Enhancing Access to Prescription Drug Monitoring Programs

Technical Framework for Interoperability
Meeting Purpose

- Briefing of S&I PDMP work to date

- Demonstration of EHR-PDMP Integrated Open Source (E-PIOS)
  - Reference Implementation for PDMP-to-EHR automated exchange of prescription drug information for a patient

**Note** – Because this meeting is not accessible to the public, no S&I decisions will be made. Relevant points from the discussion will be summarized and posted to the PDMP Google Group so S&I PDMP members can provide input to the S&I process.
# The Team

<table>
<thead>
<tr>
<th>Logo</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>
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The Problem

- The Centers for Disease Control and Prevention (CDC) declared that deaths from prescription painkillers now outnumber deaths from heroin and cocaine combined.

- Prescription drug abuse death is one of the fastest growing public health epidemics, outpacing deaths from traffic fatalities.
Many states established PDMPs to address the prescription drug abuse problem

Purpose: To reduce prescription drug abuse and diversion

What: Statewide electronic databases
  – Collect, monitor, and analyze electronically transmitted dispensing data on controlled substances.

Who: Authorized healthcare professionals
  – Physicians (known as prescribers)
  – Pharmacists (known as dispensers)
  – Other authorized healthcare professionals
Focus of This Discussion

- Underutilized by clinical decision-makers
- Lack of connections to health IT

 PDMP

- Facilitate consensus standard protocol for PDMP/EHR data exchange
- Develop Open Source protocol test bed

Prescribers
Overall Project Goals

Work Groups

Provide recommendations and pilot input

Connect PDMPs to health IT with existing technologies

Improve timely access to PDMP data

Establish standards for facilitating information exchange

Pilots

Test the feasibility of using health IT to enhance PDMP access

Reduce prescription drug misuse and overdose in the United States
S&I Framework Initiative
PDMP S&I Community: Focus/Scope

- **Need for standards:**
  - Data format and content, transport and security protocols
PDMP S&I Community: First Goal

- Evaluate data format standard for exchanging patient information between PDMP and provider EHR systems

- Standards proposed and evaluated by the group:
  - ASAP Web Service
  - Consolidated CDA
  - NCPDP Medication History Request/Response
  - PMIX PDMP Schemas (based on NIEM)*

* American Society for Automation in Pharmacy (ASAP), Clinical Document Architecture (CDA), National Council for Prescription Drug Programs (NCDP) and PMP Information Architecture (PMIX) Prescription Drug Monitoring Program (PDMP), National Information Exchange Model (NIEM)
## Qualities for Assessing Data Format Options

<table>
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<tr>
<th>Criteria</th>
<th>Weighted Value</th>
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<tbody>
<tr>
<td>Availability of an XML format</td>
<td>3</td>
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<tr>
<td>Ease of adoption and integration by EHRs/HIEs – includes technical complexity</td>
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<tr>
<td>Speed of adoption into the EHR/HIE Ecosystem – how widely used is it, plus others</td>
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<tr>
<td>Wide use of the XML version of the format</td>
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<td>Suitability for the PDMP-to-EHR Patient Encounter Use</td>
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<tr>
<td>Case – coverage of necessary data elements</td>
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<tr>
<td>Separation of transport and content</td>
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<td>Speed of adoption into the PDMP Ecosystem</td>
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<td>Available at no cost</td>
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<td>Accredited standards body</td>
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<tr>
<td>Ease of adoption and integration by PDMPs</td>
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3 = Very Important, 2 = Important, 1 = Less Important
# Standards Assessment per Quality Attribute

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<td><strong>TOTAL SCORE</strong></td>
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PDMP S&I: Still to Do

- Develop recommendation on standard for data format and content

- Explore transport standards – We need binding for different architectural styles (and implementations)
  - Push (Direct)
  - Remote Procedure Call [RPC] (SOAP)
  - RESTful
    - FHIR: Fast Healthcare Interoperability Resources
    - hData
Open Source Reference Implementation
PDMP/EHR Exchange Reference Implementation

Customized Open Source EHR client
- Submit requests over the web as a natural part of the EHR workflow
- Take in standardized healthcare documents

OpenMRS Module
- Requests using OpenSearch
- Display prescriptions in custom tab on patient dashboard (in-workflow)

PDMP Test Bed
- Accepts OpenSearch (like Amazon.com, most web browsers)
- Respond with standardized healthcare documents

PDMP Test Bed Implementation
- Receive requests over the web
- Respond with standardized healthcare documents

Enable interoperability between EHR and PDMP
Value to the PDMP Community

1. Reference Implementation

OpenMRS

EHR vendors have free access to Open Source repository for OpenMRS source code

PDMP Test Bed

PDMP vendors have free access to Open Source repository for test bed source code

2. Field Testing and Validation

EHR Vendors

3. Operation

PDMP Vendors

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Testbed Demonstration
Discussion