

The Arkansas All-Payer Claims Database (APCD) Data Validation Reporting

November 2018



Introduction

This packet introduces the **data validation process**, **data validation summary report** and **data validation detail report** to submitting entities (SEs). These are provided with each data submission.

About ACHI

- The Arkansas Center for Health Improvement (ACHI) is a nonpartisan, independent health policy center dedicated to improving the health of Arkansans
- Established in 1998, creating a much needed intersection between research and policy
- ACHI has proven experience in the management and integration of health data to support research and health policy

About ACHI

Mission

To be a catalyst for improving the health of Arkansans through evidence-based research, public issue advocacy, and collaborative program development.

Vision

To be a trusted health policy leader committed to innovations that improve the health of Arkansans.

Core Values

Trust, Innovation, Initiative, and Commitment.

ACHI Major Accomplishments

| Year | Accomplishment |
|------|--|
| 2000 | Tobacco Settlement Proceeds Act |
| 2003 | Act 1035 of 2003 – Arkansas Health Data Initiative (HDI) |
| 2006 | ARHealth Networks established |
| 2006 | Act 8 of 2006 – Clean Indoor Air Act |
| 2009 | Act 180 of 2009 – Tobacco Excise Tax |
| 2009 | Act 394 of 2009 – Graduated Driver License regulations |
| 2009 | Act 308 of 2009 – Primary Seat Belt Law |
| 2010 | Establishment of the Office of Health Information Technology (OHIT) and State Health Alliance Records Exchange (SHARE) |

Continued ...

ACHI Major Accomplishments

| Year | Accomplishment |
|----------------|--|
| 2011 | Act 197 of 2011 – Fluoridated Drinking Water |
| 2011 – present | Multi-payer Arkansas Health Care Payment Improvement Initiative (ACHPII) |
| 2012 | Arkansas Workforce Strategic Plan |
| 2013 – present | State Innovation Model – Population Health |
| 2013 – present | Arkansas Health Care Independence Program and Health Insurance Marketplace |
| 2015 | Act 1233 of 2015 – Arkansas Healthcare Transparency Initiative |
| 2016 – present | Evaluation of Private Option and Arkansas Works |

APCD: What is submitted?

- Submitting entities must provide the following data categories unless granted an exemption:
 - Member enrollment data
 - Unique identifiers (no personal identifiers)
 - Demographic and geographic information
 - Medical claims
 - Pharmacy claims
 - Dental claims
 - Provider data
 - Look-up tables

APCD: Submission Schedule

- All SEs are required to submit data quarterly
 - March 31
 - June 30
 - September 30
 - December 31
- Data submitted quarterly should include data from the previous quarter.
 - For example, data submitted March 31, 2018, should include data from Q4 2017, September 30, 2017 through December 31, 2017

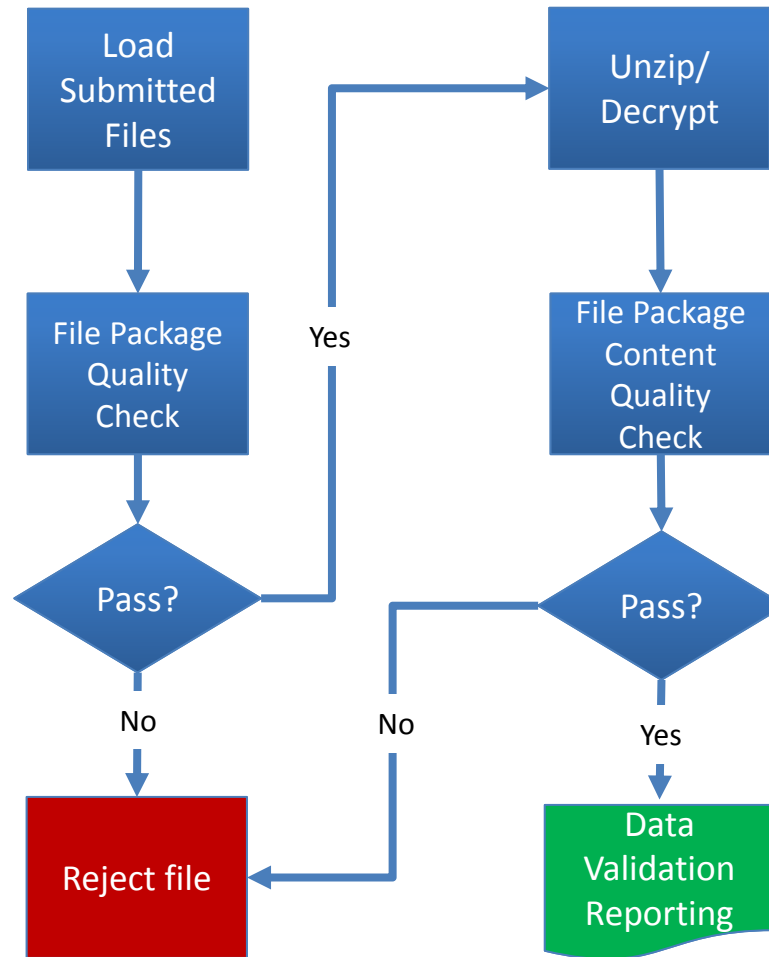
DATA QUALITY PROCESS & VALIDATION REPORTING

APCD Data Intake Quality Checks

The Arkansas APCD data intake process pulls zipped/encrypted data files from the APCD SFTP site and loads them to the APCD Landing Zone.

After the files are located on the Arkansas APCD infrastructure, the file name structure is verified and ZIP file package contents are verified.

If the Quality Check (File Package or File Package Content) does not pass, reject the file and ask SE to address issues and resubmit.



If the File Package Quality check passes, unzip and decrypt the file and verify the detached signature.

Decrypted file is examined for data format issues, header/trailer record information compliance, column count, row count, and data file type accuracy.

If the File Package Content Quality Check passes, the unzipped, decrypted file is sent to data validation reporting.

Data Validation Levels

- Submitted data is evaluated through two data validation levels:
 - Level 1: Data Intake Confirmation
 - Filename requirements and contents
 - Encryption and signature-match validation
 - Data file-type check
 - File layouts – header/trailer and control count record checks
 - Record count and column count checks
 - Level 2: Field Level Validation
 - Executed after data file passes Level 1
 - Executes over 5,000 data checks/edits
 - Produces Data Validation Summary and Detail Reports

*Instructions in
this packet
focus on
Level 2 only*

Data Validation Report Types

- Two data validation reports will be produced for every file submitted:
 - Data Validation Summary Report
 - Provided in Microsoft Excel format
 - Includes data type, length, value, dependency, and threshold results
 - Provides pass/fail indicators at data-element level
 - Provides pass/fail indicators at field level
 - Data Validation Detail Report
 - Provided in a pipe-delimited .dat text file
 - Includes first 1,000 examples of each field data issue (examples not mutually exclusive – a data element can be represented multiple times if more than one issue exists)
 - Includes data element ID and error descriptions

Data Validation Pass/Fail Criteria

- A submitted file will fail at the file level if any one required data element fails validation
- A data element will fail validation if the criteria for any of the following are not met: data type, data length, data value, data dependency, OR threshold
- Threshold criteria are evaluated after data exception requests are approved
- Optional fields are measured, but will not cause the file to fail

Data Validation Report Delivery

- Validation reports are provided via the web portal
- Packages are created using the same method as submitted files
- Reports are encrypted with the SE's public RSA key
- Upon delivery, SE can download, unzip, and decrypt data validation report packages for review

Data Validation Report Delivery

- Data validation report file naming convention (after decryption):
 - Summary Reports
ARAPCD_99999_TEST_20151230_201511_01_01_ELG_20160316_123954_DV_Summary.xlsx
 - Detail Reports
ARAPCD_99999_TEST_20151230_201511_01_01_ELG_20160316_123954_DV_Detail.dat

How to Read Validation Reports

- Identify the failed data elements in the APCD Summary Validation reports
- Find all rows with the failed data element ID in the Arkansas APCD Detail Validation file
- Address the identified issues in the submitted data and resubmit the data file
- Failed dependency non-empty records will not appear in the detail report
- If unable to resolve data quality issues, submit an online exception for review



DATA VALIDATION SUMMARY REPORT

Data Validation Summary Report



Data Validation Summary Report

| | |
|------------------------|---|
| Entity Code | 99999 |
| Payer Name | ACHI Test Entity |
| File Name | ARAPCD_99999_TEST_20170130_201511_01_01_CLM_20170130_120107.dat |
| Data Source | Medical Claims Data |
| Record Count | 108779 |
| Coverage Period | 11/1/2015 - 11/30/2015 |
| DSG Version | 4.1.2015 |
| Environment | Production |
| FileLogId | 6307 |
| FileLogDate | 1/30/2017 12:01:15 PM |
| DV Processed Date | 1/30/2017 12:15:38 PM |
| Data Validation Result | FAIL |

| Data Element ID | Data Element Name | Data Type Failures | Data Length Failures | Data Value Failures | Dependency Check Failures | Dependency Flag | Failed Dependency Non Empty | Optional Column Flag | Total Records For Calculation | Total Unique Records Failed | Required Threshold | Calculated Threshold | Data Validation Result |
|-----------------|---------------------------|--------------------|----------------------|---------------------|---------------------------|-----------------|-----------------------------|----------------------|-------------------------------|-----------------------------|--------------------|----------------------|------------------------|
| MC999 | UniqueRowId | 0 | 0 | 2 | 0 | False | 0 | Required | 108779 | 2 | 100.000000 | 99.998161 | Fail |
| MC001 | Submitter | 0 | 0 | 0 | 0 | False | 0 | Required | 108779 | 0 | 100.000000 | 100.000000 | Pass |
| MC002 | NationalPlanId | 108779 | 108779 | 0 | 0 | False | 0 | Optional | 108779 | 108779 | 0.000000 | 0.000000 | Pass |
| MC003 | InsuranceType/ProductCode | 0 | 0 | 0 | 0 | False | 0 | Required | 108779 | 0 | 98.000000 | 100.000000 | Pass |
| MC004 | PayerClaimControlNumber | 0 | 0 | 0 | 0 | False | 0 | Required | 108779 | 0 | 99.000000 | 100.000000 | Pass |



Data Validation Summary Report Header Definitions

| Header Field | Definition |
|------------------------|---|
| Entity Code | Code assigned by Arkansas APCD, representing the submitting entity |
| Payer Name | Name of the submitting entity |
| File Name | Name of submitted file represented in the Data Validation reporting |
| Data Source | Submitted File Category Values: <div> <div>Member Eligibility Data</div> <div>Medical Claims Data</div> <div>Pharmacy Claims Data</div> </div> <div> <div>Dental Claims Data</div> <div>Provider Data</div> </div> |
| Record Count | Count of data detail (DD) records on the file, not including headers and trailers |
| DSG Version | Current DSG version used for validation |
| FileLogID | Internal flag representing submission |
| FileLogDate | Date data file was picked up from SFTP site |
| ETL Complete Date | Date data validation was complete |
| Data Validation Result | Overall data validation result |

Data Validation Summary

Report Definitions

| Report Field | Definition |
|---------------------------|--|
| Data Element ID | Identifying number from Arkansas APCD Data Submission Guide (DSG) representing the data element |
| Data Element ID Name | Name/high-level descriptor of data element from Arkansas APCD DSG |
| Data Type Failures | Number of rows failing because the data element was not in the correct data type required in the Arkansas APCD DSG (first 1,000 failures will be in the detail report) |
| Data Length Failures | Number of rows failing because the data element did not have the length required in the Arkansas APCD DSG (first 1,000 failures will be in the detail report) |
| Data Value Failures | Number of rows failing because the data element did not have the data values required in the Arkansas APCD DSG (first 1,000 failures will be in the detail report) |
| Dependency Check Failures | Number of rows that did not meet the dependency, but does not qualify as an error because the dependency rule does not apply; these rows are not considered in the calculated threshold |
| Dependency Flag | <p>Indicates if a dependency is required for the data element <i>Note: Check DSG for dependency requirements</i></p> <p>Values:</p> <p>TRUE – a dependency is required FALSE – no dependency is required</p> |

Data Validation Summary

Report Definitions, Continued

| Report Field | Definition |
|-------------------------------|--|
| Failed Dependency Non Empty | Values should not be present for a data element if the dependency criteria is not met; this quantity represents the unique number of records that did not meet the defined dependency but contained values (the calculated threshold will be 0%) |
| Optional Column Flag | Indicates if the data element was optional or required Values: Required – field is required Optional – field is optional |
| Total Records for Calculation | Total number of records used to calculate the pass/fail threshold |
| Total Unique Records Failed | Total number of records failing validation |
| Required Threshold | Indicates data coverage threshold required in Arkansas APCD DSG and after exceptions; optional fields are measured but cannot cause the file to fail |
| Calculated Threshold | Indicates data coverage threshold found in the data element based on the following algorithm: $(\text{Total Records for Calculation} - \text{Total Unique Records Failed}) / (\text{Total Records for Calculation})$ |
| Data Validation Results | Indicates if data element passed or failed data validation; only required data elements affect file-level result Values: PASS FAIL |

DATA VALIDATION DETAIL REPORT

Data Validation Detail Report: Example

Detail Report Content Example Exported into Excel

| recKey | RowNumber | EntityCode | PayerName | DataSource | FileName | DataElementID | DataElementName | DataValue | FailedCheck |
|--------|-----------|------------|------------------|-------------------------|---|---------------|----------------------------|-----------|--|
| 1 | 1 | 99999 | ACHI Test Entity | Member Eligibility Data | ARAPCD_99999_TEST_20151230_201511_01_01_ELG.dat | ME002 | NationalPlanId | | Optional Column Failed DataLength Validation Check. Maximum Field Length is 30 characters. |
| 2 | 2 | 99999 | ACHI Test Entity | Member Eligibility Data | ARAPCD_99999_TEST_20151230_201511_01_01_ELG.dat | ME012 | IndividualRelationshipCode | 02 | REQUIRED Column Failed DataValue Validation Check. The expected DataValue was not found in the Lookup Reference. |
| 3 | 3 | 99999 | ACHI Test Entity | Member Eligibility Data | ARAPCD_99999_TEST_20151230_201511_01_01_ELG.dat | ME017 | MemberZipCode | 720320001 | REQUIRED Column Failed DataLength Validation Check. Required Fixed Field Length is 5 characters. |

Provided Format - Pipe Delimited .dat File

```

recKey|RowNumber|EntityCode|PayerName|DataSource|FileName|DataElementID|DataElementName|DataValue|FailedCheck|DateTimeStamp
1|1|99999|ACHI Test Entity|Member Eligibility Data|ARAPCD_99999_TEST_20151230_201511_01_01_ELG.dat|ME002|NationalPlanId||Optional Column Failed DataLength Validation Check. Maximum Field Length is 30 characters.|3/9/2016 9:30
2|2|99999|ACHI Test Entity|Member Eligibility Data|ARAPCD_99999_TEST_20151230_201511_01_01_ELG.dat|ME012|IndividualRelationshipCode|02|REQUIRED Column Failed DataValue Validation Check. The expected DataValue was not found in the Lookup Reference.|3/9/2016 9:30
3|3|99999|ACHI Test Entity|Member Eligibility Data|ARAPCD_99999_TEST_20151230_201511_01_01_ELG.dat|ME017|MemberZipCode|720320001|REQUIRED Column Failed DataLength Validation Check. Required Fixed Field Length is 5 characters.|3/9/2016 9:30

```



Note: Only the first 1,000 values of a failed check will be contained in the detail report. The submitter is expected to examine the full submitted file for all data elements.

Data Validation Detail Report: Definitions

| Report Field | Definition |
|-----------------|--|
| reckKey | Row number of Data Validation Detail Report file |
| EntityCode | Code assigned by Arkansas APCD representing the submitting entity |
| PayerName | Submitting entity name |
| DataSource | Submitted file category Values: <div> <div>Member Eligibility Data</div> <div>Medical Claims Data</div> <div>Pharmacy Claims Data</div> </div> <div> <div>Dental Claims Data</div> <div>Provider Data</div> </div> |
| FileName | Name of submitted file |
| DataElementID | Identifier from the Arkansas APCD Data Submission Guide (DSG) representing the data element |
| DataElementName | Name/high-level descriptor of data element from Arkansas APCD DSG |
| DataValue | Data element value failing data validation check |
| FailedCheck | Data validation check description |
| DateTimeStamp | Date and time validation report was processed |

Web Portal File Retrieval

APCD Website Homepage



Arkansas All-Payer Claims Database

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Web Portal

About the APCD

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Welcome to the Arkansas All-Payer Claims Database (APCD)

There is a growing demand and need for transparency of healthcare information in Arkansas to promote high-value care and advance research. Consumers, employers, and policymakers are advocating for greater reporting on the prices of healthcare services as a way to encourage consumers to choose low-cost, high-quality providers and to promote competition based on value. The Arkansas All-Payer Claims Database (APCD) is a dynamic tool that will enable the state to further its transparency objectives by collecting healthcare data from public and private sources and empowering Arkansans with information to better understand how and where healthcare is being delivered and how much is being spent. Please see the "How to Use the APCD Website" box below to learn how to navigate the Arkansas APCD website.

What's New?

- Click here for a [current status](#) on the Arkansas APCD

Reports and Maps

Click below to view initial reporting available from the Arkansas APCD.

[Start Here!](#)

Proposed Rule and Data Submission Guide

- Check out the new [Act 1233, AID Proposed Rule 100](#)
- Check out the new APCD [Data Submission Guide](#)

Data Submitters and Data Requesters

Click below to access the Arkansas APCD Web Portal.

[Start Here!](#)

How to Use APCD Website

Below is a summary of the tabs listed at the top of the Arkansas APCD page, each representing different content areas of the website:

- Visit the [Reports and Maps](#) to view reports on the price and utilization of select procedures
- Visit the [Resources](#) find additional information on healthcare transparency efforts in Arkansas and the national-level
- Visit the [Governance](#) to learn more about Arkansas APCD oversight and governing authority
- Visit the [About the APCD](#) to find out more about the Arkansas APCD

Health Care System Transparency

The Arkansas APCD is an exciting initiative that builds upon increased efforts at health care system transparency in Arkansas. Click here to read the latest [issue brief](#) on health care data transparency and click here to see additional resources on transparency efforts at the state and national-level.



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User Name and Password



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Web Portal: Data Submitter and Data Requester Access

The Arkansas All-Payer Claims Database (APCD) Web Portal provides authorized, secure access for data submission and data release.

Signing up for a Web Portal Account

To request an account, please contact [APCD Technical Support](#).

To submit an online technical support question, please [fill out our online contact form](#), and somebody from our technical support team will reach out to you within 48 business hours.

Log into the Web Portal

User Name:

Password:

[Forgot your password? Click here](#)

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Web Portal Dashboard

- Upon logging into the Web Portal, users will be directed to the Web Portal dashboard. From this page, users may access the following tabs:
 - Upload Files
 - Retrieve Files
 - Account History
 - Data Exceptions
 - Technical Support

Web Portal Setup: Account Overview



Arkansas All-Payer Claims Database

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Web Portal: Dashboard

Welcome to the Arkansas All-Payer Claims Database (APCD) Web Portal Dashboard! [Click here](#) to log out.

Account Overview

Organization

ACHI Test Entity

Entity Code

99999

Account Type

Submitter

Contact Email

Contact Phone

Upload Files

Retrieve Files

Account History

Data Exceptions

Technical Support

If you have new .ZIP files to upload on behalf of your organization, please add them here, and then click the 'Upload File(s)' button. Note that ONLY .ZIP files will be accepted.

Please choose which .ZIP files you'd like to upload:

Select

Upload File(s)



Web Portal Setup: Account Overview

- Under Account Overview on the left side of every page, users will be able to see the following entity-specific information:
 - Organization: Submitting Entity (SE)
 - Entity Code: 5-6 digit alphanumeric code assigned at registration
 - Account Type: Submitter
 - Contact Email: Email of record for SE
 - Contact Phone: Phone number of record for SE

Web Portal Setup: Retrieve Files

- Under the Retrieve Files tab, users will be able to view the list of files produced by the APCD and download:
 - Data Validation Summary Reports
 - Data Validation Detail Reports
 - Other files uploaded from APCD to the SE

Web Portal Setup: Retrieve Files



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Web Portal: Dashboard

Welcome to the Arkansas All-Payer Claims Database (APCD) Web Portal Dashboard! [Click here](#) to log out.

Account Notifications

You have 3 files that are now available for download that have not yet been downloaded. These files will be available until 6/14/2018. Please download these files as soon as possible by visiting the [Retrieve Files](#) tab.

Account Overview

Organization
ACHI Test Entity
Entity Code
99999
Account Type
Submitter
Contact Email

Contact Phone

Upload Files

Retrieve Files

Account History

Data Exceptions

Technical Support

Any files that have been prepared for you by the Arkansas APCD will be available for you to retrieve here.

| Uploaded File | Available Downloads | |
|---|------------------------------|--------------------------|
| ARAPCD_99999_TEST_20151230_201511_01_01_DNT_20160921_100338_DV Uploaded on 5/31/2018 Expires on 6/14/2018 | Summary File | Downloaded on 9/21/2016 |
| | Detail File | Downloaded on 9/21/2016 |
| ARAPCD_99999_TEST_20151230_201511_01_01_ELGL_20160316_123954_DV Uploaded on 5/31/2018 Expires on 6/14/2018 | Summary File | Not downloaded |
| | Detail File | Downloaded on 11/28/2016 |
| ARAPCD_99999_TEST_20170824_201511_01_01_DNT_20170824_094941_DV Uploaded on 5/31/2018 Expires on 6/14/2018 | Summary File | Not downloaded |
| | Detail File | Not downloaded |



Web Portal Setup: Notifications

- Above Account Overview on the left side of every page, notifications related to the Retrieve Files tab will appear:
 - Count of new files available that have not been downloaded and their latest expiration dates
 - Technical Support contact information changes
 - Technical Support phone number changes
 - Technical Support email address changes
 - APCD web portal changes

Web Portal Setup: Account History

- Under the Account History tab, users will be able to view detailed information regarding their specific accounts
- Actions listed include:
 - Successful login to the APCD Web Portal
 - Verification of technical support request submission
 - Files successfully uploaded (with filenames)
 - Reports successfully downloaded (with filenames)

Arkansas APCD Technical Support

- Arkansas APCD Technical Support team can be reached at this email address:
support@achiapcd.atlassian.net

