History of the Architecture

- The PMIX National Architecture is a nationwide framework designed to enable standards-based sharing of information between Prescription Drug Monitoring Program (PDMP) organizations and their stakeholders.
- The Bureau of Justice Assistance facilitated a committee to create an architecture for the exchange of information between state PDMPs.
- Piloted in 2011 and first states LIVE in 2012.
PMIX Architecture Summary

- **Common Data Elements:**
  - Though we may not call them the same things or collect all of the same data, we agree on what we share and what we call it when we are sharing.

- **Common Format:**
  - We use agreed upon schemas to exchange so that data elements are identified and located at an agreed upon place in the XML exchange.

- **Security:**
  - Data is secure from the requestor to the responder and vice versa. The intermediaries do not have access to the confidential data.

- **State Choice and Flexibility**
BJA convened a group of representatives with the goal of creating a state ‘owned’ committee to govern the architecture in early 2014. The group was facilitated by TTAC.

- AL, CA, FL, ME, MT, OH, OK, VA, WA, WI

- Create a representative governance structure for the architecture.

- Discuss opportunities and concerns related to interstate data sharing.
Guiding Principles

Guiding Principles in order to foster prescription drug information sharing across all Federal, State, Tribal, and approved third party entities in accordance with the PMIX National Architecture.

- Protect state’s full rights and control of Data Ownership.
- Promote the adoption of security standards that protect the confidentiality, integrity, and availability of the data in transit and at rest.
- Promote fair, open and transparent competition in the selection of IT Solution providers that provide the best value products or services to PDMP participating states, while maintaining the public’s trust and fulfilling public policy objectives.
- Promote uniformity in the selection of a limited set of approved common data standards.
The purpose of the PMIX Standards Organization is to support the sharing of PDMP Data among PDMP organizations and their stakeholders by establishing and maintaining the PMIX National Architecture and related guidelines, policies and standards to minimize the cost and complexity of sharing PDMP data across organizational, vendor, geographic and operational boundaries; enable secure, trusted exchanges of PDMP data and promote consistency among PDMPs.
Since inception, PMIX has been based on the National Information Exchange Model.

What is NIEM?
- NIEM is used by the majority of federal agencies and all 50 states to some degree.
- A XML-based information exchange framework that defines a catalogue of common data elements, schemas and meta data to share information.
- For more information on NIEM, go to NIEM.gov

What is XML?
- XML is a language that defines data in a textual format that is readable by humans and machines.
Understanding the Architecture

- **What are the data elements?**
  - Combination of commonly defined data from the NIEM catalogue (NC) and data specific to PDMPs (PMP)
  - Started with the data used by pharmacies to submit prescription records (ASAP)
  - Mapped to NC data elements where available and created PMP fields where necessary

- **What is an XML schema?**
  - It defines the structure of a particular XML ‘document’.

- **What is the metadata?**
  - Data about the data, it defines the content.
How does it all work together?
How does it work together?

Data Elements

Schema

Metadata
Current Standards

• Actively Used Schemas
  ○ Request Schemas – Sends patient specific data to a state
    ➢ Comprehensive Request schema
  ○ Response Schema – Return Rx data to requestor
    ➢ Prescription Report PMP Exchange schema
  ○ MetaData Schema – Sends Requestor and routing information
  ○ Response Status Schema – Communicates a response when no data is sent
Comprehensive Request Sample

```xml
<?xml version="1.0" encoding="UTF-8"?>
  <RequestPrescriptionDateRangeBegin>1967-08-13</RequestPrescriptionDateRangeBegin>
  <RequestPrescriptionDateRangeEnd>1967-08-13</RequestPrescriptionDateRangeEnd>
  <RequestPatient>
    <PersonBirthDate>1967-08-13</PersonBirthDate>
    <PersonName>
      <PersonPrefixText>String</PersonPrefixText>
      <PersonGivenName>String</PersonGivenName>
      <PersonMiddleName>String</PersonMiddleName>
      <PersonSurName>String</PersonSurName>
      <PersonNameSuffixText>String</PersonNameSuffixText>
    </PersonName>
    <PersonSSNIdentification>
      <IdentificationID>String</IdentificationID>
      <IdentificationJurisdictionText>String</IdentificationJurisdictionText>
    </PersonSSNIdentification>
  </RequestPatient>
</Request>
```
Proposed Changes to the PMIX Architecture

- Comprehensive Request Schema
  - Remove the Prefix field
    - nc:PersonNamePrefixText
  - Remove the Full Name field
    - nc:PersonFullName
Current Comprehensive Request Schema

```xml
<?xml version="1.0" encoding="UTF-8"?>
  <pmx:RequestPrescriptionDateRange>
    <pmx:RequestPrescriptionDateRangeBegin>1967-08-13</pmx:RequestPrescriptionDateRangeBegin>
    <pmx:RequestPrescriptionDateRangeEnd>1967-08-13</pmx:RequestPrescriptionDateRangeEnd>
  </pmx:RequestPrescriptionDateRange>
  <pmx:RequestPatient>
    <nc:PersonBirthDate>
      <nc:Date>1967-08-13</nc:Date>
    </nc:PersonBirthDate>
    <nc:PersonName>
      <nc:PersonNamePrefix>String</nc:PersonNamePrefix>
      <nc:PersonGivenName>String</nc:PersonGivenName>
      <nc:PersonMiddleName>String</nc:PersonMiddleName>
      <nc:PersonSurName>String</nc:PersonSurName>
      <nc:PersonNameSuffix>String</nc:PersonNameSuffix>
    </nc:PersonName>
    <nc:PersonSexCode>'U'</nc:PersonSexCode>
    <nc:PersonSSNIdentification>
      <nc:IdentificationID>String</nc:IdentificationID>
      <nc:IdentificationJurisdictionText>String</nc:IdentificationJurisdictionText>
    </nc:PersonSSNIdentification>
    <pmx:PersonPrimaryContactInformation>
      <nc:ContactTelephoneNumber>
        <nc:FullTelephoneNumber>
          <nc:PhoneNumberId>String</nc:PhoneNumberId>
        </nc:FullTelephoneNumber>
      </nc:ContactTelephoneNumber>
      <nc:ContactMailingAddress>
        <nc:StructuredAddress>
          <nc:LocationStreet>
            <nc:StreetFullText>String</nc:StreetFullText>
          </nc:LocationStreet>
          <nc:LocationCityName>String</nc:LocationCityName>
          <nc:LocationStateUSPostalServiceCode>NV</nc:LocationStateUSPostalServiceCode>
          <nc:LocationPostalCode>String</nc:LocationPostalCode>
          <nc:LocationPostalExtensionCode>String</nc:LocationPostalExtensionCode>
        </nc:StructuredAddress>
      </nc:ContactMailingAddress>
      <pmx:PersonStateIssuedIdentifier>
        <nc:IdentificationID>String</nc:IdentificationID>
        <nc:IdentificationJurisdictionText>String</nc:IdentificationJurisdictionText>
      </pmx:PersonStateIssuedIdentifier>
      <nc:SpeciesCode>01</nc:SpeciesCode>
      <nc:PatientLocationCode>01</nc:PatientLocationCode>
      <nc:PatientNameOfAnimalText>String</nc:PatientNameOfAnimalText>
    </pmx:PersonPrimaryContactInformation>
  </pmx:RequestPatient>
</pmx:PMRequest>
```
Future Comprehensive Request Schema
Proposed Changes to the PMIX Architecture

- Prescription Report PMP Exchange schema
  - Remove the Prefix field
    - nc:PersonNamePrefixText
  - Remove the Full Name field
    - nc:PersonFullName
  - Add fields available in ASAP 4.2B
    - **PrescribedQuantity (A):** Allows the exchange of the quantity prescribed if collected.
    - **RxSIGText (B):** Allows the Prescription instructions to be shared.
    - **ICD-10DiagnosticCodeText (C):** Allows state to share ICD 10 codes associated with the Prescription Record.
    - **XDEAIndicator (D):** True = DEA number is an XDEA number, False = DEA is not an XDEA number
    - **Added New Code 06 to the code table of TransmissionFormOfRxOriginCode (E):** Add code per ASAP latest version.
    - **Added PersonVendorIdentifier to nc:IdentificationType:** Identifies a person using and ID number provided by a vendor and the vendor which has jurisdiction over the id.
    - **OpioidTreatmentCategoryCode (F):** Allows the exchange of a code to identify the reason for the opioid prescription.
  - pmp:PatientAlertCategoryCode: This is a code list below that identifies the type of alert the may be contained in a text field. This allows states to choose whether to use the information in the text field.
  - pmp:PatientAlertDescriptionText: This field contains the actual text per the sending state
Current Prescription Report Schema

```xml
<?xml version="1.0" encoding="UTF-8"?>

<pmx:RequestResponsePrescriptionReport>
  <pmx:PMPPrescriptionReport>
    <pmx:DocumentPublicationTime>14:20:00.02</pmx:DocumentPublicationTime>
    <pmx:PMPPrescriptionReport>
      <pmx:ReportExecutionTime>14:20:00.02</pmx:ReportExecutionTime>
      <pmx:ReportDateRangeBegin>1967-08-13</pmx:ReportDateRangeBegin>
      <pmx:ReportDateRangeBegin>1967-08-13</pmx:ReportDateRangeBegin>
      <pmx:ReportDateRangeEnd>1967-08-13</pmx:ReportDateRangeEnd>
      <pmx:ReportDateRangeEnd>
        <pmx:Dispenser>
          <nc:OrganizationDoingBusinessAsName>String</nc:OrganizationDoingBusinessAsName>
          <nc:OrganizationLocation>
            <nc:LocationAddress>
              <nc:StructuredAddress>
                <nc:StreetFullText>String</nc:StreetFullText>
                <nc:LocationStreet>String</nc:LocationStreet>
                <nc:LocationCityName>String</nc:LocationCityName>
                <nc:LocationStateUSPostalServiceCode>OH</nc:LocationStateUSPostalServiceCode>
                <nc:LocationPostalCode>String</nc:LocationPostalCode>
                <nc:LocationPostalExtensionCode>String</nc:LocationPostalExtensionCode>
              </nc:StructuredAddress>
            </nc:LocationAddress>
            <nc:OrganizationName>String</nc:OrganizationName>
            <nc:OrganizationPrimaryContactInformation>
              <nc:ContactTelephoneNumber>
                <nc:FullTelephoneNumber>String</nc:FullTelephoneNumber>
                <nc:ContactTelephoneNumber/>
              </nc:ContactTelephoneNumber>
              <nc:ContactEntity>
                <nc:EntityOrganization>
                  <nc:OrganizationDoingBusinessAsName>String</nc:OrganizationDoingBusinessAsName>
                  <nc:OrganizationLocation>
                    <nc:LocationAddress>
                      <nc:StructuredAddress>
                        <nc:StreetFullText>String</nc:StreetFullText>
                        <nc:LocationStreet>String</nc:LocationStreet>
                        <nc:LocationCityName>String</nc:LocationCityName>
                        <nc:LocationStateUSPostalServiceCode>M1</nc:LocationStateUSPostalServiceCode>
                        <nc:LocationPostalCode>String</nc:LocationPostalCode>
                        <nc:LocationPostalExtensionCode>String</nc:LocationPostalExtensionCode>
                      </nc:StructuredAddress>
                    </nc:LocationAddress>
                  </nc:OrganizationLocation>
                </nc:EntityOrganization>
              </nc:ContactEntity>
            </nc:OrganizationPrimaryContactInformation>
          </nc:OrganizationLocation>
        </pmx:Dispenser>
      </pmx:ReportDateRangeEnd>
    </pmx:ReportDateRangeBegin>
  </pmx:PMPPrescriptionReport>
</pmx:RequestResponsePrescriptionReport>
```
Current Prescription Report Schema

```xml
<nc:EntityOrganization>
  <nc:ContactEntity>
    <nc:OrganizationPrimaryContactInformation>
      <pmp:NPIdentifier>
        <nc:IdentificationID><String/></nc:IdentificationID>
        <nc:IdentificationJurisdictionText><String/></nc:IdentificationJurisdictionText>
      </pmp:NPIdentifier>
      <pmp:DEANumberIdentifier>
        <nc:IdentificationID><String/></nc:IdentificationID>
        <nc:IdentificationJurisdictionText><String/></nc:IdentificationJurisdictionText>
      </pmp:DEANumberIdentifier>
      <pmp:StateLicenseIdentifier>
        <nc:IdentificationID><String/></nc:IdentificationID>
      </pmp:StateLicenseIdentifier>
      <pmp:NCPDPIdentifier>
        <nc:IdentificationID><String/></nc:IdentificationID>
        <nc:IdentificationJurisdictionText><String/></nc:IdentificationJurisdictionText>
      </pmp:NCPDPIdentifier>
      <pmp:ContactNameText><String/></pmp:ContactNameText>
      <pmp:ChainSiteIDText><String/></pmp:ChainSiteIDText>
      <pmp:Distributor>
        <nc:PrescriptionNumberText><String/></nc:PrescriptionNumberText>
        <pmp:DrugRefillNumberCount>1</pmp:DrugRefillNumberCount>
        <pmp:Dispenser>
          <nc:PrescriptionFilledDate><Date>1967-08-13</Date></nc:PrescriptionFilledDate>
        </pmp:Dispenser>
      </pmp:Patient>
      <nc:PersonBirthDate><Date>1967-08-13</Date></nc:PersonBirthDate>
      <nc:PersonName>
        <nc:PersonPrefixText><String/></nc:PersonPrefixText>
        <nc:PersonGivenName><String/></nc:PersonGivenName>
        <nc:PersonMiddleName><String/></nc:PersonMiddleName>
        <nc:PersonSuffixText><String/></nc:PersonSuffixText>
        <nc:PersonFullname><String/></nc:PersonFullname>
      </nc:PersonName>
    </nc:OrganizationPrimaryContactInformation>
    <nc:PersonSexCode><U/></nc:PersonSexCode>
    <nc:PersonSSNIdentification>
      <nc:IdentificationID><String/></nc:IdentificationID>
      <nc:IdentificationJurisdictionText><String/></nc:IdentificationJurisdictionText>
    </nc:PersonSSNIdentification>
  </nc:ContactEntity>
</nc:EntityOrganization>
```
Future Prescription Report Schema

- **XDEAIndicator (D):** True = DEA number is an XDEA number, False = DEA is not an XDEA number
Current Prescription Report Schema

```xml
<nc:StructuredAddress/>
</nc:ContactMailingAddress>
</pmp:PersonPrimaryContactInformation>
</pmp:PersonIssuedIdentifier>
</nc:IdentificationJurisdictionText>
</pmp:PersonSpecifiedIdentifier>
<nc:SpeciesCode>01</nc:SpeciesCode>
<pmp:PatientLocationCode>11</pmp:PatientLocationCode>
<pmp:PatientNameOfAnimalText>String</pmp:PatientNameOfAnimalText>
</pmp:Patient>
</nc:PersonName>
<nc:PersonNamePrefixText>String</nc:PersonNamePrefixText>
<nc:PersonGivenName>String</nc:PersonGivenName>
<nc:PersonMiddleName>String</nc:PersonMiddleName>
<nc:PersonSurname>String</nc:PersonSurname>
<nc:PersonNameSuffixText>String</nc:PersonNameSuffixText>
<nc:PersonFullName>String</nc:PersonFullName>
</nc:PersonName>
</nc:PersonNamePrefixText>
</pmp:ContactTelephoneNumber>
</nc:FullTelephoneNumber>
</nc:ContactTelephoneNumber>
</nc:ContactEntity>
<nc:OrganizationDoingBusinessAsName>String</nc:OrganizationDoingBusinessAsName>
</nc:Organization>
</nc:StructuredAddress>
</nc:LocationAddress>
</nc:StreetFullText>
</nc:LocationStreet>
</nc:LocationCityName>
<nc:LocationStateUSPostalServiceCode>AT</nc:LocationStateUSPostalServiceCode>
<nc:LocationPostalCode>String</nc:LocationPostalCode>
<nc:LocationPostalExtensionCode>String</nc:LocationPostalExtensionCode>
</nc:StructuredAddress>
</nc:LocationAddress>
<nc:OrganizationName>String</nc:OrganizationName>
</nc:EntityOrganization>
</nc:ContactEntity>
</pmp:PersonPrimaryContactInformation>
</pmp:NPIIdentifier>
<nc:IdentificationJurisdictionText>String</nc:IdentificationJurisdictionText>
</pmp:NPIIdentifier>
```
Future Prescription Response Schema

- pmp:PatientAlertCategoryCode: This is a code list below that identifies the type of alert the may be contained in a text field. This allows states to choose whether to use the information in the text field.
- pmp:PatientAlertDescriptionText: This field contains the actual text per the sending state

```xml
<pmp:specieSpecies>01</pmp:specieSpecies>
<pmp:PatientLocationCode>01</pmp:PatientLocationCode>
<pmp:PatientNameOfAnimalText>String</pmp:PatientNameOfAnimalText>
<pmp:PatientAlert>
  <pmp:PatientAlertDescriptionText>String</pmp:PatientAlertDescriptionText>
  <pmp:PatientAlertCategoryCode>01</pmp:PatientAlertCategoryCode>
</pmp:PatientAlert>
```
Patient Alert Category Codes

- 01: Suspected non-fatal overdose alert
- 02: Suspected fatal overdose alert
- 03: Doctor/pharmacy shopping alert
- 04: Benzo and opiate overlapping prescription alert
- 05: MME alert (e.g. MMEs within certain range considered to by high risk)
- 06: Marijuana alert (e.g. participant in medical marijuana registry)
- 07: Prescribing practice alert (e.g. prescribing opioids more than 30 days, greater than 640 patients in month)
- 08: Dispensing practice alert (e.g. early refills, multiple same day)
- 09: Naloxone dispensing alert
- 10: Conviction alert (e.g. felony convictions)
- 11: Law Enforcement alert (e.g. stolen prescriptions)
- 12: Patient contract alert (e.g. lock-in programs, pain/treatment contracts)
- 99: Unspecified Alert (defined by the sending PDMP)
Current Prescription Report Schema

- <pmp:DEANumberIdentifier>
  <nc:IdentificationID>String</nc:IdentificationID>
  <nc:IdentificationJurisdictionText>String</nc:IdentificationJurisdictionText>
</pmp:DEANumberIdentifier>
- <pmp:PrescriberDEANumberSuffixText>String</pmp:PrescriberDEANumberSuffixText>
- <pmp:StateLicenseIdentifier>
  <nc:IdentificationID>String</nc:IdentificationID>
  <nc:IdentificationJurisdictionText>String</nc:IdentificationJurisdictionText>
</pmp:StateLicenseIdentifier>
- <pmp:Prescriber>
  <nc:Date>1967-08-13</nc:Date>
</pmp:PrescriberWrittenDate>
- <pmp:PrescriptionDrug>
  <pmp:DrugUPNProductIdentifier>
    <nc:IdentificationID>String</nc:IdentificationID>
    <nc:IdentificationJurisdictionText>String</nc:IdentificationJurisdictionText>
  </pmp:DrugUPNProductIdentifier>
  <pmp:DrugProductNameText>String</pmp:DrugProductNameText>
  <pmp:DrugStrengthText>String</pmp:DrugStrengthText>
  <pmp:DrugUnitOfMeasureText>String</pmp:DrugUnitOfMeasureText>
  <pmp:DEAClassScheduleText>String</pmp:DEAClassScheduleText>
</pmp:PrescriptionDrug>
- <pmp:CompoundDrugIngredient>
  <pmp:CompoundDrugIngredientSequenceNumber>1</pmp:CompoundDrugIngredientSequenceNumber>
  <pmp:CompoundDrugIngredientNDCProductIdentifier>
    <nc:IdentificationID>String</nc:IdentificationID>
    <nc:IdentificationJurisdictionText>String</nc:IdentificationJurisdictionText>
  </pmp:CompoundDrugIngredientNDCProductIdentifier>
  <pmp:CompoundDrugIngredientProductNameText>String</pmp:CompoundDrugIngredientProductNameText>
  <pmp:CompoundDrugIngredientStrengthText>String</pmp:CompoundDrugIngredientStrengthText>
  <pmp:CompoundDrugIngredientDEAClassScheduleText>String</pmp:CompoundDrugIngredientDEAClassScheduleText>
  <pmp:IngredientQuantity>1.1</pmp:IngredientQuantity>
  <pmp:CompoundDrugIngredientDrugDosageUnitsCode>02</pmp:CompoundDrugIngredientDrugDosageUnitsCode>
</pmp:CompoundDrugIngredient>
- <pmp:RefillsAuthorizedCount>1</pmp:RefillsAuthorizedCount>
  <pmp:DaysSupplyCount>1</pmp:DaysSupplyCount>
  <pmp:DrugDosageUnitsCode>03</pmp:DrugDosageUnitsCode>
  <pmp:MethodOfPaymentCode>07</pmp:MethodOfPaymentCode>
</pmp:PrescriptionDrug>
- <pmp:PartialFillIndicator>true</pmp:PartialFillIndicator>
- <nc:PersonName>
  <nc:PersonNamePrefixText>String</nc:PersonNamePrefixText>
  <nc:PersonMiddleNameText>String</nc:PersonMiddleNameText>
  <nc:PersonSurnameText>String</nc:PersonSurnameText>
  <nc:PersonNameSuffixText>String</nc:PersonNameSuffixText>
  <nc:PersonFullnameText>String</nc:PersonFullnameText>
</nc:PersonName>
- <nc:PersonSexCode>U</nc:PersonSexCode>
Future Prescription Report Schema

- Added New Code 06 to the code table of TransmissionFormOfRxOriginCode (E): Add code per ASAP latest version.

- No change made to the schema. Updated to add new codes per the latest ASAP version.
Current Prescription Report Schema

- `<nc:PersonSSNIdentification>
  - `<nc:IdentificationID>`<String>`/</nc:IdentificationID>
  - `<nc:IdentificationJurisdictionText>`<String>`/</nc:IdentificationJurisdictionText>
</nc:PersonSSNIdentification>
- `<pmp:PersonPrimaryContactInformation>
  - `<nc:ContactTelephoneNumber>
    - `<nc:FullTelephoneNumber>
      - `<nc:TelephoneNumberFullID>`<String>`/</nc:TelephoneNumberFullID>
    </nc:FullTelephoneNumber>
  </nc:ContactTelephoneNumber>
  - `<nc:Contactentity>
    - `<nc:EntityOrganization>
      - `<nc:OrganizationDoingBusinessAsName>`<String>`/</nc:OrganizationDoingBusinessAsName>
      - `<nc:OrganizationLocation>
        - `<nc:LocationAddress>
          - `<nc:StructuredAddress>
            - `<nc:LocationStreet>
              - `<nc:StreetFullText>`<String>`/</nc:StreetFullText>
            </nc:LocationStreet>
          - `<nc:LocationCityName>`<String>`/</nc:LocationCityName>
          - `<nc:LocationStateUSPostalServiceCode>`<OR>`/</nc:LocationStateUSPostalServiceCode>
          - `<nc:LocationPostalCode>`<String>`/</nc:LocationPostalCode>
          - `<nc:LocationPostalExtensionCode>`<String>`/</nc:LocationPostalExtensionCode>
        </nc:LocationAddress>
      </nc:OrganizationLocation>
      - `<nc:OrganizationName>`<String>`/</nc:OrganizationName>
    </nc:EntityOrganization>
  </nc:Contactentity>
</pmp:PersonPrimaryContactInformation>
- `<pmp:NPIIdentifier>
  - `<nc:IdentificationID>`<String>`/</nc:IdentificationID>
  - `<nc:IdentificationJurisdictionText>`<String>`/</nc:IdentificationJurisdictionText>
</pmp:NPIIdentifier>
- `<pmp:StateLicenseIdentifier>
  - `<nc:IdentificationID>`<String>`/</nc:IdentificationID>
  - `<nc:IdentificationJurisdictionText>`<String>`/</nc:IdentificationJurisdictionText>
</pmp:StateLicenseIdentifier>
- `<pmp:Pharmacist>
  - `<nc:IdentificationID>`<String>`/</nc:IdentificationID>
  - `<nc:IdentificationJurisdictionText>`<String>`/</nc:IdentificationJurisdictionText>
</pmp:Pharmacist>
- `<pmp:StateIssuedRxSerialNumberIdentifier>
  - `<nc:IdentificationID>`<String>`/</nc:IdentificationID>
  - `<nc:IdentificationJurisdictionText>`<String>`/</nc:IdentificationJurisdictionText>
</pmp:StateIssuedRxSerialNumberIdentifier>
**Future Prescription Report Schema**

- **PrescribedQuantity (A):** Allows the exchange of the quantity prescribed if collected.
- **RxSIGText (B):** Allows the Prescription instructions to be shared.
- **ICD-10DiagnosticCodeText (C):** Allows state to share ICD 10 codes associated with the Prescription Record.
- **Added PersonVendorIdentifier to nc:IdentificationType:** Identifies a person using and ID number provided by a vendor and the vendor which has jurisdiction over the id.
- **OpioidTreatmentCategoryCode (F):** Allows the exchange of a code to identify the reason for the opioid prescription.
Required Fields

- nc:JurisdictionUSPostalServiceCode – Identifies State in any segment
- Header information identifying the schema
  - pmp:ReportExecutionDate – Date of response
  - pmp:ReportExecutionTime – Time of response
  - pmp:FileTypeCode
  - pmp:UniqueInformationSourceIDText
  - pmp:InformationSourceEntityNameText
  - pmp:ReportingStatusCode
Required Fields

- **Rx Field for All Drugs - Field – ASAP Field (ASAP Status)**
  - `pmp:PrescriptionNumberText` - DSP02 Prescription Number (Required)
  - `pmp:PrescriptionWrittenDate` - DSP03 Date Written (Required)
  - `pmp:DrugProductIdentifier` – DSP08 Product ID (Required)
  - `pmp:RefillsAuthorizedCount` – DSP04 Refills Authorized (Required)
  - `pmp:PrescriptionFilledDate` – DSP05 Date Filled (Required)
  - `pmp:DrugRefillNumberCount` – DSP06 Fill Number (Required)
  - `pmp:DispensedQuantity` – DSP09 Quantity Dispensed (Required)
  - `pmp:DaysSupplyCount` – DSP10 Days Supply (Required)
  - `pmp:DEANumberIdentifier` **This is conditionally required if the drug is a controlled substance**
Rx Fields for Compound Drugs- Field – ASAP Field (ASAP Status)
- `pmp:CompoundDrugIngredientProductIdentifier` – CDI02 Product ID Qualifier (Required)
- `pmp:CompoundDrugIngredientSequenceNumber` – CDI03 Product ID (Required)
- `pmp:IngredientQuantity` – CDI04 Compound Ingredient Quantity- Field (Required)
Metadata Schema

- Adding an Alternate MetaData Schema based on PMP Gateway logs/transaction information
- Allows states send and receive additional data in the transaction
- This is an optional schema
## Metadata Schema Data Elements

### Current Metadata

<table>
<thead>
<tr>
<th>Current PMIX Metadata Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requestor</td>
</tr>
<tr>
<td>User Role</td>
</tr>
<tr>
<td>Disclosing State</td>
</tr>
<tr>
<td>Request ID</td>
</tr>
<tr>
<td>Requesting State</td>
</tr>
</tbody>
</table>

### Alternate Metadata

<table>
<thead>
<tr>
<th>Alternate PMIX Metadata Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requestor Last Name</td>
</tr>
<tr>
<td>Requestor First Name</td>
</tr>
<tr>
<td>Requestor ID Type</td>
</tr>
<tr>
<td>Requestor ID</td>
</tr>
<tr>
<td>Requestor Organization</td>
</tr>
<tr>
<td>Requestor Facility</td>
</tr>
<tr>
<td>Facility ID Type</td>
</tr>
<tr>
<td>Facility ID</td>
</tr>
<tr>
<td>Date/Time of Request from Originating System</td>
</tr>
<tr>
<td>Hub Search ID</td>
</tr>
<tr>
<td>Hub Disclosure ID</td>
</tr>
</tbody>
</table>
<xml version="1.0" encoding="UTF-8"?>
<!--Sample XML file generated by XMLSpy v2011 rel. 3 (http://www.altova.com)-->
   <tns:Requestor>String</tns:Requestor>
   <tns:RequestorRole>Examiner</tns:RequestorRole>
   <tns:RoutingData>
      <tns:DisclosingState>String</tns:DisclosingState>
      <tns:RequestID>String</tns:RequestID>
      <tns:RequestingState>String</tns:RequestingState>
   </tns:RoutingData>
</tns:MetaData>
Alternate Metadata Schema
Alternate Metadata Schema continued

```xml
<tns:Requestor>
    <tns:RequestorOrganization>
        <tns:RequestorOrganizationName>String</tns:RequestorOrganizationName>
        <tns:FacilityIdentification>
            <tns:IdentificationID>String</tns:IdentificationID>
            <tns:IdentificationCategoryCode>DEA</tns:IdentificationCategoryCode>
        </tns:FacilityIdentification>
        <tns:IdentificationID>String</tns:IdentificationID>
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```
thank you!
Process to Change the Architecture

- Proposal is reviewed by the Executive Committee and referred to subcommittee if reasonable
- Subcommittee reviews and amends in consultation with other subcommittees
- Subcommittee votes to recommend or not recommend proposed change to Exec Committee
- Exec Committee votes to post proposal for comments allowing a 15 to 30 days period *
- Exec Committee provides written response to all comments in a manner viewable by all PDMP organizations
- Exec Committee votes to:
  - Approve
  - Amend and approve
  - Deny
- If approved, the proposal shall be implemented on a defined implementation date
- If denied, the proposal may be returned to subcommittees for further consideration

* Must include a description of the change, the reason for the change, instructions for review and comment and anticipated date of implementation
Structure of the PMIX Standards Organization

Standards, guidelines, policies and procedures

Executive Committee

- Operations Subcommittee
- Technical Architecture Subcommittee
- Standards Compliance Subcommittee
- Ad Hoc Subcommittees

Bylaws

Process to Change PMIX

PDMP, Vendor, and Stakeholder Communities
Officers

- Chairperson – Jean Hall (KY)
- Vice-Chairperson – Chad Garner (OH)
- Secretary – Stan Murzynski (PA)
- Standing Committee Chairpersons
  - Operations – Kevin Borcher (NE)
  - Technical Architecture – Ron Larsen (UT)
  - Standards Compliance – Chad Garner (OH)
Executive Committee Members

North Region
Haley Winans (MI)
Kevin Borcher (NE)
Chad Garner (OH) - alternate

East Region
Jason Slavoski (DE)
Stan Murzynski (PA)
Scott Szalkiewicz (CT) - alternate

West Region
Tina Farales (CA)
Darla Zarley (NV)
Ronald Larsen (UT) - alternate

South Region
Jean Hall (KY)
Christie Frick (SC)
Jamie Turpin (AR) - alternate
The Operations Subcommittee shall address business issues impacting the exchange of information between PDMPs and the development and maintenance of the operations of the PMIX Architecture. In addition, the Operations Subcommittee will address operational behaviors, policies and standards necessary to promote consistency across state PDMPs by proposing such artifacts to the Executive Committee for adoption.
Operations Subcommittee Members

Prescription Drug Monitoring Programs
California – Tina Farales
Delaware – Jason Slavoski
Florida – Erika Marshall
Georgia – Amy Benson
Kentucky – Jean Hall
Maine – Jennifer Marlowe
Nebraska – Kevin Borcher
New York – Joshua Vinciguerra, Kimberly Leonard, Dave Flashover
Washington – Sasha DeLeon, Matthew Reid, Eric Grace

Vendor Community
Appriss – Sheila Sullivan
BizTek – Denise Robertson
NIC – Kevin Schmidt
OpiSafe – Colin Benjamin
Scripulate – Neil Chatterjee

Other State/Federal Government
CDC – Wesley Sargent
ONC – Carmen Smiley

Other Stakeholders
NABP – Danna Droz
Sherry Green & Associates – Sherry Green

* Support provided by TTAC
The Technical Architecture Subcommittee shall be responsible for the development and maintenance of the technical aspects of the PMIX Architecture as well as technical behaviors, policies and standards necessary to promote consistency across state PDMPs by proposing such artifacts to the Executive Committee for adoption.
Technical Architecture Subcommittee Members

Prescription Drug Monitoring Programs
- California – Tina Farales
- Georgia – Shari Ramchal
- Kentucky – Jean Hall, Julio Mendoza
- Maine – Jennifer Marlowe
- Massachusetts – Rodd Kelly
- Nebraska – Naresh Sundar Rajan
- North Carolina – Depris Price
- Ohio – Chad Garner
- Pennsylvania – Stan Murzynski
- Utah – Ronald Larsen, Destiny Calvano
- Washington – Matthew Reid, Eric Grace

Vendor Community
- Appriss – Clay Rogers
- BizTek – Diwakar Cherukumilli
- Carradora – Mike Flanigan
- IJIS Institute – Robert May
- Logicoy – Fred Aabedi
- NIC – Kevin Schmidt
- OpiSafe – Chris Ennis
- PastRx – Robert Cassidy

Other State/Federal Government

Other Stakeholders
- Carlson Consulting – Tom Carlson

* Support provided by TTAC
The Standards Compliance Subcommittee conducts reviews and makes recommendations on compliance to the PMIX standards as well as waivers and plans of action for organizations seeking to certify compliance.
Standards Compliance Subcommittee Members

**Prescription Drug Monitoring Programs**
- Kentucky – Jean Hall
- Massachusetts – Natasha Colvin
- Ohio – Chad Garner
- Utah – Sam Albornoz

**Vendor Community**

**Other State/Federal Government**
- OJP – Peter Nguyen, Abid Rizvi

**Other Stakeholders**

*Support provided by TTAC*
## Goals

<table>
<thead>
<tr>
<th>GOAL</th>
<th>Executive</th>
<th>Operations</th>
<th>Technical</th>
<th>Standards Compliance</th>
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<tbody>
<tr>
<td>Identify functionality for data sharing hubs</td>
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<td>1st</td>
<td>2nd</td>
<td>3rd</td>
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<tr>
<td>Creating a minimum standard of functionality of a PDMP; promote consistency among PDMPs; review NAMSDL and/or NASCSA model act as starting point;</td>
<td>1st - in conjunction with TTAC initiative - will address PMIX actions when identified.</td>
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<tr>
<td>Explore best practices in EHR integration/interstate data sharing queries</td>
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<td>Explore engage pharmacy partners to improve data on front end</td>
<td>1st</td>
<td>2nd</td>
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<td>Hub to Hub Interoperability - Document the previous work that proved the feasibility of hub-to-hub interoperability. Consider whether this should be a standard.</td>
<td>2nd</td>
<td>1st</td>
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<td>Promotion and education of PMIX organization and its work</td>
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<tr>
<td>Multi-state health system rules sets in different states; explain challenges/opportunities</td>
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<td>2nd</td>
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<tr>
<td>Guidelines for problem resolution</td>
<td>1st</td>
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