Delaware e-Prescribing Pilot Abstract

The Delaware Department of Health and Social Services, Division of Medicaid and Medical Assistance (DMMA) seeks to transform the technology Medicaid uses for improved administration, effectiveness, and efficiency in providing health care to Medicaid enrollees. DMMA aims to accomplish this by transforming electronic capabilities of the Delaware Medicaid Management Information System (MMIS) by establishing a universal transaction for HIPAA-compliant electronic prescribing. The project will leverage the MMIS, focus on cost savings, and increase functionality.

The e-prescribing pilot will target 50 of the highest-volume prescribers in the Medicaid program and leverage those providers already using e-prescribing in other health plans throughout the state. These initial 50 providers may represent only two percent (2%) of the total Medicaid provider enrollment, yet they account for twenty percent (20%) of the total annual paid pharmacy claims volume. In Delaware, there are currently over 200 physicians, who actively use e-prescribing, including the State Employees Health Plan and Blue Cross Blue Shield of Delaware. Many of these 200 practitioners are also Medicaid providers and could benefit from a DMMA application. The intent of DMMA's project is to provide a universal solution for Medicaid providers to access the health record data they need when prescribing medications to Delaware's Medicaid population.

These e-prescribing providers will be enabled to fully utilize the MMIS' e-prescribing solution to increase client safety and reduce Delaware pharmacy assistance costs by providing the connectivity to exchange health care data between provider, pharmacy, and pharmacy benefit administration. The funding will provide handheld devices and software, enabling providers to have immediate access to client records, reference libraries, and formularies. On-site training, technical assistance, and utilization reports will be included for participating and currently active providers. This pilot will introduce the technology to DMMA providers, provide feedback to help providers embrace the technology and its benefits, and directly impact DMMA clients. It will leverage and build on last year's State Employees Health Plan and Blue Cross Blue Shield of Delaware e-prescribing implementations. In addition, this project will expand the functionality of the 200 physicians who already have e-prescribing solutions in place, providing them access to medical histories and benefit information—as stored in the MMIS—for all Medicaid clients.

The goal of this project is to build sustainable solutions that will improve client care and help ensure the following:

- Fewer errors/adverse events from misunderstood handwritten prescriptions
- Reduced ability to commit prescription fraud/divert medications
- Increased compliance with appropriate, preferred medication regimens
- Increased accessibility to data for users (medication profiles for providers)
- Reduced manual effort with current technological solutions,

The total two-year budget for this project is $1,018,065.00.

E-Prescribing

Statement of Project/Need

The Institute of Medicine (IOM) recently estimated that there are at least 1.5 million preventable adverse drug events each year in the United States. These medication errors result in poor patient outcomes as well as increased healthcare costs. In collaboration with the pharmacy benefits manager and Drug Utilization Review Board, drug utilization review activities and benefit guidelines are continuously reviewed. Within the past three years, the state has greatly expanded the pharmacy benefit program with enhanced clinical reviews and established a Preferred Drug List. These clinical reviews create an administrative burden on the clinicians. With the availability of e-prescribing to the Delaware Medicaid program and its enrollees, practitioners, and pharmacies, critical information would be available at the time of prescribing. Issues related to compliance, duplicate therapies, drug interaction, and all other prospective drug utilization review currently done at the pharmacy could be dealt with prior to the client leaving the office.

Delaware is proposing the development and implementation of an electronic prescribing solution integrated within the MMIS. E-prescribing offers a tool to transform prescription drug coverage programs administered by the Delaware Division of Medicaid and Medical Assistance (DMMA), including Title XIX, the Delaware Prescription Assistance Program, the Delaware Healthy Children Program (Title XXI), and the Chronic Renal Disease Program. Using connectivity to the Medicaid Management Information System (MMIS), e-prescribing can help ensure medication safety for clients, improve client outcomes, contain pharmacy costs, and make provider administrative activities more efficient.

The proposed system includes the following features:

- Complete medication history transaction processing
- Mapping and hosting of the Delaware Medicaid Preferred Drug List to integrate access, and response with a PDL drug when a non-preferred is prescribed
- Drugs that require prior authorization will be flagged on the interactive e-prescribing transaction (transaction response back to practitioner)
- Distribution and licensing of 50 hand-held devices to encourage provider participation to the highest drug prescribers
- Benefits, including therapeutic categories with quantity limits and appropriate dosing included in transaction response to practitioner
- Interactive eligibility request and response
- Monitoring and reporting of e-prescribing transaction usage

The proposed solution will use a data transaction format for drug history data that is approved by the National Council for Prescription Drug Programs (NCPDP) and the American National Standards Institute (ANSI).

DMMA's adoption of the most current e-prescribing technologies will transform overall quality of care by providing instant connectivity between provider, pharmacy, and pharmacy benefit administration. On average, e-prescribing will affect monthly about 160,000 individuals in these programs as well as practitioners and pharmacists. Medicaid spending for drugs exceeded $75 million (net of drug rebates) during the last fiscal year, roughly eight percent (8%) of the annual Medicaid budget. This represents nearly 1.8 million prescription claims.

The focus of this project is to:

- Improve adherence to Delaware Medicaid Preferred Drug List (PDL) guidelines and reduce requests for exception prior authorizations.
- Reduce requests or time to complete prior authorization for drugs that have expanded clinical review for coverage.
- Reduce overall program costs by reducing adverse drug events, increasing client compliance with drug therapy, and reducing fraud.
- Improve overall healthcare quality by reducing medication errors arising from illegible handwritten prescriptions and/or incomplete medication.
- Reduce administrative time for both practitioners and pharmacists. Pharmacist will have more time to do patient counseling because the practitioner has already been informed of concerns regarding prescription, e.g., therapeutic duplication when two physicians are involved. The new prescription can denote STOP first medication. The pharmacist will be able to reinforce what the physician has already reviewed and noted.

The pilot project will target participation by 50 of the highest-volume prescribers, who represent about 20 percent (20%) of DMMA prescriptions claims. In addition, the solution will enable prescribers with current e-prescribing solutions to leverage the same solution and have access to MMIS data. Over the course of the project, more providers will be recruited to expand the number of users to approximately 250 providers generating almost 250,000 e-prescribing transactions. The State's goal is to have 500 participating providers with close to 500,000 e-prescribing transactions by June 2012. The e-prescribing options include transmissions for medication profiles, benefit coverage, refilling renewal requests, and the provision of other clinical information to facilitate the effective administration of medications. Our intent is to

establish a universal solution that will work long-term with any of the e-prescribing software (e.g., Zix, Epocrates, WebMD) that providers may have. Our solution will translate the transaction so that providers can access the data they need without having to change software brands.

Project Justification

The benefits of e-prescribing will be felt across multiple areas of Delaware's Medicaid program, among both providers and customers. The proposed project will contribute to greater efficiency and client safety in the Delaware Medicaid program by:

- **Eliminating medical errors caused by misread or misunderstood handwritten prescriptions, adverse drug events, medication errors, and associated costs.** Illegible prescriptions, drug-drug interactions, medication allergies, incorrect step therapy requirements, incomplete client histories, and miscommunication can all occur and contribute to client safety issues and the expenses incurred from inappropriate medications.

  E-prescribing will enable program efficiencies and realize cost savings as a result of fewer adverse drug events. By making the client medication history available to practitioners, e-prescribing enables physicians to see what other providers have ordered and prevent adverse drug/drug interactions. The medication profile provides a true compliance picture, documenting whether previous prescriptions were filled and whether refills were requested at the appropriate time. This specific information can prevent higher doses of medications being ordered if patients are non-responsive to therapy but don't tell the practitioner that they are also not compliant. Non-compliance with drug regimen not only leads to higher doses but adding additional therapies—each new

therapy adding potential for side effect or adverse reaction. E-prescribing also allows providers to transmit an electronic, legible prescription to the client's pharmacy of choice.

- **Increasing adherence to a Preferred Drug List (PDL).** E-prescribing will also increase adherence to the Medicaid PDL by providing the necessary information, upfront, to facilitate compliance with guidelines prior to generating a prescription. Further, practitioners will be able to identify and resolve Prospective Drug Utilization Review (Pro-DUR) issues, such as early refill, late refill, therapeutic duplication, drug/drug interaction, high dose, low dose, quantity limit, and PDL at the time the prescription is written.
- **Improving quality of care for clients.** E-prescribing will reduce medication errors and improve compliance with drug therapy. Clients will have shorter wait times for prescriptions because the major barriers for non-coverage are addressed prior to arriving at the pharmacy. Immediate, real-time transactions allow more time for the pharmacist to provide counseling services to the client, which should better assure compliance and maximize quality medical care.
- **Simplifying operations/improving workflow.** Call centers currently spend a lot of time checking enrollment and coverage as well as communicating appropriate medication regimens and preferred drugs. Medical offices currently spend a lot of time faxing information to the call centers or having the provider call for clarification. E-prescribing would facilitate management of the Preferred Drug List (PDL) and prior authorizations by providing immediate electronic responses to appropriate use of generics, exceptions for brand-name drugs, benefit coverage, co-payments, and other related information. This

would reduce the burden considerably on providers who participate in the Medicaid program. Automation of transactions will improve the efficiency of pharmacy workflow, increasing customer satisfaction.

In addition, the National Association of Chain Drug Stores (NACDS) estimates that five percent (5%) of all prescriptions are incomplete or unclear. NACDS further reports that up to thirty percent (30%) of a pharmacist's time is spent obtaining the proper prescription and forty percent (40%) of all prescriptions are reworked before they are dispensed. E-prescribing will allow pharmacists to focus more time on client interaction and counseling.

- **Promoting provider and pharmacist participation.** Although this pilot program targets the highest-volume prescribers, ongoing recruiting efforts will also include a cross-section of participating Medicaid provider locations to include all three counties. The intent is to increase the level of comfort providers have with the technology and help them gain an appreciation for the reliability, clarity, and accuracy of client medication delivery.
- **Eliminating opportunities for fraud.** Finally, e-prescribing eliminates opportunities for fraudulent alteration of a prescription by the purchaser in the following ways:
  - Prevents modification of the quantity
  - Prevents modification of the strength
  - Eliminates the threat of stolen prescription pads

Project Goals and Outcomes

- **Improve overall healthcare quality by reducing medication errors from illegible handwritten prescriptions and/or incomplete medication history available to**

prescribing practitioners. Numerous studies have identified the benefits of e-prescribing in the prevention of adverse drug events. Common mistakes associated with handwritten prescriptions can be avoided by ensuring a complete and legible transmission. Further, access to a patient's medication history enables potential problems, such as drug-drug interactions and duplicate therapies, to be identified before the prescription is ordered.

- **Improve adherence to Delaware Medicaid PDL guidelines and reduce requests for exception prior authorizations.** Adherence to preferred drugs is greatly improved if the physician is informed of the PDL prior to making a decision. E-prescribing enables physicians to modify a prescription for guideline compliance prior to generating the prescription. This, in turn, will reduce requests for exception prior authorizations and simplify workflow for providers.
- **Reduce overall program costs by reducing adverse drug events, increasing client compliance with drug therapy, and reducing fraud.** Medication errors are costly to patients, health care providers, and payers. The IOM reports one study finding that each preventable adverse drug event that took place in a hospital added approximately $8,750 to the cost of the hospital stay. Electronic prescriptions have been shown to reduce errors by as much as eighty percent (80%). E-prescribing also enables the State to track whether clients are shopping for different prescribers and eliminate compliance issues that cause prescribers to issues stronger prescriptions to alleviate medical conditions. With e-prescribing, pro-DUR alerts would no longer go from the MMIS to the pharmacist and then be communicated to providers. Rather, the provider can determine any alert issues before the client leaves the provider's office, which will make a huge difference to the cost per prescription. Providers will be aware of the aggressive benefit coverage policies their clients have and compliance

with the PDL will increase, thereby increasing the use of lower-cost medications and reducing the number of prior authorization requests. Additionally, improved client compliance leads to improved health outcomes and reduced need for more expensive treatment due to deteriorating health status. Finally, e-prescribing offers safeguards against fraudulent activity and diversion of medications.

Estimate of Impact to Beneficiaries

The proposed e-prescribing project will be implemented statewide, impacting approximately 144,000 Medicaid enrollees and 15,000 enrollees in the Delaware Healthy Children Program (Delaware's SCHIP) and SPAP (Delaware Prescription Assistance Program and Chronic Renal Disease Program) programs. During state fiscal year 2006, a monthly average of 45,000 Medicaid enrollees (unduplicated count) received at least one prescription during the month.

Clients will benefit from instant feedback to the prescriber from the pharmacy benefit manager or pharmacy. Client records will be maintained and reviewed to avoid drug interactions and allergies. E-prescribing means fewer paper prescriptions that can be lost or misread, fewer medical errors, and reduced delivery time to the client.

Description of Magnitude of the Transformation/System

The proposed e-prescribing project represents a significant transformation for the Medicaid program in Delaware. DMMA is committed to increasing the use of technology to improve overall quality of care by providing instant connectivity between the provider, pharmacy, and DMMA pharmacy benefits manager. The project will impact both clients and providers, enhancing interactions between clients, providers, and pharmacists and will serve as a model for other providers to implement e-health technology. In addition, the tools will help the

provider community reduce administrative burdens, such as making phone calls to discuss prior authorizations or medical necessity cases.

While many providers already have the capability to link to the proposed e-prescribing solution, many still operate in a paper environment. Training and ongoing support will be required to integrate practitioners at varying technological levels. The products selected for this pilot can be leveraged with private-sector e-prescribing pilots currently being run for State Employees Health Plan and for Blue Cross Blue Shield of Delaware. The use of these products by each of these pilots provides a broad base of providers who have been introduced to the efficiencies and high level of data retrieval of e-prescribing. Data from these pilots can help identify and recruit the providers who can benefit the most from e-prescribing.

This project could be easily replicated in other states. The proposed approach incorporates software and data transaction formats that allow linkages with practices that have already adopted e-prescribing without the need for additional interfaces. The transaction format has been approved by NCPDP and ANSI. Delaware's experience in implementing and maintaining this statewide system could hold valuable lessons for other states in the future.

Description of Sustainability of the Project

Grant funds will be used to develop and implement a solution that has never been available in Delaware, without a manual call center intervention. The solution will be integrated within the MMIS to set up electronic transactions between providers and the medication profile information stored in the MMIS.

Future operating costs will be offset by decreased prescription costs and increased administrative efficiencies generated by the new solution. Any additional future costs needed to sustain this solution will be budgeted by DMMA.

Funds acquired from this grant application are specifically earmarked to finance the programming and equipment costs associated with the e-prescribing solution. Ongoing program costs will continue to be funded by DMMA through its annual Medicaid budget.

DMMA views this project as an important first step toward a more fully operational electronic healthcare environment, aligning the MMIS for the future adoption of electronic health records. DMMA also intends to integrate the e-prescribing solution with the current Delaware Health Information Network (DHIN) solution contracted by AHRQ.

Evaluation Plan

The effectiveness of the program will be measured by comparing the PDL use rate and overall prescription rates (number of prescriptions per member) of the participating providers to their peers. Detailed reports will be generated at the six-month and twelve-month points. The results can be used for quality initiatives and overall performance measures. By monitoring providers, the pilot will indicate a decreased number of prescriptions paid per prescriber, decreased number of prior authorization requests, and increased percentage of providers complying with the PDL. Long-range, the evaluation should indicate a decrease in overall drug expense per member.

DMMA, in collaboration with the pharmacy benefits manager, will develop performance standards to measure actual program results. These measures will include, at a minimum, the following components:

- Adoption status / Provider participation
- Performance summary (number of providers complying with the PDL/number of prescriptions per member)
- Formularies accessed

- Interaction warning analysis
- Formulary and plan design warning analysis

In addition, DMMA will oversee the use of funds and prepare estimates of cost savings attributable to the implementation of e-prescribing. All evaluation and cost data will be submitted in the form of an annual report to the Secretary. DMMA will ensure the evaluations are performed and will conduct outreach to recruit providers who should participate in the program.

Description of Project Implementation Readiness

Prescription benefits have been the focus of several significant initiatives over the past several years in Delaware; including enhanced drug utilization review and the development of a Preferred Drug List. Quality of care has been given the highest priority in designing these programs. E-prescribing is the next logical step and the concept has been well received by the State's Drug Utilization Review Board and the Pharmaceutical & Therapeutic Committee.

Delaware is prepared to quickly begin to implement e-prescribing in the next federal fiscal year. Preliminary technical requirements have already been developed, based on the State Employees Health Plan and Blue Cross Blue Shield pilots, which were implemented last year. A project timeline is provided below.

Project Timeline:

October to November 2007

- Finalize technical requirements with stakeholders

December 2007 to March 2008

- Implement MMIS changes and set up data exchange
- Develop roll-out strategy and timeline

- Solicit stakeholder contributions to the program
- Publicize availability of the program

February to March 2008

- Identify and choose provider participants
- Provide devices
- Install hardware and software
- Test technology in each county
- Test remaining sites

March to May 2008

- Train providers and staff
- Perform system testing and modification
- Disseminate the e-prescribing transactions with all practitioners via the medical associations and DMMA bulletins

June 2008

- Implement and integrate solution with MMIS
- Troubleshoot with on-site visits/toll-free helpline
- Develop strategy for proposing a statewide plan

July to September 2008

- Begin preliminary analysis of utilization reports
- Survey participants for feedback and suggestions

October 2008 to March 2009

- Expand project to include other providers who agree to purchase the hardware and software

- Continue provider outreach
- Work with DHIN to integrate e-prescribing solution
- Complete project evaluation and produce final report

Project Budget

Budget Justification

Delaware is requesting $1,018,065.00 over eighteen months to implement the e-prescribing project. All funds will be used to implement and integrate the solution with the MMIS. Funding requirements for each year are described below.

FY 2007: DMMA will award a contract for the development and implementation of the e-prescribing solution. The implementation effort will take approximately seven months. Funding will be applied to additional programming time to make necessary changes to the Medicaid Management Information System (MMIS). In addition, sub-contracts will be developed to build necessary linkages with providers and to provide e-prescribing transaction processing. Start-up costs include the purchase and distribution of 50 hand-held devices and licenses to encourage provider participation, as well as training and consultation. First-year costs also include three months of operational costs. These costs include ongoing administration, oversight, and technical support.

FY 2008: Funds in the second year of the project will be used to continue day-to-day operations, administration, and technical support. These costs are based on estimates of provider participation and volume of transactions. Projections assume 250 participating physicians generating almost 250,000 e-prescribing transactions by the end of the project.

Estimated Budget Total:

Line Item	Description	Estimated Funding Requirement FY 2007	Estimated Funding Requirement FY 2008
Personnel/ fringe benefits		n/a	n/a
Contractual cost	Setup and installation of E-Prescribing, and integration with MMIS includes:		
	Project and Technical Leadership	$ 751,133.00	$ 68,319.00
	Programming		
	Design and development, includes: e-prescribing transaction processing, to include interactive eligibility request/response and medication history request/response, PDL and benefit load transactions		
	Reporting for electronic verification system, and e-prescribing ongoing monitoring, retention, and utilization		
	Testing (unit, regression, system)		
	Training, includes: hand-held devices, e-prescribing software for transaction processing, e-Prescribing user manual, training preparation and presentation, and documentation updates		
	Contractual cost Sub-total	**$ 751,133.00**	**$ 68,319.00**
Supplies		n/a	n/a
Equipment	E-Prescribing technology costs include:		
	Hardware	$ 83,556.00	$ 115,057.00
	50 DrFirst hand-held devices and wireless routers		
	Network connectivity between DrFirst, RxHub, Business Exchange Services, and MMIS		
	Software		
	1 Rcopia Insight Reporting license		
	Equipment Sub-total	**$ 83,556.00**	**$ 115,057.00**
Other Costs		n/a	n/a
	Total	**$ 834,689.00**	**$ 183,376.00**