Rural Health Network http://www.connectup.org/ePrescribing_glossary.html

Intermediary: Infrastructure providers, such as Surescripts and Minnesota Health Information Exchange (MN HIE), provide secure networks for medication history, benefit and formulary information and pharmacy connectivity.

NCPDP (National Council for Prescription Drug Programs): NCPDP is an ANSI-accredited standards development organization. The NCPDC focuses on prescription drug messages and works to create and promote data interchange and processing standards for the pharmacy services sector of the health care industry. This is the standard for billing retail drug sales. Reference: http://www.ncpdp.org

Pharmacy Benefit Manager (PBM): Private companies that administer pharmacy benefits and manage the purchasing, dispensing and reimbursing of prescription drugs on behalf of payers and group purchasers. A PBM is an organization that contracts with health insurance plans to manage prescription medication benefits. private companies that administer pharmacy benefits and manage the purchasing, dispensing and reimbursing of prescription drugs. PBMs provide their services to health insurers or to large health care purchasers such as public employee systems, other government agencies and labor union trust funds. PBM services to their clients may include negotiating rebates or discounts from pharmaceutical manufacturers, processing claims for prescription drugs and negotiating price discounts from retail pharmacies. PBMs also develop formularies and manage utilization of drugs through prior authorization or utilization reviews. Many PBMs also operate mail order pharmacies or have arrangements to include prescription availability through mail order pharmacies. PBMs play a key role in managing pharmacy benefit plans in the Medicare drug program. Northern Sierra Rural Health Network http://www.connectup.org/ePrescribing_glossary.html

Prescription: The term "prescription" means a signed written order, or an oral order reduced to writing, given by a practitioner licensed to prescribe drugs for patients in the course of a practitioner's practice, issued for an individual patient and containing the following: the date of issue, name and address of thee patient, name and quantity of the drug prescribed, directions for use, and the name and address of the prescriber.

Preauthorized Refill: Initial prescription includes number of refills permitted. Preauthorized refills on existing prescriptions are not included in electronic prescribing transactions because they do not require communication between a physician and pharmacist.

Renewals: Renewal prescriptions are either 1) prescriptions with all refills used or 2) expired prescriptions.

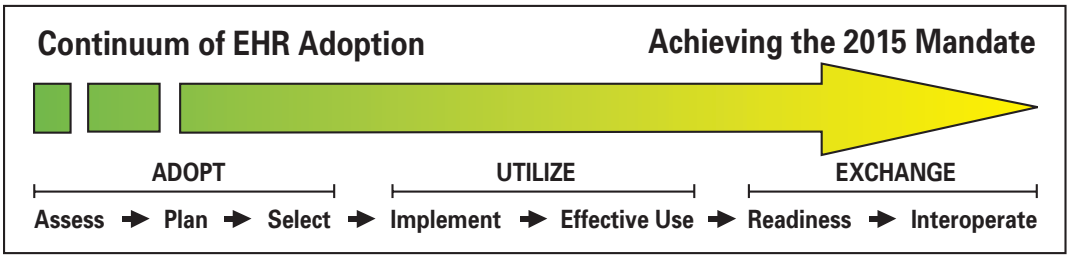
APPENDIX I

Minnesota Model for Adopting Interoperable Electronic Health Records

The Guide is organized by the adoption model developed by the Minnesota Department of Health (MDH) and the Minnesota e-Health Initiative:

- **Adopt,** which includes the sequential steps of Assess, Plan and Select.
- **Utilize,** which involves implementing an EHR product and learning how to use it effectively.
- **Exchange,** including readiness to exchange electronically with other partners, and implementing regular, ongoing exchange between interoperable EHR systems.

Figure 1. Minnesota Model for Adopting Interoperable Electronic Health Records



This model was first published in the statewide plan aimed at helping providers understand and implement Minnesota's EHR mandate. Entitled *A Prescription for Meeting Minnesota's 2015 Interoperable Electronic Health Record Mandate—A Statewide Implementation Plan,* the plan provides practical guidance for proceeding through the steps of Adoption, Utilization and Exchange. It is available for download at http://www.health.state.mn.us/ehealth/ehrplan.html.

Defining the Seven Steps of the Model

While the continuum of EHR adoption is more iterative and less linear than the graphic suggests, each of the steps are necessary for a successful implementation and a positive return on investment.

Assess

The assessment phase is foundational to every subsequent step in the continuum. It is here that an organization can begin to identify—or at least predict—the barriers it might encounter. It may be tempting to skip the assessment and planning steps in favor of making a quick decision on an EHR product and getting the implementation underway. But it is critical that an organization understand in concrete terms why it is moving toward an interoperable EHR system, how it will be financed on an ongoing basis (health information technology is not just a one-time acquisition cost), the status of EHR adoption among other provider organizations in the community, and staff readiness.

Plan

Effective planning is perhaps the most critical element in successful EHR implementation. As with assessment, skipping this step for the sake of expediency not only threatens the implementation of a project but often the operations of an entire organization.

Because of the complexity and criticality of this step, a trusted and knowledgeable consultant can provide invaluable guidance to an organization and its planning team. The consultant can not only help avoid costly mistakes, but help ensure that the decisions and purchases made are aligned with state and national efforts around health data standards and interoperability.

Select

Choosing an EHR system from the range of products in the marketplace can be daunting. Selection involves having identified ahead of time—in clear, detailed and unambiguous terms—what the organization is looking for in an EHR. This is necessary both for preparing a Request for Proposals, as well as in evaluating demonstrations of the products. This step also involves the complex and often nuanced process of negotiating a contract with a selected vendor.

Implement

Implement may sound like a single step but in reality it is a series of steps leading up to a "go live" date. It involves implementing various interrelated work plans (staff training, redesigning work processes, installing terminals and other hardware, testing and retesting the customized portions of EHR software, etc.), continually refining and adjusting those workplans as issues crop up. Very importantly, it includes ensuring that staff is trained, being both psychologically and functionally ready for the transition. Finally, it involves "going live," often uncovering and fixing issues that were not predicted.

Effective Use

Here begins the payoff for the work to date. With effective planning, selection and implementation, the return on investment will become apparent at this stage.

If, however, the implementation is basically automating old paper processes (many of which may have been inefficient), the return on investment/value on investment will elude the organization. Worse, the staff will likely be frustrated by what they see as an encumbrance and obstacle to their work, one that detracts from their effectiveness as clinicians or support staff.

Effective use will be defined in different ways across different organizations but should have two main components:

1. An adequately trained staff that can make effective use of the technology; and
2. The tools and processes that make up an optimally functional, integrated EHR system.

More information is available in Guide #4: A Practical Guide to Effective Use of EHR Systems.

Readiness for Electronic Exchange

Readiness to exchange health records electronically consists of three related factors:

- The capacity of the EHR system to exchange information with another system.
- The use of health data standards during the collection and recording of patient information.
- Having the policies and data sharing agreements in place between organizational trading partners.

Interoperate—Electronic Exchange

Electronic exchange of health records is the "holy grail" of e-health. Much of the benefit of improving the continuity, quality and safety of care depends upon the ability to securely and meaningfully exchange health records from point to point in a timely manner. This is the meaning of the term *interoperability* as used in this plan.

APPENDIX J

Examples of Interoperability in the Context of Electronic Prescribing

Understanding Interoperability in the Context of e-Prescribing

Interoperability of Electronic Health Records (EHR) in Minnesota means the ability of two or more EHR systems or components of EHR systems* to exchange information electronically, securely, accurately and verifiably, when and where needed: is comprised of "technical", "semantic" and "process" interoperability; and the information includes transactions and standards as defined by the Commissioner of Health. *Additional information on standards can be found in the Standards and Interoperability Guide.* Technical, semantic and process interoperability are required for the consistent and timely exchange of health information among various stakeholders in healthcare. Closely examining each form of interoperability can inform our approach to the effective implementation of e-prescribing in Minnesota.

Technical interoperability

The focus of technical interoperability is on the conveyance of data, not on its meaning. This refers to hardware, software, networks, transmission, and closely related functions like access and security management. Technical interoperability has to do with connectivity across the network and across applications. This interoperability in healthcare neutralizes the effects of distance.

In e-prescribing, the use of the appropriate NCPDP SCRIPT Standard, allowing for system-to-system communication with no human intervention, enables technical interoperability.

Semantic interoperability

The focus of semantic interoperability is communicating the meaning of the data. The emphasis is communicating information in a form that will be understood in exactly the same way by both sender and receiver. This is essential in healthcare due to the complexity of the information, the various stakeholders involved, the implications of accurate information interpretation to ensure quality and safety and to facilitate the care of the patient. Semantic interoperability refers to standard representation of data and information (e.g., data content terminologies like ICD-10, SNOMED, LOINC)

Semantic interoperability in e-prescribing can be achieved through the future adoption of a common vocabulary such as RxNORM.

Process interoperability

Process interoperability, an emerging concept, is required for accurate and effective integration of information in a work setting. This refers to coordination of work processes, user role specifications, presentation of data and information in the context of workflows, etc.

We will know when process interoperability has been achieved in e-prescribing when all prescribers prescribe electronically completing formulary, benefit and medication history checks with automated drug utilization review (DUR). Prescriptions are routed electronically to dispensers and are received and filled without manual re-entry, and prescribers are informed by the pharmacy when the prescription has been picked up by the patient.

The information in this guide is intended to provide assistance to all of the stakeholders charged with the implementation of e-prescribing systems, in moving toward achieving each of these aspects of interoperability.

More information is available in Guide # 2: Standards Recommended to Achieve Interoperability in Minnesota, Minnesota e-Health Initiative - June 2009.

APPENDIX K

Electronic Prescribing Adoption in Minnesota

Current status of Electronic Prescribing in Minnesota

Of the 54 million prescriptions filled in Minnesota in 2007 an estimated 21 million were eligible for e-prescribing; that is, they were neither preauthorized refills nor controlled substances. Of those, only an estimated 1.2% were transmitted through a fully electronic process, although the number is growing annually.

Table 1. Status of Electronic Prescribing in Minnesota

2007 Total Filled Prescriptions[1]	54,266,489
Estimated Preauthorized Refills [2]	29,552,025
Estimated Potential e-Prescriptions New and Renewal [3]	24,714,464
Estimated DEA Controlled [4]	(3,212,880)
Estimated Prescriptions Eligible for Electronic Prescribing	21,501,584
Electronically Filled Prescriptions [5]	258,019

[1] Source: Wolters Kluwer Health Pharmaceutical Source® Audit Suite, data accessed 5/15/2008. Data shown here are for calendar year 2007 and include the total number of prescription drugs filled at community retail pharmacies only. Community retail pharmacies include independent pharmacies, chain pharmacies, supermarkets, and mass merchandisers.

[2] Preauthorized refills on existing prescriptions are not included because they do not require communication between a physician and pharmacist.

[3] Data from the National Association of Chain Drug Stores for calendar year 2007. Data represent new and renewal prescriptions only. Renewal prescriptions are either 1) prescriptions with all refills used or 2) Expired prescriptions.

[4] Estimate of DEA controlled prescriptions, 13% of total prescriptions (National estimates range from 10-20%).

[5] Source: Surescripts, 2008. Includes new and renewal prescriptions.

PRESCRIBING PROVIDERS: In 2008, an estimated 10.3% of the estimated practicing prescribing providers and prescribers in Minnesota were electronically prescribing.

Table 2. Electronic Prescribing Adoption in Prescribing Providers

	Licensed Providers[1]	Estimated Practicing[2]	Active e-prescribers[3,4]	Percent Active
Physicians	18,265	13,700		
Dentists	3,909	2,970		
Podiatrists	196			
Optometrists	939			
Physician Assistants	1,111	950		
Advanced Practice Registered Nurses	3,823	2,750		
Total	**28,243**	**20,370**	**2,089**	**10.3%**

[1] Source: Minnesota Board of Pharmacy, licensed prescribers.

[2] Source: MDH Office of Rural Health and Primary Care Workforce Data, 2007 estimated practicing physicians, dentists and physician assistants based on survey data. Advanced Practice Registered Nurses estimate is a percent, not survey based.

[3] Source: Surescripts, 2008. Prescriber is actively electronically

[4] Source: HealthPartners, 2009.

PHARMACIES: In 2008, an estimated 52.9% of the pharmacies in Minnesota were electronically filling prescriptions.

Table 3. Electronic Prescribing Adoption in Minnesota – PHARMACIES

	Totals[1]	Urban	Rural	Electronically Filling [2,3]	Percent Active
Community Chain	626	361	265	540	86.3%
Community Independent	445	139	306	27	6.1%
Total Chain and Independent	1,071	500	571	567	52.9%

[1] Source: Minnesota Board of Pharmacy, 2006 Note: There are 6,901 licensed pharmacists in Minnesota.

[2] Source: Surescripts, 2008. Actively electronically filling prescriptions.

[3] Source: HealthPartners, 2009.

For More Information:

Minnesota Department of Health
Minnesota e-Health Initiative/
Center for Health Informatics

P.O. Box 64882
85 East Seventh Place, Suite 220
St. Paul, MN 55164-0882
651-201-5979
www.health.state.mn.us/e-health/