



PMIX 3.0 PMP Prescription Response Exchange Schema

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1 Background

The Prescription Monitoring Information eXchange (PMIX) is a standards organization sponsored by the Bureau of Justice Assistance. Its purpose is to support the sharing of Prescription Drug Monitoring Program 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.

1.1 PMIX National 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.

1.2 Guiding Principles

The Guiding Principles of the PMIX National Architecture foster prescription drug information sharing across all Federal, State, Tribal and approved third party entities in accordance with the PMIX National Architecture are: ■ Protect state's full rights and control of Data Ownership.

- Promote the adoption of security standards that protects the confidentiality, integrity, and availability of the data, in transit and at rest.
- Promote uniformity in the selection of a limited set of approved common data standards.
- Promote a standard to which IT solution providers are held that ensures the best value products and/or services to PDMP participating states, while maintaining the public's trust and fulfilling public policy objectives.

2 Standards Implementation

2.1 Audience

This document applies to all entities involved in the exchange of prescription data between Prescription Drug Monitoring programs and their stakeholder organizations as well as data sharing hubs, and other exchange partners or intermediaries when utilizing the PMIX Architecture to exchange or map the exchange to another data sharing standard.

2.2 Foundation of the PMIX National Architecture

The PMIX Architecture is based on the National Information Exchange Model (NIEM). The National Information

Exchange Model (NIEM) is a common vocabulary that enables efficient information exchange across diverse public and private organizations. NIEM connects communities of people who share a common need to exchange information in order to advance their mission. In addition to NIEM, PMIX also synchronizes its information exchange infrastructure with the American Society for Automation in Pharmacy (ASAP) whose reporting standard is widely used by Prescription Drug Monitoring programs. For more information on these programs, please see their websites: <https://www.niem.gov/> and <https://www.asapnet.org/>.

3 Standards Proposal

3.1 Background

As a part of its 2018 – 2019 organizational goals, the Executive Committee of the PMIX Standards Organization directed its Operations and Technical Architecture subcommittees to review and propose changes to the PMP Prescription Response Exchange Schema including but not limited to the following areas:

- Updating the elements to the latest version of NIEM
- Synchronizing where applicable with the latest version of ASAP
- Adding additional data elements as needed to meet the business objectives of the PDMP community and their stakeholders

The sample below illustrates the proposed new schema. The actual xsd file is available upon request for review. Outlined below is a summary of the changes made to the schema. The latest approved versions of the schema are available on the PMIX website for comparison (<https://www.pdmpassist.org/PMIX/Standards>).

3.2 Proposed Schema Sample

3.2.1 RxCheck Sample

```
<?xml version="1.0" encoding="UTF-8"?>
<!--Sample XML file generated by XMLSpy v2011 (x64) (http://www.altova.com)--> <pmix:PMPPrescriptionReport
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://pmixpmp.org/niem/4.0/
../../schema/information/exchange/PMIX_NIEM_4.0_PMP_Prescription_Report.xsd"
xmlns:pmix="http://pmixpmp.org/niem/4.0/"
xmlns:s="http://release.niem.gov/niem/structures/4.0/"
xmlns:nc="http://release.niem.gov/niem/niem-core/4.0/"
xmlns:j="http://release.niem.gov/niem/domains/jxdm/6.2/"
xmlns:pmp="http://pmixpmp.org/niem/4.0/extension">
  <pmp:RequestResponsePrescriptionReport>
    <pmp:PMPDocumentAugmentation>
      <pmp:DocumentPublicationTime>14:20:00.0Z</pmp:DocumentPublicationTime>
    </pmp:PMPDocumentAugmentation>
    <pmp:ReportExecutionDate>1967-08-13</pmp:ReportExecutionDate>
    <pmp:ReportExecutionTime>14:20:00.0Z</pmp:ReportExecutionTime>
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      <pmp:ReportDateRangeEnd>1967-08-13</pmp:ReportDateRangeEnd>
    </pmp:ReportDateRange>
    <pmp:Prescription>
      <pmp:Dispenser>
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        <nc:OrganizationLocation>
```

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  </nc:LocationStreet>
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  <nc:LocationState>
    <nc:LocationStateUSPostalServiceCode>OH</nc:LocationStateUSPostalServiceCode>
  </nc:LocationState>
  <nc:LocationPostalCode>String</nc:LocationPostalCode>
  <nc:LocationPostalExtensionCode>String</nc:LocationPostalExtensionCode>
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</pmp:DEANumberIdentifier>

```



D

```

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```

```

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```

```

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              <nc:LocationPostalExtensionCode>String</nc:LocationPostalExtensionCode>
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      </nc:ContactEntity>

```




```

</pmp:PersonPrimaryContactInformation>
<pmp:NPIIdentifier>
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  <nc:IdentificationJurisdiction>
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<pmp:ICD-10DiagnosticCodeText>String</pmp:ICD-10DiagnosticCodeText>
<pmp:OpioidTreatmentCategoryCode>11</pmp:OpioidTreatmentCategoryCode>
</pmp:Prescription>
</pmp:RequestResponsePrescriptionReport>
</pmix:PMPPrescriptionReport>

```

The diagram consists of four yellow boxes labeled A, B, C, and F. Box A points to the <pmp:PrescribedQuantity>5</pmp:PrescribedQuantity> element. Box B points to the <pmp:RxSIGText>String</pmp:RxSIGText> element. Box C points to the <pmp:ICD-10DiagnosticCodeText>String</pmp:ICD-10DiagnosticCodeText> element. Box F points to the <pmp:OpioidTreatmentCategoryCode>11</pmp:OpioidTreatmentCategoryCode> element.

3.2.2 PMPi Sample

The illustration below is based on current meta data. Appriss will provide an xml rendering when complete.

```
<?xml version="1.0" encoding="UTF-8"?>
- <pmpl:PmpDisclosure xmlns:nc="http://niem.gov/niem/niem-core/2.0" xmlns:pmix="http://xml.ijs.org/niem/2.0/" xmlns:pmp="http://xml.ijs.org/niem/2.0/extension"
  xmlns:pmpl="http://pmpl.nabp.org/">
  <pmpl:Type>complete</pmpl:Type>
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  <pmpl:InterconnectDisclosureId>234567</pmpl:InterconnectDisclosureId>
- <pmpl:SearchingPmp>
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  <!-- optional -->
</pmpl:SearchingPmp>
- <pmpl:DisclosingPmp>
  <pmpl:InterconnectPmpId>987654</pmpl:InterconnectPmpId>
  <pmpl:PmpDisclosureId>ZXY-cba-#@!-321</pmpl:PmpDisclosureId>
  <!-- optional -->
</pmpl:DisclosingPmp>
- <pmpl:EncryptedData>
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  03r7lI69kN2qb1lii4WS7MueoIsti12uVSuOimF/6qhLPjUOVQMK41wTcIe9xlz sFJ4l0KAJ2N2bmoiaFeUTXsg69a0Q1iNISDa/T7frAYJC2t0wsuIgjx5yTTTK+v
  JmHPNA0Ar3G/xKG4rPp+TX04blCca4uUnRjTLNz680coNuGymZideeP5ucVkn1y4 TkqPZ+EcYDSKkLqLs1rZ7RfP8kto/WSXe19QW0sXpi0yH10Q2/GQ0a6mTE9PObYH
  9G7xUr6slUuBjgRnIU1UlubvNK7Bc.i9Wg/5y3lrvOP/9VzyertSowuM20oXj86a Sq0mwBy7LIRTu293MfAGn/ext4+2Qb4Ik9CwzX2H6eakqrqeCddVd3Hc7CAIAbV
  SWsYrXv53t08q5y7TRw5yGwvG+g714iSiy0pSHAAPZ9kIHu3d/zDaY1AZCjeP/l1 jzqe0eHK/4IivOIOs86q9jHRWwFXqIm/naD2My99WfEtTKY2QldqdvMCoze6y5
  0oGccXvJjuX13bMOT7z1rUaUss/fIeK75a1lyZBvaUHyt6X8uzv+zHqk++XsZlJ qYkrIY2/phXWXqPxoF6ICd6af5dhrJqhaY+AyoAzgQjSinULTovpIV1WZGqt5HLQ
  S8fxGE0qX3qsdibUkwFooB/dmWSD23FiukIGVhS4qsEb7Ym4YATj9Z4hxnmGXyO ErCvY77K516iHrIT /tMaufa6EYkbs5v+UJUmCgeQGYsRnZi7EY2G1PPxvfeVq
  18zVaIeukX9GsVQdi+A1pe3vFvumwK+gaWd6qnEAERyalNv6eRInt57xHd0SVDw a6TE8oe0Qix6DPNIHPxXdsfnhqPu2H00G1Oiooi1Bk1PAN0XPrIGyGlvna/V4iFt
  3HKmmPg+l0kEaPIFu+pdz0Kw3B0QIEeQ2wIOEUQuZaAbbsRKHPEVt3aXtncQAzS A0o7YQrmmxcflXQJgTwiSfsfyb+JAq/Ns5M3ODJqmGIFPwPI5WLSrivK9YGQwTs
  5Le1ICCO5TLOhUMCRQBkk9c6moWzISNgMvxAfpNmkQEXMTIHEmndF0YEUqGn/8 0J3l0at12N60Yxt3qcQF8gr5UWnZhcSxKfle/KPAM4P+8vTMWb5VYKq3oyql5b
  FtGub6/4gWX+1o1NIRskdWDW8VeajGPs44mZuSiPj7gjeD0e9RCdMtMRxf3E OLwhGFHXE73/tk5iuVVQZavgy01MyE8v/goCzPoy33f5h3t758dN8SMiQHazyXRG
  utwmERK5zrku5p2adyvOe8bZ92bdZWW+3HLuWrQoYzox5bm63ZONTodtIxzvsEnoh 3E/plfoeSHJ8WIKg8D3dYcWgn8mafV0Lr/ui4s76+uzZpYDEUFsRr/bxpWozwkQ
  5iRY1sRrK/WKstiv4/v8i2RnRhb1R9nHOXODH7TeRRIF0VpMfr8tIonnK/rf9DNI G3hVvftTP77TFRmXVhlsuCrAs697RnPF3d17HYOCfrsri5sS1vd711A0A51FC13
```

The new response xml would be embedded and encrypted in the same manner as it is today.

4 Summary of Changes

4.1.1 Migrate to NIEM 4.0

The definition of any field prefaced by “nc:” comes from the field definition now supported in NIEM 4.0. In addition, the following fields were removed from the schemas:

- nc:PersonNamePrefixText
- nc:PersonFullName

4.1.2 Update to ASAP

The following changes were made to synchronize this schema to ASAP 4.2b. The highlighted letter following the field will direct you to the field in the schema sample above.

4.1.2.1 Add Additional Fields

The fields below were added to the 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. ▪
- **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.

4.1.2.2 Required Fields

The following fields will now be required in PMIX exchanges. **It is important to note that the comparable fields are required in ASAP except where marked by **.*

- **nc:JurisdictionUSPostalServiceCode**
- **pmp:VersionReleaseNumberText**
- **pmp:TransactionControlNumberText**
- **pmp:ReportExecutionDate**
- **pmp:ReportExecutionTime**
- **pmp:FileTypeCode**
- **pmp:UniqueInformationSourceIDText**
- **pmp:InformationSourceEntityNameText**
- **pmp:ReportingStatusCode**
- **pmp:CompoundDrugIngredientProductIdentifier**
- **pmp:DrugProductIdentifier**
- **pmp:CompoundDrugIngredientSequenceNumber**
- **pmp:IngredientQuantity**
- **pmp:PrescriptionNumberText**
- **pmp:PrescriptionWrittenDate**
- **pmp:RefillsAuthorizedCount**
- **pmp:PrescriptionFilledDate**
- **pmp:DrugRefillNumberCount**
- **pmp:DispensedQuantity**
- **pmp:DaysSupplyCount**
- **pmp:DEANumberIdentifier** ***This is conditionally required if the drug is a controlled substance*

4.1.2.3 Patient Alert Fields

In collaboration with the Operations Subcommittee, the schema will now include fields for sharing state specific patient alerts with integration partners and other states. The fields include:

- **pmp:PatientAlertCategoryCode**: This will be a code from the list below that identifies the type of alert enabling PDMPs to only use alerts that are permitted by statute, policy or design. The codes are (examples in parentheses):
 - 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 be 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)
- **pmp:PatientAlertDescriptionText:** This field contains the actual text per the sending state.

5 Implementation

This standard will replace the existing PMP Prescription Response Exchange schema. The proposed implementation timeline is:

- Available for use: 9/1/2021
- Adoption by all states: 3/1/2022