Enhancing Access to Prescription Drug Monitoring Programs Using Health Information Technology:

Integrating an Emergency Department with a Prescription Drug Monitoring Program: A Pilot Study

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MITRE

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Substance Abuse and Mental Health Services Administration SAMHSA

DEPARTMENT OF HEALTH & HUMAN SERVICES • USA

"It's viral, and AWESOME." – Dr. J. T. Finnell, Wishard Hospital and Regenstrief Institute

Overview

Goal

This Indiana Regenstrief Emergency Department (ED) pilot demonstrated the value of health IT connectivity by:

- Making Prescription Drug Monitoring Program (PDMP) data readily available to ED physicians (prescribers) during patient encounters
- Streamlining system access to PDMP information by using an interstate PDMP data sharing hub

This pilot configuration showcased the workflow, ease of use, and added technical value of presenting PDMP data in the electronic health record (EHR) system by integrating the EHR and PDMP systems through an intermediary.

Pilot Design

This pilot showed the value of integrating Indiana's PDMP system (INSPECT) with an ED management system (CareWeb). CareWeb automatically queried the PDMP upon patient check-in. CareWeb received, stored, and processed PDMP data for use during the patient encounter. The pilot also used an interstate PDMP sharing hub, Prescription Monitoring Program InterConnect (PMP)i, as an intermediary for access to the PDMP data.

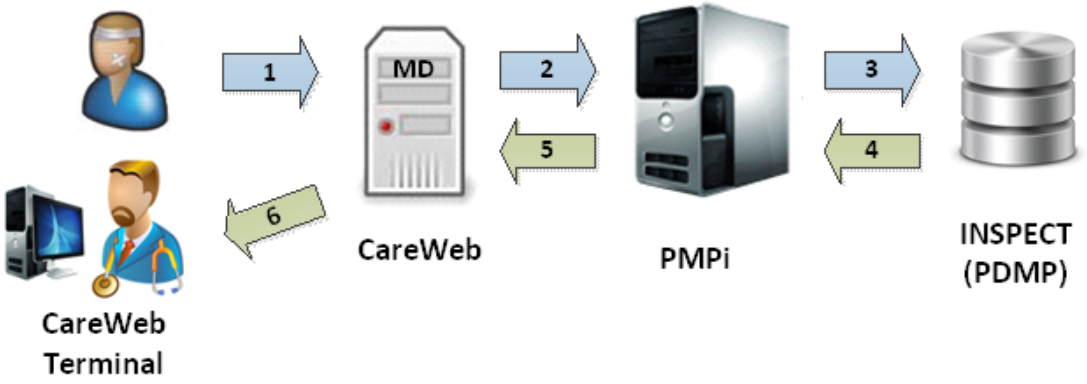


Figure 1. Pilot Workflow Diagram

Figure 1 illustrates these steps of the pilot's workflow:

1. Upon patient admission, a PDMP data request message is automatically sent to the CareWeb system.
2. CareWeb queries PMPi for the patient's controlled substance history.
3. PMPi uses the message's routing data to forward the message to INSPECT.

4. INSPECT responds with the patient's PDMP data.
5. PMPi passes the information back to CareWeb.
6. CareWeb formats a PDMP report and stores it to be viewed by prescribers during the patient encounter.

Appendix A describes technical considerations for the pilot, including a list of participants. Appendices B and C discuss operational and legal considerations, respectively.

Experiment

Pre-Pilot State

Wishard Hospital, the site of the pilot, has 106,000 annual patient visits. Some prescribers in the ED had PDMP accounts, but access was solely through the INSPECT web portal, which is outside CareWeb (the ED management system) and thus not part of the usual patient care workflow. The current PDMP web portal user interface is time-consuming to access for each patient. Some prescription information was available via other sources and already being presented in CareWeb. Therefore, the prescribers rarely accessed the PDMP data because this was too time-consuming.

The PDMP system did not have a direct means of allowing system integration (two systems talking to each other). INSPECT had an existing connection to PMPi, the interstate data sharing hub, and PMPi, which was originally designed to share data between states, had the means to accept system-to-system communication. This pilot used PMPi as a means to access INSPECT data, even though Regenstrief is located in the state of Indiana.

Hypotheses and Specific Methods

The following hypotheses directly relate to the six areas of interest that were the basis for evaluating the effectiveness of the pilots. Appendix D describes the evaluation methods in detail.

Table 1. Hypotheses and Intended Impacts

Area of Interest	Intended Impact
Ease of Use	• Easier for ED prescribers to access the PDMP • CareWeb launching queries in the background and displaying the data within the user interface
Fit with Workflow	• Improves clinic processes and is accessible at the proper place in the workflow • Uses the same system that supports Wishard prescribers in their day-to-day workflow • Reduces, not adds to, clinical overhead for accessing PDMP data

Area of Interest	Intended Impact
Technical Impact	• Allows for a flexible and efficient implementation • Use of PMPi provides access to PDMP data
Clinical Impact	• Results in more queries being run for ED patients, and thus better-informed prescribers
Driver of Adoption	• Well accepted by the participants, and the pilot will serve as a springboard for further adoption
Optimization Factors	• Has additional opportunities to improve, and these can be identified and enumerated

Results

The data gathering phase of the pilot test started on July 9, 2012 and ended on August 9, 2012. Over this period, Wishard prescribers viewed 674 PDMP data reports. The prescribers had the option of entering notes into the system to describe their response to the data and provided these notes 243 times.

Ease of Use

The pilot configuration completely streamlined the process of accessing PDMP information so that the technology performed the querying and processing tasks:

1. **Querying the PDMP** – An automatic query was initiated when the patient was admitted to the Emergency Department.
2. **Processing PDMP Data** – The patient's demographic information was automatically passed from CareWeb to the PDMP (via PMPi) to perform the query.
3. **PDMP Response and Documentation** – The PDMP data was saved as a PDF report and automatically integrated into the patient's history in CareWeb.

To access the PDMP data, the physician selected the link to the prescription drug history in the patient's record in CareWeb.

In 97% of the notes provided, prescribers indicated that the CareWeb/INSPECT integration was easier to use than the INSPECT web portal. 82% indicated that the PDMP data (in the formatted report) was valuable for clinical use.

Clinical

Over the month pilot period, prescribers could indicate whether the PDMP data had altered their planned prescribing pattern. In 58% of the responses, there was a reduction in either prescriptions written or number of pills. In 7% of the responses, there was an increase in either prescriptions written or number of pills.

In 72% of the cases in which notes were provided, the prescribers indicated that the PDMP data provided information that they were not otherwise aware of.

Technical

All development work was completed on time and on budget. Work included:

- Development of the interface from Regenstrief to PMPi
- Development of the code to post-process the PDMP data
- Enhancement of the CareWeb user interface to allow Wishard prescribers to view the PDMP data
- Enhancement of the CareWeb user interface to allow Wishard prescribers to note their reactions to the data

Discussion

The pilot test was a success from an ease of use, technical, and clinical perspective.

Fit with Workflow

Wishard clinical prescribers rely upon CareWeb to provide clinical details about their patients' past medical history and current test results, so they typically use it many times per day. Before this pilot test, PDMP data was not integrated into CareWeb so prescribers had to interrupt their usual workflow to access the INSPECT portal. In a busy Emergency Department, these extra steps created a significant barrier to accessing the PDMP data. By integrating the PDMP data into the CareWeb system, prescribers were able to access the PDMP data as part of their workflow. They overwhelmingly (greater than 97%) reported that the pilot system was easier to use than the INSPECT portal. One prescriber wrote: "I've never used INSPECT before (0 times) because of the extra step, but I have used on many patients in just a few shifts since this change."

Technical Impact

From a technical perspective, the implementation validated that the chosen deep integration approach was effective. The level of effort was comparable to other pilots and was completed in a similar time-frame. Therefore, the pilot team concludes that this is an approach that others should consider when planning a PDMP integration project.

Clinical Impact

The integration also had a positive clinical impact. In only 28% of the prescriber notes did the prescriber indicate that the PDMP data caused no change in their planned prescribing patterns. 58% of the notes indicated that the prescriber was reducing either the prescription or the number of pills. In other cases, the PDMP data reassured prescribers that they were working with valid patient data, which allowed them to prescribe with confidence. One prescriber

wrote: "It actually has helped mostly in quelling fears that a patient was receiving multiple controlled meds from multiple providers and usually made us more likely to agree to a request for controlled substance prescribing." This result indicates that using this technology, patients who need medication will be more likely to obtain it, while patients who don't need it will be less likely to be able to fraudulently obtain it.

Outcome and Next Steps

Regenstrief and Wishard Hospital are working with INSPECT to keep the connection established. The Indiana Board of Pharmacy has already approved keeping the connection established through the end of 2012. At the same time, other hospitals in the Indianapolis area have already inquired how they can have the same connection in their settings. We anticipate that Wishard's connectivity will be expanded to other Indianapolis-area sites in the coming months, beginning with hospitals that are connected to the Indiana Network for Patient Care (INPC).

Other Pilots

The Enhancing Access to PDMP project conducted five additional pilots in Fiscal Year 2012 which are available for review. The pilots encompass a variety of user groups, including dispensers (pharmacists) and prescribers (ambulatory and emergency department) as well as different technological solutions. These papers can be found at the Office of the National Coordinator for Health Information Technology (ONC) PDMP website: http://healthit.hhs.gov/portal/server.pt?open=512&mode=2&objID=3870.

Appendix A. Technical Considerations

The following sections contain a detailed description of the pilot design, including participants and technologies.

Participants

The following parties participated in the pilot:

- **Indiana Board of Pharmacy** (http://bop.in.gov/) – Provided oversight and legal consultation. They also operate the Indiana Scheduled Prescription Electronic Collection and Tracking (INSPECT) program, which is designed to serve as a tool to address the problem of prescription drug abuse and diversion in Indiana.
- **Wishard Memorial Hospital** (http://www.wishard.edu/) – A leading health care provider located in Indianapolis, IN, that offers a wide range of services at its 339-bed hospital and 10 community health centers. Wishard is a Level 1 Trauma Center and tertiary referral center, with over 106,000 emergency visits annually. The physician staff comprises over 30 attending faculty, over 60 emergency medicine residents, over 100 off-service residents (e.g., non-emergency medicine), and over 100 medical students that provide care to these patients.
- **Regenstrief Institute** (http://www.regenstrief.org/) – An internationally respected informatics and healthcare research organization located in Indianapolis, IN. Regenstrief provided software development expertise, clinical oversight, and project management.
- **National Association of Boards of Pharmacy** (NABP, http://nabp.net/) – An impartial professional organization located in Mount Prospect, IL, that supports state boards of pharmacy in creating uniform regulations to protect public health. NABP is responsible for the PMPi system that enabled access to INSPECT data.
- **Appriss, Inc.** (http://www.appriss.com/) – Located in Louisville, KY, Appriss develops and operates the PMPi system as a subcontractor to NABP. They collaborated with Regenstrief on the system integration.

Relevant Technologies and Tools

The following technologies and tools were vital components of the pilot.

Indiana Network for Patient Care (INPC)

INPC is a city-wide clinical informatics network operated by the Regenstrief Institute. INPC serves five hospital systems, including Wishard Hospital, in the Indianapolis area. More information is available at http://www.regenstrief.org/medinformatics/inpc.

CareWeb

CareWeb is a web-based EHR user interface to the INPC system. It is used by providers at INPC hospitals to access records stored in INPC.

Prescription Monitoring Program InterConnect (PMPi)

NABP's PMPi is a system that facilitates the secure sharing of data between state PMPs. The InterConnect rules engine allows each participating state the full autonomy to enforce its own rules and policies of data access when sharing with other states. InterConnect does not house any data but serves as a conduit. For security purposes, messages are encrypted by the sender so PMPi is incapable of reading the patient information. PMPi uses the PMIX messaging specification developed by the Bureau of Justice Assistance. PMPi serves as the application programming interface (API) for INSPECT in this pilot (seeing Regenstrief as a state), a role which was not envisioned during the design or rollout of this hub. This may introduce additional complexities for multi-state pilots. Note that this API configuration was seen in three pilots. More details are available at http://www.nabp.net/programs/assets/PMPInterconnectFactSheet.pdf.

Extensible Markup Language (XML)

XML is an open standard for defining data elements on both web pages and business-to-business documents. XML uses a similar tag structure as Hypertext Markup Language (HTML), but while the latter defines how elements are displayed, the former defines the contents of the elements. By providing a common method for identifying data, XML supports business-to-business transactions and has become a widely adopted format for electronic data interchange.

Testing

Regenstrief is the author and maintainer of the CareWeb/INPC system, and has been for many years. Thus, the Institute has developed internal test policies and procedures that may not be of use except for CareWeb/INPC development. In one area, however, their work could be generally useful. The PMPi uses strong encryption to protect the patient's health information in transit. As noted by one Regenstrief developer, "With encryption, everything has to be perfect, or the system fails spectacularly." They thus developed the PMPi interface code in two phases, with careful testing of each phase.

The first, exploratory phase involved setting up Regenstrief as a node in the PMPi network as a peer to the Indiana PDMP. Sample UNIX shell code was available that used the "openssl" toolkit to encrypt and create payloads. Using sample code, they were able to verify basic functionality and the encryption keys. Using the shell tool "wget", they began interacting with the test PMPI node, targeting the PMPI itself, the Indiana test PMP environment, and the Appriss Test PMP environment. Several issues of misconfiguration of the test PMPi simply had to be uncovered as they were encountered. Ultimately, it was highly productive for Appriss to share the private key of its test environment with Regenstrief so they could work through the small but important encryption details, including line breaks in the BASE64 payload encoding, and trailing spaces in the clear text of the Advanced Encryption Standard (AES) encryption key.

The shell tools were helpful in having explicit text files of the payload and clear text PMIX payloads that they were sharing.

User Interface

Wishard Emergency Department physicians use CareWeb to view patient data stored in the INPC system. Figure A-1 shows the patient "Start Page" that is the base page for a specific patient's data. The pilot test added the "INSPECT Drug Report" link in the lower left. This link was visible only to Wishard ED doctors.

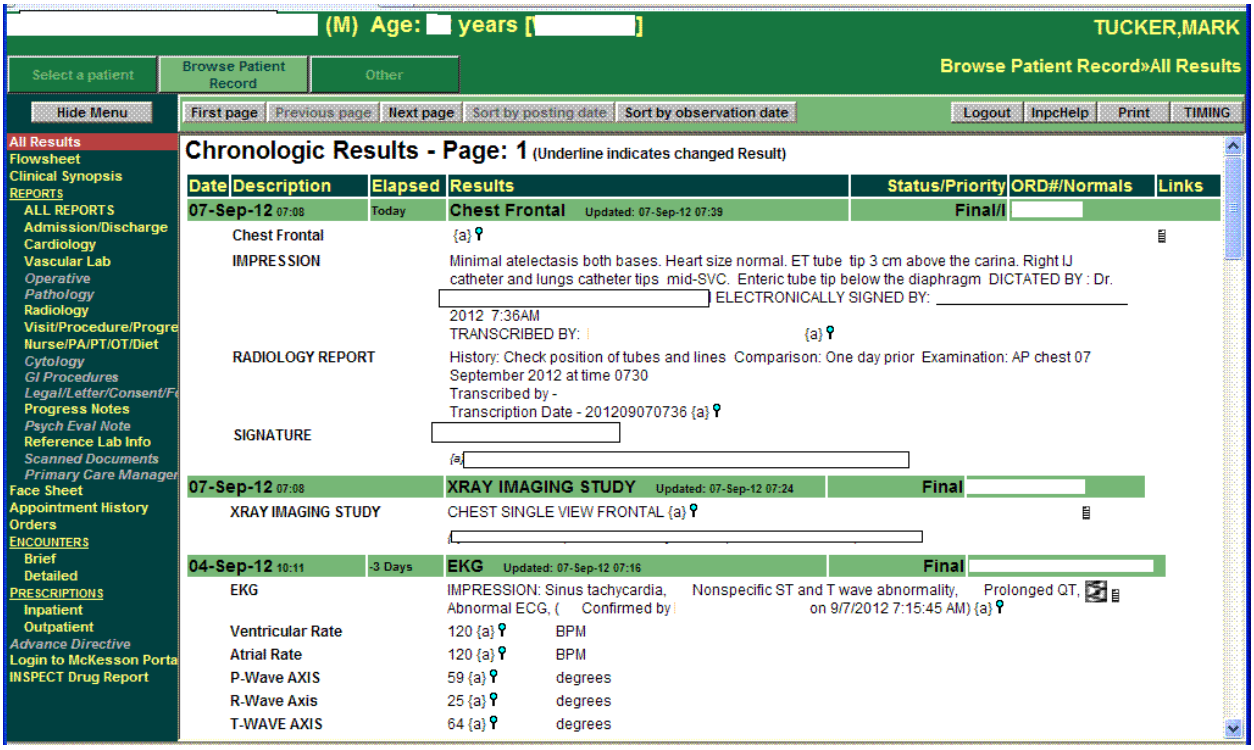
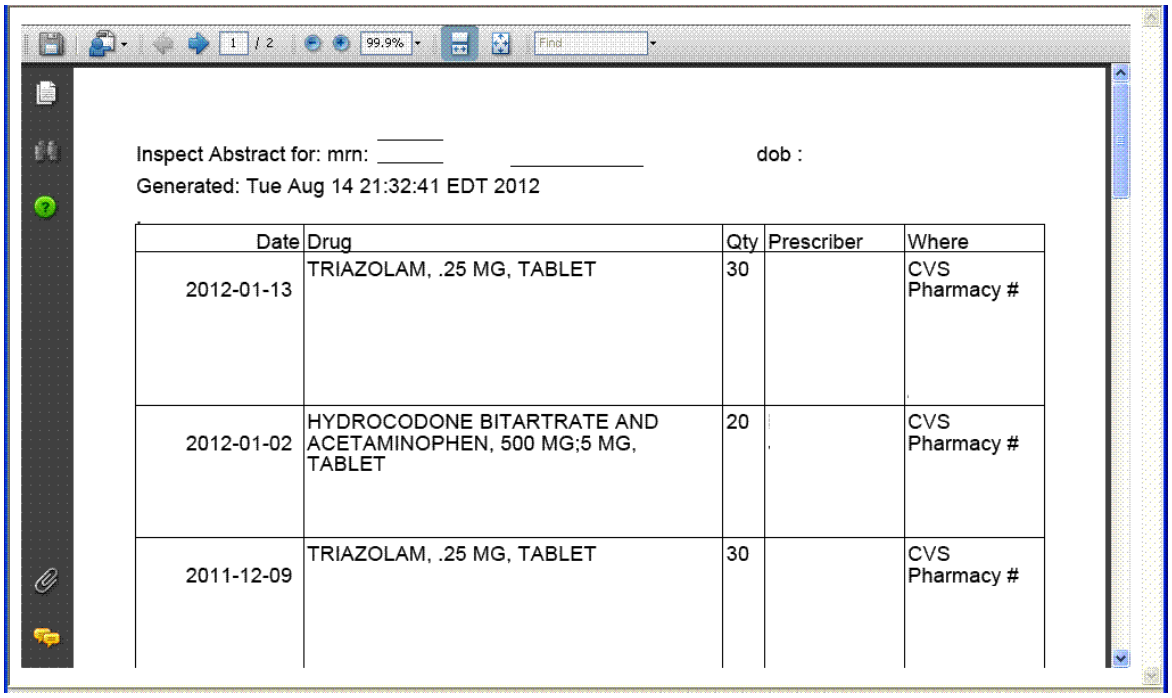


Figure A-1. CareWeb Patient "Start Page"

Reports are generated automatically upon patient arrival at Wishard's ED, so they are immediately available for providers to view. Figure A-2 shows a formatted report. It is based on data from INSPECT, but formatted by INPC.



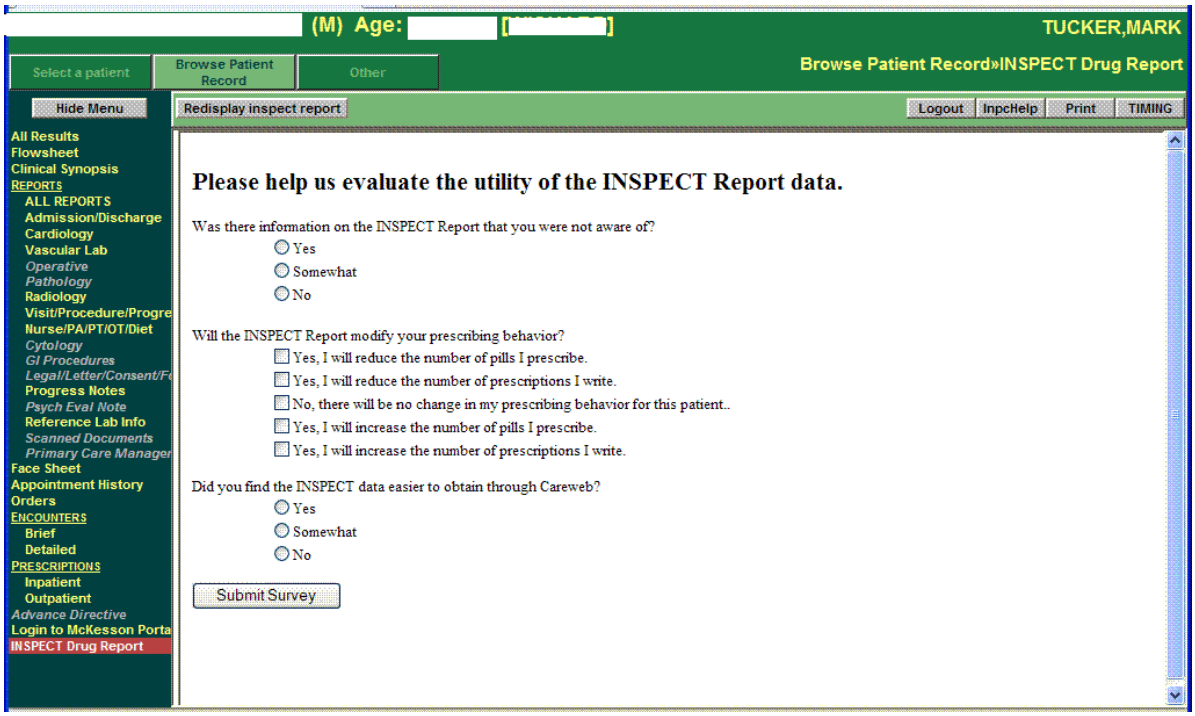
Inspect Abstract for: mrn: _____ _____ dob :

Generated: Tue Aug 14 21:32:41 EDT 2012

Date	Drug	Qty	Prescriber	Where
2012-01-13	TRIAZOLAM, .25 MG, TABLET	30		CVS Pharmacy #
2012-01-02	HYDROCODONE BITARTRATE AND ACETAMINOPHEN, 500 MG;5 MG, TABLET	20		CVS Pharmacy #
2011-12-09	TRIAZOLAM, .25 MG, TABLET	30		CVS Pharmacy #

Figure A-2. Formatted Drug Report

Prescribers have the option of adding notes to CareWeb to indicate if the INSPECT data has been helpful to them. They can choose to answer any of the questions, or they can choose not to leave notes. Figure A-3 shows this prescriber note screen.



(M) Age: [ ] TUCKER,MARK

Select a patient | Browse Patient Record | Other

Browse Patient Record»INSPECT Drug Report

Hide Menu | Redisplay inspect report | Logout | InpcHelp | Print | TIMING

All Results
Flowsheet
Clinical Synopsis
REPORTS
ALL REPORTS
Admission/Discharge
Cardiology
Vascular Lab
Operative
Pathology
Radiology
Visit/Procedure/Progre
Nurse/PA/PT/OT/Diet
Cytology
GI Procedures
Legal/Letter/Consent/F
Progress Notes
Psych Eval Note
Reference Lab Info
Scanned Documents
Primary Care Manager
Face Sheet
Appointment History
Orders
ENCOUNTERS
Brief
Detailed
PRESCRIPTIONS
Inpatient
Outpatient
Advance Directive
Login to McKesson Porta
INSPECT Drug Report

Please help us evaluate the utility of the INSPECT Report data.

Was there information on the INSPECT Report that you were not aware of?

- Yes
- Somewhat
- No

Will the INSPECT Report modify your prescribing behavior?

- Yes, I will reduce the number of pills I prescribe.
- Yes, I will reduce the number of prescriptions I write.
- No, there will be no change in my prescribing behavior for this patient..
- Yes, I will increase the number of pills I prescribe.
- Yes, I will increase the number of prescriptions I write.

Did you find the INSPECT data easier to obtain through Careweb?

- Yes
- Somewhat
- No

Submit Survey

Figure A-3. INSPECT Effectiveness Note Screen

Appendix B. Operational Considerations

Key Operational Considerations

- Because this was a limited-scope pilot test, only Wishard Hospital Emergency Department providers were given access to the PDMP data through CareWeb. CareWeb users in other INPC-participating hospitals did not have access.
- Queries to PMPi were configured to query only INSPECT, not other PDMPs that are connected to PMPi.
- The Indiana Board of Pharmacy was an active participant in planning and monitoring the pilot test.

Operational Advantages or Barriers

This pilot test had the advantage of having fewer participants than some of the other pilots, which reduced the project management complexity compared to those pilots. Also working in favor of a successful completion was the fact that Dr. J. T. Finnell is both a Regenstrief Institute researcher and an active ED physician at Wishard Hospital. Dr. Finnell was therefore able to advocate on behalf of the pilot test with both organizations.

The INPC system has been in development and operation for many years, which added difficulties to parts of the development effort. Some system components are still implemented using technologies that are far enough behind the state of the art to be considered "legacy" technologies: for example, VAX basic mixed with a very early, FRAMESET-based user interface framework. In some cases, tasks that would be considered easy with modern technologies were more complicated to accomplish than they would be with modern technologies.

Pilot Schedule

Task Name	Start	Finish	Duration
Planning	February 15, 2012	May 31, 2012	77 days
Coding	March 20, 2012	July 6, 2012	79 days
Execution/Monitoring	July 9, 2012	August 6, 2012	20 days
Post-Pilot Analysis/Report	August 7, 2012	August 31, 2012	19 days

Pilot Costs

Vendor	Services	Subcontract
Regenstrief Institute	Software Development Quality Assurance Project Management Pilot Communications Pilot Execution Clinical Oversight Clinical Functionality Development and Testing	$ 111,877

MITRE subcontracts are fixed price instruments. It is noted that no participants requested legal review costs for business (e.g., MITRE subcontract) and privacy-protection purposes. Other expenses also may have been insufficiently enumerated in this list, and regional cost factors may likewise play a role in the quoted prices. Thus, the actual cost of reproducing this pilot elsewhere may be more or less than this amount, even when attempting to exactly replicate these circumstances.

Appendix C. Legal Considerations

This section looks at the policy and regulatory considerations and obstacles, as well as the agreements implemented.

Policy and Regulatory Considerations

To successfully conduct the pilot on production systems, certain laws and policies need to be in place to support the pilot design. The following considerations were most applicable to this pilot:

- During the pilot planning phase, INSPECT management requested three policy approvals from the Indiana Board of Pharmacy:
    1. Allow INPC to authenticate with PMPi in a system-to-system fashion (as opposed to a user-to-system)
    2. Allow INPC to store INSPECT data
    3. Allow INPC to merge INSPECT data with prescription history data from other sources
- The Board of Pharmacy granted all three approvals. For testing purposes, however, INSPECT data was kept separate from other prescription history data.

Agreements Implemented

The only agreement implemented for this pilot was a NABP-Regenstrief Letter of Agreement (LOA).

Appendix D. Evaluation Methods

Evaluation Approach – Hypotheses and Specific Methods

The Federal Government and The MITRE Corporation conducted pilot studies, small-scale experiments, to test the feasibility of proposed workflows and evaluate their outcomes before investing resources in a full-scale, permanent implementation. These pilots provide valuable insights concerning time requirements, system challenges, and opportunities for process improvement—all of which can be addressed to improve final system design and performance success.

Evaluating the PDMP Pilots required a disciplined and consistent approach to examine the impact of the new or changed technical and clinical work process features toward achieving the following goals:

- **Workflow Logistics** – Providing the correct amount of the appropriate information, in proper condition, at the right place and time, in the necessary position/sequence
- **System Performance** – Achieving desired outcomes
- **Predicting Implementation Success** – Extrapolating the results to a larger system

MITRE's systematic analytic approach effectively consolidated these objectives into a set of three consistent evaluation themes: usability, impact, and scalability. The PDMP Pilots varied from simple to more complex health IT connectivity configurations to the PDMP, so testing afforded the opportunity to examine the different facets of performance along a continuum of technical sophistication (see Figure D-1).

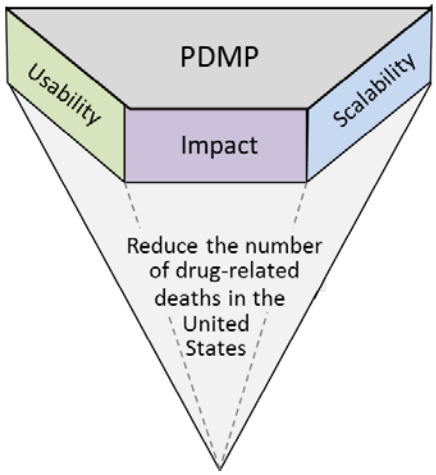


Figure D-1. Evaluation Themes

This appendix describes the three evaluation themes in detail. Each theme and its accompanying areas of interest, with associated evaluation metrics, were the basis for evaluation of the PDMP pilots.

Usability

The primary focus of the usability theme is the user's perspective. The following areas of interest concern the optimization of the care delivery experience and the efficiency in performing work processes by leveraging and maximizing technical integration:

- **Ease of Use** – Promoting easier and more efficient ways to access to the PDMP prescription drug data than the previous method for providers and dispensers
- **Fit With Workflow** – Natural integration into existing clinical and health IT workflows for providers and dispensers

Table D-1. Usability Analysis Features

Area of Interest	Evaluation Metrics	Data Source
Ease of Use	% reporting PDMP data provided was of acceptable quality for use	Participant Feedback (Solicited Response, Interview)
	% reporting PDMP data now easier to access (pilot versus prior methods)	Participant Feedback (Solicited Response, Interview)
	Distribution of previous methods used to access data	Identification of Methods / Logged System Data
Fit with Workflow	% indicating proper integration with position in workflow	Participant Feedback (Solicited Response, Interview)
	% indicating access to PDMP data was better than alternative option	Participant Feedback (Solicited Response, Interview)

Impact

The impact theme is meant to validate that the connectivity method to the PDMP was achieved and ultimately resulted in a positive impact to clinical care outcomes (reducing the number of prescription drug related deaths). The following areas of interest assess the technical and clinical impact:

- **Technical Impact** – Resulted in maximizing connections to existing technologies and increased queries to the PDMP data
- **Clinical Impact** – Resulted in timely and meaningful PDMP prescription drug information, readily available at the time of decision-making, that positively impacted care delivery to the patient

Table D-2. Impact Analysis Features

Area of Interest	Evaluation Metrics	Data Source
Technical Impact	% change in PDMP queries (pilot versus prior)	N/A
	Distribution of patients at threshold condition (at risk versus not at risk)	N/A
Clinical Impact	% satisfied with data provided in pilot configuration for clinical use	Participant Feedback (Solicited Response, Interview)
	% reporting change in treatment as result of better PDMP access	Participant Feedback (Solicited Response, Interview)
	% change in prescriptions for CS written or fulfilled (pilot versus prior)	Participant Feedback (Solicited Response, Interview)

Scalability

The scalability theme assessed the capability of the new work processes to be widely applied and accommodate growth in the existing system of providers and dispensers. The following areas of interest assessed how well participants adopted the new process and the degree to which it improved the existing workflow:

- **Driver of Adoption** – Accepted by the participants so that pilot drove further adoption by other sites or user groups (e.g., providers), if applicable
- **Optimization Factors** – Generated identifiable improvement opportunities to increase the usefulness and timely availability of PDMP prescription drug information

Table D-3. Scalability Analysis Features

Area of Interest	Evaluation Metrics	Data Source
Driver of Adoption	% wishing to continue to use the new process	Participant Feedback (Solicited Response, Interview)
	% willing to recommend the new process to their peers or colleagues	Participant Feedback (Solicited Response, Interview)
Optimization Factors	% able to identify specific, actionable steps to further refine process	Participant Feedback (Solicited Response, Interview)
	Distribution of specific suggestions for improvement	Participant Feedback (Solicited Response, Interview)

Anecdotal Results from Clinical Staff

"I have used INSPECT since its inception, while at Riverview and now at Wishard. It is invaluable tool when taking care of patients, whether it is identifying someone who is obtaining prescriptions from multiple sources or realizing someone has no significant history. This latter scenario, although less common, allows you to provide the analgesics necessary without any doubts. The major obstacle to using the database is the time needed to access the information. During a busy shift, it is not always possible to stop and access the website. Anything that puts this information in front of me quicker, or more simply, will only benefit patient care. I would encourage the Board of Pharmacy to pursue other creative ways to limit narcotic distribution through the ED such as 72 hour limits on ED prescriptions."

"I have an anecdote that I think illustrates how INSPECT has a concrete impact on patient care. Let me preface this by saying that I think the primary utility of having access to INSPECT is *NOT* punitive. I see it (and use it in my practice) as providing information that could directly lead to a point of intervention in patients who may have prescription drug abuse problems. I do not use INSPECT to "catch" patients in lies (although this sometimes happens, as you know). I use it to help treat them... which in some cases is for their drug abuse/addiction, not their presenting complaint/symptom.

I took care of a woman in her early 50's who presented for dental pain. She had no evidence of emergent medical issue related to her dental complaint. INSPECT report showed that she had filled 27 prescriptions for narcotics during June 2012 alone (with similar activity dating back over at least a year). I asked her about this and she ultimately admitted to having an opioid addiction, and I was able to counsel her and provide concrete outpatient drug abuse follow-up. She stated that no doctor had ever cared enough to look into her prescribing habits, and although she was tearful, she also expressed readiness to seek help for her addiction.

I was able to do an INSPECT search on this patient because the ED happened to be slow at the time she came in. Most of the rest of the time (ie when there are multiple patients waiting to be seen), I would not have taken the time to do the search, and I would have facilitated her underlying issue by prescribing *another* course of narcotics. Having INSPECT more readily accessible (i.e., via CareWeb) would allow us to get this important information quickly so that we can use it inreal-time."

"I and residents have found it very useful. It actually has helped mostly in quelling fears that a pt was receiving multiple controlled meds from multiple providers and usually made us more likely to agree to a request for controlled substance prescribing.

Thanks for arranging this. Please lobby to keep it."

“I have to say that this is probably one of the more genius moves of the 21st century...having easy access to INSPECT without going to a totally different website and have it pop up instantly has taken a lot of time off of decision making for me. Thanks for spearheading it.”

“Do you need specific case anecdotes or just for me to say that it's great! I've never used INSPECT before (0 times) because of the extra step, but I have used on many patients in just a few shifts since this change.”

“It is incredibly useful, but really just for the obvious reasons, because it removes the difficulty of the external search, which was cumbersome.”

“Extremely helpful in identifying at risk pts - those who are misrepresenting the amount or type of controlled substances prescribed and conversely, finding a pt with gray zone Sx who has little or no prior activity.

I routinely look at this from pts with non-traumatic pain w/o objective physical exam findings - abd pain, back pain, etc.”

Appendix E. Acronyms

AES	Advanced Encryption Standard
API	Application Programming Interface
ED	Emergency Department
EHR	Electronic Health Record
HTML	Hypertext Markup Language
INPC	Indiana Network For Patient Care
INSPECT	Indiana's Scheduled Prescription Electronic Collection & Tracking
LOA	Letter of Agreement
NABP	National Association of Boards of Pharmacy
ONC	Office of the National Coordinator for Health Information Technology
PDMP	Prescription Drug Monitoring Program
PMPi	Prescription Monitoring Program Interconnect
XML	Extensible Markup Language