PMIX National Architecture: Advancing Interstate Data Sharing Through Standardization and Innovation

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Overview

• PMIX Goals
• PMIX National Architecture
• Interstate Data Sharing Update
• RxCheck
• RxSentry Exchange
• PMP Interconnect

• Interoperability Challenge
• Interoperability Solution
• PMIX PMPi Proxy Deployment
• Interoperability Next Steps
• Springboard Program
• PMIX Springboard
Prescription Monitoring Information Exchange

• Prescription monitoring programs (PMPs) are among the most effective tools available to identify and prevent drug diversion
• PMP Information Exchange (PMIX) enables secure, reliable, sustainable interstate and intrastate exchange of prescription drug history
PMIX Goals

• Facilitate PMP systems exchange of prescription history reports with other PMP systems and other authorized organizations using appropriate data and information exchange standards
• Define high-level security requirements for information exchanges
• Provide PMP interoperability execution infrastructure for security related functions and exchange-facilitating intermediate hubs
PMIX Architecture Principles

• PMP-to-PMP security and privacy using Public Key Infrastructure (PKI)
• National Information Exchange Model (NIEM) data and metadata
• Hub to hub capability
• Industry standard Web Services using the Global Reference Architecture (GRA) Profile
PMP-to-PMP Security

• End-to-end encryption of all Protected Health Information (PHI) and Personally Identifiable Information (PII)
• Encryption/decryption occurs only at the endpoints of each exchange transaction, which limits the potential risk of disclosure en route
• Data encrypted in accordance with NIST encryption standard
RxCheck

- PMIX Architecture reference implementation
- Operational with Kentucky and Health Information Designs RxSentry Exchange
- Currently hosted by IJIS Institute along with the PMIX Directory
- Publicly available software with Java and .NET reference implementations
- Includes State Routing Service which can serve as an intrastate hub for system-to-system PMP data sharing
RxSentry Exchange

- RxSentry Exchange is based on the RxCheck reference implementation
- Potential to allow data sharing directly with 20+ HID customer states as well as RxCheck and other PMPi states
- First system to be certified as PMIX conformant using Springboard
- RxSentry states, Alabama and South Carolina, are scheduled to be the first interoperable PMIX PMPi states
PMPi - PMP Interconnect

- Interstate data exchange hub sponsored by the National Association of Boards of Pharmacy
- 2,500,000+ requests processed
- 16 states using PMP InterConnect
PMIX PMPi Interoperability Benefits

• Faster adoption and implementation of PMP information sharing
  • Provides clear implementation path for State PMP administrators regardless of hub plans
  • Easier PMP onboarding
• Hub access decisions based on business benefits rather than technology constraints or immediate sharing needs
Interoperability Challenge – PMPi & PMIX

**PMIX**
- PMP-to-PMP security
- NIST encryption with XML encryption
- NIEM
- Hub-to-hub design
- Standard web services

**Challenge**
- ☑ NIEM
- ☑ Hub-to-hub
- □

**PMPi**
- PMP-to-PMP security
- NIST encryption only
- NIEM
- Hub-to-hub feasible
- RESTful web services
Interoperability Solution – PMPi & PMIX

**PMIX**
- PMP-to-PMP security
- NIST encryption with XML encryption
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- Hub-to-hub design
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**Solution**
- Double encryption
- NIEM
- Hub-to-hub
- Web service Proxy

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- PMP-to-PMP security
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PMIX PMPi Proxy with Double Encryption

PMIX National Architecture
Springboard

• A standards-based interoperability partnership program managed by the IJIS Institute
• Providing a shared resource venue for industry to work with government to evaluate, test and certify use of information sharing and interoperability standards
• Designed to help advance information sharing in the justice, public safety, health and homeland security operational environments
• RxSentry was the first product to be certified as PMIX Springboard conformant
PMIX Springboard Testing Capabilities

- PMIX Springboard provides functional tests
- Tests are fully automated with formal reports
- PMIX Springboard available for state PMIX testing including interactive forms based console
PMIX Springboard Report

PMIX Testing

Conformance - Positive Summary

TestStep Results

PMIX National Architecture
Interoperability Next Steps

- Complete final testing of the PMIX PMPi Proxy
- Deploy production PMIX PMPi Proxy
- Deploy updated State Routing Service at RxSentry to support double encryption
- Proceed with production PMP sharing between Alabama (RxSentry/PMIX) and South Carolina (PMPi)
- Develop automated administrative tools, e.g. PMIX PMPi automated public key exchange
Interstate Data Sharing 2013

[Diagram showing interstate data sharing with connections between different states, indicating data sharing models such as PMPi, RxCheck, RxSentry eXchange, and PMPi through RxSentry.]
Interstate Data Sharing 2013

Connection Status
Production Planned

HID RxSentry States
(includes States Accessing PMPI and RxCheck through the RxSentry Exchange)

NABP PMPI connected States

RxCheck connected States

Note: States may have the technical "path" and capability to interconnect to another State but may not have authorizing MOUs to allow sharing
Potential PMIX HIE Integration