

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

June 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



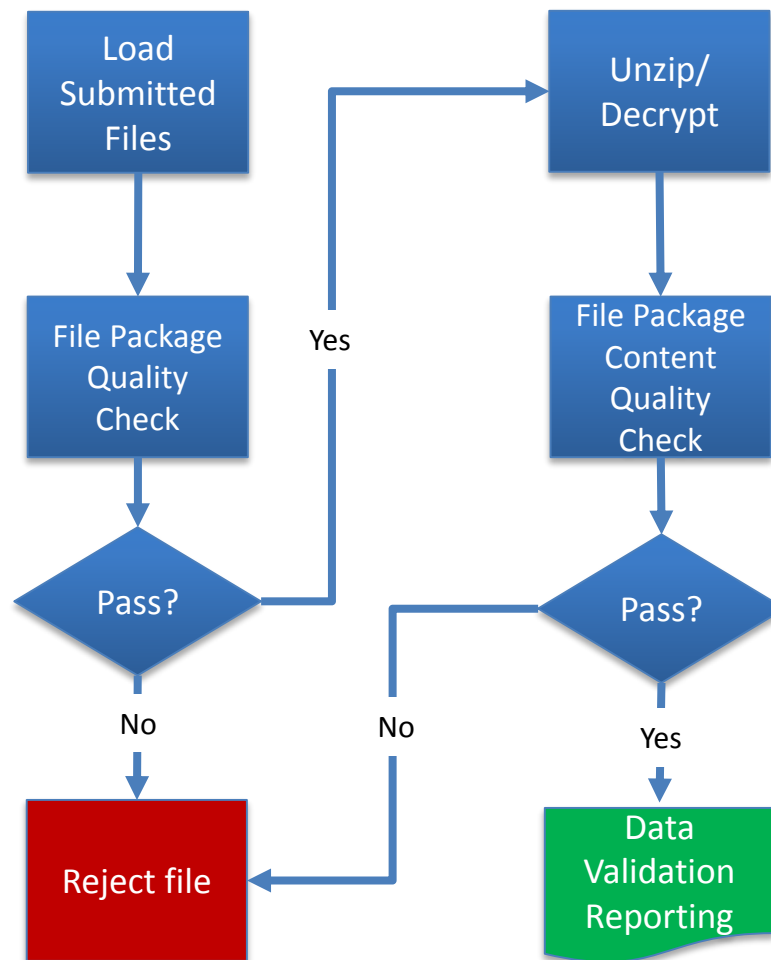
# DATA QUALITY PROCESS & VALIDATION REPORTING

# 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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Governance

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.



# 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:

Log In

[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

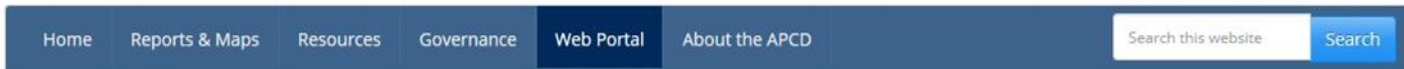
- Under the Retrieve Files tab, users will be able to view the list of files produced by the APCD and download:
  - Data Validation Summary Reports
  - Data Validation Detail Reports
  - Other files uploaded from APCD to the SE

# 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 <b>Expires on 6/14/2018</b>	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 <b>Expires on 6/14/2018</b>	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 <b>Expires on 6/14/2018</b>	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](mailto:support@achiapcd.atlassian.net)

