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| PCHH Data Mapping Guide |
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# Introduction

## Purpose

This document will provide detailed specifications of the interchange of data from your primary care clinic to the MPCA PCHH Administration System (PAS). This document is meant to guide development of the extract queries to be used to provide data in a very specific format required for data integration. The only records that should be sent to the PAS are those which originate from Health Home program Medicaid patients.

## Audience

This document is intended for the technical team or person who will be creating the data extracts to be sent to the PCHH Administration System (PAS) built into the MPCA data warehouse.

# Version Control

| **Version Date** | **Section** | **Description** |
| --- | --- | --- |
| 2016-02-18 | Version Control | Added version control. |
| 2016-02-18 | Maintenance | Modified allowed scores of PHQ-2 & PHQ-9 maintenance items to allow for 0 scores. |

# Data Mapping

The remainder of this document is dedicated to specifying guidelines to be followed for data extracts. Required data is split into 10 categories. For each data category, the following is provided:

* A table outlining fields to be sent for each record. This table includes the following columns:
  + Field Name
  + Data Type
  + Required field or not required?
    - Fields that are not required are highly recommended but the lack of a value will not cause a rejection of a file.
  + Notes on each field
* An example query for each category which may be used as a guide to extract this data from primary care clinic source databases.
  + It is possible that these queries may be used essentially “as-is” on Centricity databases which have integrated EHR/EPM databases. These **should** be modified to meet each EHR database’s configuration, and be used solely for Medicaid patients (see next bullet)
  + **NOTE: For PCHH reports, data is required for all Medicaid patients at your center. The MPCA has no desire or intention to store patient data outside the scope of reporting requirements. All queries should be filtered to only pull data for Medicaid patients. All queries should have a WHERE clause to filter on ONLY Medicaid patient data**
  + **PCCH reporting requires data for a trailing two year period. The PAS will accept uploads containing all data for a center’s entire Medicaid population every month or if a center prefers we will also accept data for that population from only the trailing two years every month.**

**Recommended approach: In order to create these data extracts to the required specifications, Azara suggests starting with the simpler extracts before moving on to more difficult extracts.**

* **Easy categories: Patient, encounter, provider**
* **Medium difficulty categories: Diagnosis, charge, lab, medication, vitals, payer**
* **Difficult category: Maintenance**
  + **Maintenance is a broad category that will take the most effort to develop**

**Please note that all specifications for strings and fields names are case sensitive and all dates are expected in the ISO 8601 format. If a field name is indicated as required in the following tables that means that it cannot be NULL. Rows that contain such should be excluded from the output.**

**Extract category specifications and example queries are provided below.**

# ****File Submission and Formatting****

In order for DRVS to be able to recognize and properly consume the XML files, they **must** be summited conforming to the following rules:

Each data set (Charge, Diagnosis, Patient, Payer, Patient Payer) must be submitted separately in its own .xml file, named in the following fashion. Please note that while only one dataset type can be contained in each file, a dataset can be submitted using multiple files. For instance, the maintenance dataset can be submitted across multiple files if needed, but each file can only contain maintenance records.

<CenterID>\_<DatasetName>\_<StartDate>\_<StopDate>\_<AdditionalQualifier>

<CenterID> = The assigned center\_id for your organization, a two digit number beginning with 5 or 6. Will be the same as any center\_id column/node in the file.

<DataSetName> = see table below

<StartDate> = The Start date of the period you are submitting files for.

<EndDate> = The End date of the period you are submitting files for.

<AdditionalQualifier> = Any additional qualifiers for the file. For instance, if submitting multiple maintenance files, you must distinguish between them. There is no required format for this, only that the filename be unique and that it only contains one dataset.

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| --- | --- |
| **Data Set** | **DataSetName (case sensitive)** |
| Charge | charge |
| Diagnosis | diagnosis |
| Encounter | encounter |
| Lab | lab |
| Maintenance | maintenance |
| Medication | medication |
| Patient | patient |
| Payer | payer |
| Patient Payer | patientpayer |
| Provider | provider |
| Vitals | vitals |

# ****Common Issues and Questions****

**What patients should be included in the extract?**

All Medicaid patients should be sent in the flat files. This includes BOTH PCHH Enrollees AND all other Medicaid patients. The report will be run for both the full Medicaid population, and the PCHH Enrollee population.

**Which encounters/locations should be included in the extract?**

All outpatient encounters, regardless of location, should be included in the extract.

**How important is the file name formatting and submission requirements?**

Extremely important. Azara cannot guarantee files named improperly will be loaded and processed correctly.

**Which ICD Codeset should we send?**

Our ICD fields in charges and diagnoses can accept either ICD-9 or ICD-10.

## Charge

| **Field Name** | **Data Type** | **Required?** | **Used In Measures?** | **Field Notes** |
| --- | --- | --- | --- | --- |
| center\_id | Integer | Y | Y | Must be your unique center ID as provided by Azara |
| charge\_id | String | Y | Y | Must be unique per each record in this table |
| patient\_id | String | Y | Y | Must link to patient\_id on patient extract |
| encounter\_id | String | Y | Y | Must link to encounter\_id on the encounter extract |
| cpt\_code | String | Y | Y | Identifies charges linked to encounters |
| icd\_code\_1 | String | N\* | Y | Primary billing diagnosis, ICD 9 or 10 only |
| icd\_code\_2 | String | N\* | Y | Secondary billing diagnosis, ICD 9 or 10 only |
| icd\_code\_3 | String | N\* | Y | Tertiary billing diagnosis, ICD 9 or 10 only |
| icd\_code\_4 | String | N\* | Y | Quaternary billing diagnosis, ICD 9 or 10 only |
| charge\_date | Date or Datetime | Y | Y | Date of service |
| create\_timestamp | Datetime | Y | Y | Date created in database |
| modify\_timestamp | Datetime | Y | Y | Date modified in database. If NULL, must be set to the create\_timestamp datetime |

\*While Diagnosis codes are not required for each record, they are used in measures and it is strongly recommended they be sent.

## Diagnosis

| **Field Name** | **Data Type** | **Required for processing?** | **Required for measures?** | **Field Notes** |
| --- | --- | --- | --- | --- |
| center\_id | Integer | Y | Y | Must be your unique center ID as provided by Azara |
| diagnosis\_id | String | Y | Y | Must be unique per each record in this table |
| patient\_id | String | Y | Y | Must link to patient\_id on patient extract |
| icd\_code | String | N\* | Y | ICD 9 or 10 diagnosis on patient problem list |
| snomed\_code | String | N\* | Y | SNOMED diagnosis on the patient problem list |
| resolved\_date | Date or Datetime | N | Y | If the problem has been resolved, the date the problem was resolved or deactivated |
| diagnosed\_date | Date or Datetime | N | Y | The date the problem was diagnosed as identified in your EHR |
| create\_timestamp | Datetime | Y | Y | Date created in database |
| modify\_timestamp | Datetime | Y | Y | Date modified in database. If NULL, must be set to the create\_timestamp datetime |

\*While all formats are not required, at least one code (ICD-9, ICD-10, or SNOMED) must be sent with each record

## Encounter

| **Field Name** | **Data Type** | **Required for processing?** | **Required for measures?** | **Field Notes** |
| --- | --- | --- | --- | --- |
| center\_id | Integer | Y | Y | Must be your unique center ID as provided by Azara |
| encounter\_id | String | Y | Y | Must be unique per each record in this table. Must link to encounter\_id on charge extract |
| patient\_id | String | Y | Y | Must link to patient\_id on patient extract |
| provider\_id | String | Y | Y | Must link to provider\_id on provider extract |
| location | String | N | Y | Name of location of service for this encounter |
| encounter\_date | Date or Datetime | Y | Y | Date of visit |
| create\_timestamp | Datetime | Y | Y | Date created in database |
| modify\_timestamp | Datetime | Y | Y | Date modified in database. If NULL, must be set to the create\_timestamp datetime |

## Lab

The only labs that will be accepted are A1C and LDL labs.

| **Field Name** | **Data Type** | **Required for processing?** | **Required for measures?** | **Field Notes** |
| --- | --- | --- | --- | --- |
| center\_id | Integer | Y | Y | Must be your unique center ID as provided by Azara |
| lab\_id | String | Y | Y | Must be unique per each record in this table |
| patient\_id | String | Y | Y | Must link to patient\_id on patient extract |
| completed\_date | Datetime | Y | Y | Date lab is completed |
| type | String | Y | Y | Lab Type. **MUST** be either ‘A1C’ or ‘LDL’ |
| result | Positive Decimal Numeric | Y | Y | Result for A1C or LDL labs   * Must be measured in % for A1C and mg/dL for LDL * Must be numeric results * Only labs with valid results will be counted in reports * Cannot not be NULL – eliminate NULL values in data extract |
| Loinc\_code | String | N | Y | Must be a standard loinc\_code |
| Snomed\_Ct\_code | Integer | N | Y | Must be a standard snomed\_code |
| create\_timestamp | Datetime | Y | Y | Date created in database |
| modify\_timestamp | Datetime | Y | Y | Date modified in database. If NULL, must be set to the create\_timestamp datetime |

## Maintenance

“Maintenance” data originates from many different places within the EHR and will be the most time-consuming extract to put together. The table below lays out the specific format required for each record. However, because there are a number of maintenance types, the “Type” and “Result” fields will need to be customized to meet requirements for each data element sent to DRVS. A number of queries will be required to pull all relevant maintenance types. Examples of queries for each maintenance type are explained below. We expect most questions on the data extract process to come from this section. Some EHR templates may need to be built to track some maintenance items

| **Field Name** | **Data Type** | **Required for processing?** | **Required for measures?** | **Field Notes** |
| --- | --- | --- | --- | --- |
| center\_id | Integer | Y | Y | Must be your unique center ID as provided by Azara |
| maintenance\_id | String | Y | Y | Must be unique per each record in this table |
| patient\_id | String | Y | Y | Must link to patient\_id on patient extract |
| type | String | Y | Y | Maintenance type   * Must match list of maintenance types below * **See table below** |
| result | String | Y | Y | Expected result depends on maintenance type. Some types require results and some do not.   * **See table below** |
| completed\_date | Datetime | Y | Y | Date maintenance item completed |
| create\_timestamp | Datetime | Y | Y | Date created in database |
| modify\_timestamp | Datetime | Y | Y | Date modified in database. If NULL, must be set to the create\_timestamp datetime |

Maintenance types must match a very specific list of maintenance names based on the reporting requirements. List of maintenance types, expected results, and notes on each is provided below. **Maintenance type names and result values must match those on this list exactly.**

| **Maintenance Type Category** | **Maintenance Type Name** | **Required Result Values** | **Maintenance Type Notes** |
| --- | --- | --- | --- |
| Care Coordination | “Hospital Discharge” | * Result must be ‘Y’ * completed\_date must be the date of the patient’s hospital discharge | * To be used to track hospital discharges, either reported by patient or pulled from discharge dates in database |
| Care Coordination | “Care Manager Follow Up” | * Result field may be NULL * completed\_date must be the date of that care manager followed up with patient after hospital discharge and completed med reconciliation | * To be used to track care manager follow up after hospital discharge |
| SBIRT Measures | “SBIRT How Many Drinks 3 Months” | * Numeric result required * Accepted results: 0, 1, 2, 3, OR 4 * completed\_date is date question was asked | * Answer to SBIRT question |
| SBIRT Measures | "SBIRT How Many Drinks Typical Day”   |  | | --- | |  | | * Accepted results: 0, 1, 2, 3, OR 4 * completed\_date is date question was asked | * Answer to SBIRT question |
| SBIRT Measures | “SBIRT Drinks 4 or 5 How Often”   |  | | --- | |  | | * Accepted results 0, 1, 2, 3, OR 4 * completed\_date is date question was asked | * Answer to SBIRT question |
| SBIRT Measures | “SBIRT Illicit Drug Use” | * Accepted results:   + “Y”   + “N” * completed\_date is date question was asked | * Answer to SBIRT question: “In the last twelve months, did you smoke pot, use another street drug, or use a prescription painkiller, stimulant, or sedative for a non-medical reason?” |
| SBIRT Measures | “SBIRT Referral” | * Accepted results:   + “Y”   + “N” * completed\_date is date question was asked | * If patient answers in positive to any SBIRT substance abuse question, was the patient referred to BH counselor, and did counselor complete the ASSIST follow-up? |
| Screens and Follow-Up | "PHQ-2 Depression Screen" | * Result must be numeric between 0-6 * completed\_date is date screening was completed | * Depression screening to be done based on a PHQ-2 * Depression Screen (NQF 0418) |
| Screens and Follow-Up | "PHQ-9 Depression Screen" | * Result must be numeric between 0-27 * completed\_date is date screening was completed | * Depression screening to be done based on a PHQ-9 * Depression Screen (NQF 0418) |
| Screens and Follow-Up | "Depression Follow-Up" | * Result must be ‘Y’ * completed\_date must be the date depression follow-up plan was created | * If patient records a **positive** Depression Screen, when was a depression follow-up plan created? * Can be a referral * Depression Screen (NQF 0418) |
| Screens and Follow-Up | "BMI Follow-Up Plan" | * Result must be ‘Y’ * completed\_date must be the date weight counseling was provided | * If patient BMI is outside parameters, when was weight counseling/BMI follow-up plan provided? * BMIs between 22 and 30 are considered acceptable. * Adult Weight Screening (NQF 0421) * If captured via ICD9 code V65.3 or V65.43, or ICD10 code Z71.3 or CPT codes 43644, 43645, 43770, 43771, 43772, 43773, 43774, 43842, 43843, 43845, 43846, 43847, 43848, 97804, 98961, 98962, 99078, does not need to be maintenance item |
| Screens and Follow-Up | "Nutritional Counseling" | * Result must be ‘Y’ * completed\_date must be date nutritional counseling was given. | * Documents the occurrence of nutritional counseling. * Used in Child Weight Screening measure. |
| Screens and Follow-Up | "Physical Activity Counseling" | * Result must be ‘Y’ * completed\_date must be the date physical activity consultation was completed. | * Documents the occurrence of physical activity counseling. * Used in Child Weight Screening measure. |
| Screens and Follow-Up | “Asthma Severity” | * Result must contain the word “Persistent” if the patient’s asthma is persistent asthma | * Documents the severity of the patients asthma. Used alongside ICD codes to include patients in Asthma measure denominator. Patient can either have an ICD-9 code of asthma and an asthma severity maintenance item, or an ICD-10 code indicating the patient has persistent asthma. |

## Medication

| **Field Name** | **Data Type** | **Required for processing?** | **Required for measures?** | **Field Notes** |
| --- | --- | --- | --- | --- |
| center\_id | Integer | Y | Y | Must be your unique center ID as provided by Azara |
| medication\_id | String | Y | Y | Must be unique per each record in this table |
| patient\_id | String | Y | Y | Must link to patient\_id on patient extract |
| ndc\_code | String | Y | Y | Must be standard NDC code value without dashes to be reported |
| start\_date | Date or Datetime | Y | Y | Date medication was prescribed |
| stop\_date | Date or Datetime | N | Y | If medication was discontinued, date medication was discontinued. If patient is still on medication, send null. |
| create\_timestamp | Datetime | Y | Y | Date created in database |
| modify\_timestamp | Datetime | Y | Y | Date modified in database. If NULL, must be set to the create\_timestamp datetime |

## Patient

| **Field Name** | **Data Type** | **Required for processing?** | **Required for measures?** | **Field Notes** |
| --- | --- | --- | --- | --- |
| center\_id | Integer | Y | Y | Must be your unique center ID as provided by Azara |
| patient\_id | String | Y | Y | Must be unique per each record in this table. Must link to patient\_id on all other data extracts |
| MRN | String | Y | Y | Patient’s MRN |
| first\_name | String | Y | Y | Patient’s first name |
| last\_name | String | Y | Y | Patient’s last name |
| sex | String | Y | Y | Patient sex. Must be ‘M’, ‘F’, ‘Male’ or ‘Female’ |
| birth\_date | Date or Datetime | Y | Y | Patient DOB. Used to determine the age of the patient, which is inclusion/exclusion criteria for many measures. |
| death\_date | Date or Datetime | N | Y | Patient date of death. Used to exclude deceased patients |
| create\_timestamp | Datetime | Y | Y | Date created in database |
| modify\_timestamp | Datetime | Y | Y | Date modified in database. If NULL, must be set to the create\_timestamp datetime |

## Payer

All Medicaid (where Medicaid is either primary or secondary) payers should be sent.

| **Field Name** | **Data Type** | **Required for processing?** | **Required for measures?** | **Field Notes** |
| --- | --- | --- | --- | --- |
| center\_id | Integer | Y | Y | Must be your unique center ID as provided by Azara |
| payer\_id | String | Y | Y | Must be unique per each record in this table |
| name | String | Y | Y | Payer name as it will be displayed |
| create\_timestamp | Datetime | Y | Y | Date created in database |
| modify\_timestamp | Datetime | Y | Y | Date modified in database. If NULL, must be set to the create\_timestamp datetime |

## Patient\_Payer

It is critical that all DCNs (policy\_number field) for Health Home patients be sent to Azara. MO Healthnet sends Azara a file that contains DCNs and their enrollment dates, and Azara matches the DCN in the MO Healthnet file to the policy\_number field to determine if the patient is a health home enrollee.

| **Field Name** | **Data Type** | **Required for processing?** | **Required for measures?** | **Field Notes** |
| --- | --- | --- | --- | --- |
| center\_id | Integer | Y | Y | Must be your unique center ID as provided by Azara |
| Patient\_payer\_id | String | Y | Y | Must be unique per patient and payer |
| Patient\_id | String | Y | Y | Must link to patient\_id on all other data extracts |
| payer\_id | String | Y | Y | Must link to payer\_id on payer extract |
| Policy\_number | String | Y | Y | DCN/policy number of patient |
| Policy\_start | date | Y | Y | Start date of policy |
| Policy\_end | Date | N | Y | End date of policy, if patient is still enrolled, send null. |
| create\_timestamp | Datetime | Y | Y | Date created in database |
| modify\_timestamp | Datetime | Y | Y | Date modified in database. If NULL, must be set to the create\_timestamp datetime |

## Provider

| **Field Name** | **Data Type** | **Required for processing?** | **Required for Measures?** | **Field Notes** |
| --- | --- | --- | --- | --- |
| center\_id | Integer | Y | Y | Must be your unique center ID as provided by Azara |
| provider\_id | String | Y | Y | Must be unique per each record in this table. Must link to provider\_id on all other data extracts |
| first\_name | String | Y | Y | Provider first name. Used to generate reports per provider |
| last\_name | String | Y | Y | Provider last name. Used to generate reports per provider |
| create\_timestamp | Datetime | Y | Y | Date created in database |
| modify\_timestamp | Datetime | Y | Y | Date modified in databa  e. If NULL, must be set to the create\_timestamp datetime |

## Vitals

| **Field Name** | **Data Type** | **Required for processing?** | **Required for Measures?** | **Field Notes** |
| --- | --- | --- | --- | --- |
| center\_id | Integer | Y | Y | Must be your unique center ID as provided by Azara |
| vitals\_id | String | Y | Y | Must be unique per each record in this table |
| patient\_id | String | Y | Y | Must link to patient\_id on patient extract |
| bmi | Float | N\* | Y | Patient’s BMI value. Used for adult patients |
| Bmi\_percentile | Integer | N\* | Y | Patient’s BMI percentile, such as “23”. Used for pediatric patients |
| Height | Integer | N\* | Y | Height of patient in inches. Pediatric Patients only. |
| Weight | Integer | N\* | Y | Weight of patient in Pounds. Pediatric Patients only. |
| bp\_systolic | Float | N\* | Y | Patient’s systolic blood pressure. Each vitals record should have BMI, BP Systolic, or BP Diastolic populated |
| bp\_diastolic | Float | N\* | Y | Patient’s diastolic blood pressure. Each vitals record should have BMI, BP Systolic, or BP Diastolic populated |
| vitals\_date | Date or Datetime | Y | Y | Date the vitals was taken/recorded |
| create\_timestamp | Datetime | Y | Y | Date created in database |
| modify\_timestamp | Datetime | Y | Y | Date modified in database. If NULL, must be set to the create\_timestamp datetime |

\*At least one of these fields must be sent per record. For instance, a record may contain bp\_systolic and bp\_diastolic, but BMI or BMI Percentile. The .xsd validator will not check for this, so it is critical you QA this on your own.