

Agenda Item VII: Provider Organization Index Pilot

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For Today

- Overview of the HCAI Provider Organization Index pilot project
 - Why needed?
 - Use cases
 - Work undertaken to date
- HPD Provider Data
 - Data elements and completeness
 - Challenges with matching
- Next steps on the HCAI Provider Organization Index

HCAI Provider Organization Index

The HCAI Provider Organization Index aims to catalog and describe the organizational structures and hierarchies of California's provider organizations.

(example organizations: hospitals, health systems, medical groups, IPAs)

The Provider Organization Index is distinct from a Provider Directory

Both are valuable tools with different purposes

Provider Organization Index

Focuses on organizational structures and hierarchies of health care provider organizations

Provider Directory

Provides insight on the availability of individual network providers/clinics specific to a consumer's health plan

Work To Date



Engaged Blue Path Health to support planning and feasibility assessment



Conducted environment scan and baseline assessment



Conducted interviews with subject matter experts and data vendors



Identified potential public and private data sources that could contribute to a Provider Organization Index



Evaluated data vendor responses to “test case scenarios” designed to assess ability to provide data to meet HCAI requirements

Why a Provider Organization Index Is Needed

HCAI cannot uniquely and consistently identify provider organizations using existing data sources.

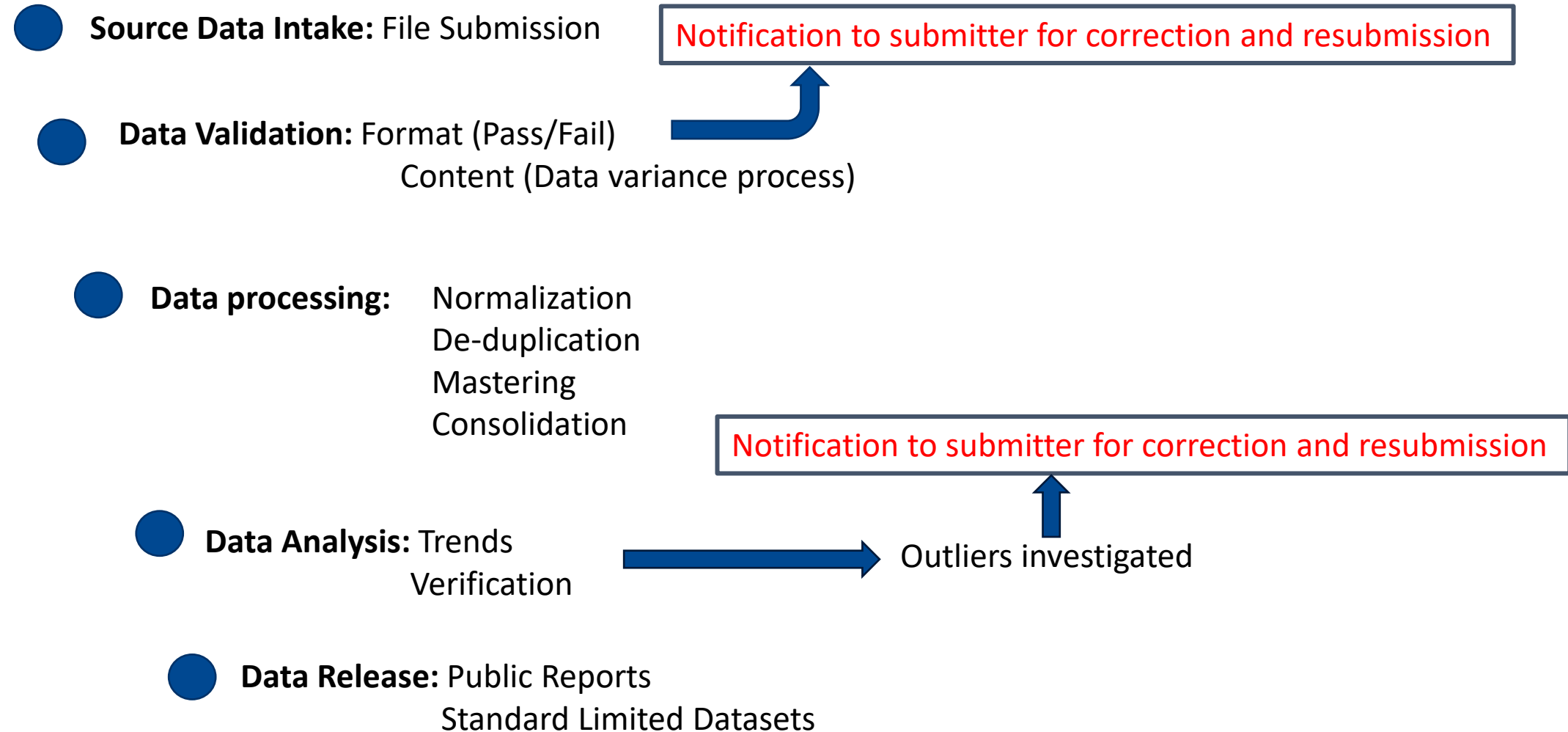
There is currently no single “source of truth” that provides a complete picture of California’s provider organization landscape and maps provider organizations to their parent organizations

Building the Provider Organization Index could facilitate many important use cases

- Increasing transparency around the structure of California’s health care system
- Attributing cost growth across geographies for large, statewide health systems
- Identifying large single specialty physician organizations
- Monitoring merger and acquisition (M&A) activities in the provider space, including private equity investment
- Supporting academic research by helping researchers identify organizational profiles
- **Allowing for systematic linking within the HPD to attribute claims and services to provider organizations**

HPD Provider Data

HPD Data Collection Process



HPD Provider Data: What We Get*

Entity Information

Reference identifiers, name data, address data, specialty data

Service Information

Where care happened, who did what

Payer-assigned provider ID
National provider ID
Medicare ID
Medicaid ID
Tax ID
Entity type
DEA number
State license number

Street
City
State
Postal code
FIPS county code
Country code
Phone number

Type of bill (institutional claim)
Place of service (professional claim)

Rendering provider details
Billing provider details
Referring provider details
Attending provider details

First
Middle
Last (or org. name)
Suffix

Primary taxonomy code
Additional taxonomy codes
Atypical specialty codes
All NUCC codes

Rendering provider details are similar to what can be found in provider enrollment data to the left; other provider details are limited to reference identifiers

* Fields are available in the APCD Common Data Layout for submitters to use, but that doesn't mean they're all being used—or available and being used consistently across mandatory submitters

HPD Provider Data – Completeness Rates

| <i>Provider Data Element</i> | <i>Data Element Description</i> | <i>Requirements</i> | Submitted HPD Data (Provider Table) | Linked to National Plan and Provider Enumeration System (NPPES) | | |
|------------------------------|---|-----------------------|--|---|----------------|---------------------|
| | | | <i>All Records (Persons + Organizations)</i> | <i>All Records (Persons + Organizations)</i> | <i>Persons</i> | <i>rganizations</i> |
| CDLPV004 | Payer Assigned Provider ID | Required | 100.0% | 100.0% | 100.0% | 00.0% |
| CDLPV006 | Entity Type Qualifier | Required | 13.1% | 97.7% | 100.0% | 00.0% |
| CDLPV007 | Provider NPI | Required | 97.2% | 97.5% | 99.8% | 9.7% |
| CDLPV009 | Provider State License Number | Required if available | 39.9% | 75.6% | 95.9% | 5.9% |
| CDLPV010 | Provider First Name | Situational | 59.7% | 70.8% | 99.8% | .8% |
| CDLPV012 | Organization Name | Required | 2.3% | 29.6% | 0.2% | 8.4% |
| CDLPV012 | Provider Last Name or Organization Name | Required | 88.7% | 96.4% | 100.0% | 8.3% |
| CDLPV014 | Provider Office Street Address | Required | 79.2% | 79.2% | 78.3% | 3.5% |
| CDLPV015 | Provider City | Required | 80.6% | 98.8% | 99.9% | 00.0% |
| CDLPV016 | Provider Office State | Required | 83.7% | 98.8% | 99.9% | 00.0% |
| CDLPV017 | Provider Office ZIP Code | Required | 83.6% | 98.8% | 99.9% | 00.0% |
| CDLPV021 | Provider Specialty | Required | 64.3% | 97.6% | 99.9% | 9.8% |

| | |
|---|---------------------|
| ■ | High Data Quality |
| ■ | Medium Data Quality |
| ■ | Low Data Quality |

Typos or changes to any of these data elements have an impact on data quality.

Individual Provider – NPI to NPPES Example

From Commercial Provider File

| Submitter | NPI | Entity Type | First Name | Last Name/Org | Address Line 1 | City | Zip |
|-----------|------------|-------------|------------|----------------|----------------------|------------|-------|
| Payor A | 1235467890 | 1 | Mickey | Mouse | 814 High Lane | Mahwah | 07430 |
| Payor A | 1235467890 | 1 | | Blizzard Beach | 86 Vale Avenue | Westfield | 01085 |
| Payor A | 1235467890 | 1 | Snow | White | 20 Camp Dr | San Angelo | 76901 |
| Payor A | 1235467890 | 1 | Peter | Pan | 7027 Newbridge | Logansport | 46947 |
| Payor A | 1235467890 | 1 | Peter | Pan | 7027 Newbridge Court | Logansport | 46947 |

Most prevalent examples continue for thousands of rows.

From CMS NPPES

| | NPI | Entity Type | First Name | Last Name/Org | Address Line 1 | City | Zip |
|--|------------|-------------|------------|---------------|----------------------|------------|-------|
| | 1235467890 | 1 | Peter | Pan | 7027 Newbridge Court | Logansport | 46947 |

*Fictitious data emulating real identified scenarios

Organization Provider – NPI to NPPES Example

From Commercial Provider File

| Submitter | NPI | Entity Type | First Name | Last Name/Org | Address Line 1 | City | Zip |
|-----------|------------|-------------|------------|-----------------|------------------------|------------------|-------|
| Payor A | 1235467890 | 2 | null | Magic Kingdom | 1180 Seven Seas Drive | Lake Buena Vista | 32830 |
| Payor A | 1235467890 | 2 | null | Disneyland Park | 1313 Disneyland Drive | Anaheim | 92802 |
| Payor A | 1235467890 | 2 | Myron | Blizzard | 351 S. Studio Drive | Lake Buena Vista | 32830 |
| Payor A | 1235467890 | 2 | null | Blizzard Beach | 1534 Blizzard | Orlando | 32836 |
| Payor A | 1235467890 | 2 | null | Blizzard Beach | 1534 Blizzard Beach Dr | Orlando | 32836 |

Most prevalent examples continue for thousands of rows.

From CMS NPPES

| | NPI | Entity Type | First Name | Last Name/Org | Address Line 1 | City | Zip |
|--|------------|-------------|------------|----------------|------------------------|---------|-------|
| | 1235467890 | 2 | null | Blizzard Beach | 1534 Blizzard Beach Dr | Orlando | 32836 |

*Fictitious data emulating real identified scenarios

Why is Entity Type Qualifier important for provider matching?

- Example without Entity Type Qualifier
 - Without Entity Type Qualifier, where an individual provider and an organization may be mistakenly considered the same due to identical names and address.

| Name | Specialty | Address | Entity Type |
|--------------------------|-----------------------------|------------------|-------------|
| John Sith | Family Medicine | 123 Main St, Sac | <null> |
| John Sith Medic Group | Multi-Specialty Practice | 123 Main St, Sac | <null> |

Why is Entity Type Qualifier important for provider matching?

- Example with Entity Type Qualifier
 - With Entity Type Qualifier, it avoids mismatches, and the match recognizes John Smith as an individual healthcare provider; John Smith Medical Group as an organization providing group medical services

| Name | Specialty | Address | Entity Type |
|--------------------------|--------------------------|------------------|-------------|
| John Smith | Family Medicine | 123 Main St, Sac | 1 |
| John Smith Medical Group | Multi-Specialty Practice | 123 Main St, Sac | 2 |

HPD Provider Data – Medical Claims Data Completeness Rates

- The average completeness rate of Rendering Provider ID and the Billing Provider ID is between 97 to 100% across the payer types for the 2021 to 2023 period.
- Matching Provider ID's back to the provider file is another challenge/data gap area.
- Having a strong Provider ID completion in the medical claims file does not mean that provider specific identifiers can be accurately matched and provide valid or actionable provider specific information from provider file.

HPD Provider Data: What We Don't Get

- **Detailed address/contact information** – Email or other digital addresses, alternate work locations
- **Provider networks/relationships** – Payer-assigned provider IDs may include generic values; incorrect to interpret data as showing payer-provider or provider-provider hierarchies

HCAI Provider Data Index: Next Steps

Provider Organization Index: Current Efforts

- Two feasible options have been identified to serve as the “backbone” for the Provider Organization Index:
 - Agency for Healthcare Research and Quality (AHRQ) Compendium of U.S. Health Systems, supplemented by HCAI Licensed Facility Information system (LFIS)
 - Proprietary data from a private vendor / commercial data broker
- Neither option is perfect - both options have risks and will require supplemental data
- Authoritative public sources are preferred to minimize limitations on acquisition and use of the data
- Currently in proof-of-concept development centered on the AHRQ Compendium

California Government Data Sources Reviewed

| Department | Data Source | Description |
|---|--|--|
| Department of Managed Health Care (DMHC) | RBO | Risk bearing organizations (RBOs) submit reports to DMHC; includes RBO-level characteristics such as number of lives (range), counties, and hospital/health system ownership |
| | Annual Network | Health plans submit provider network data annually; includes network providers, hospitals, other facilities, and enrollees. |
| Department of Health Care Services (DHCS) | Medi-Cal Managed Care Provider Listing | 274 data captures relationships between providers and organizations; dataset includes individual NPIs, group names, and sub-networks names. |
| | PAVE | Provider Application and Validation for Enrollment: collects information on Medi-Cal providers; extensive list of provider types |
| Secretary of State | Business Directory | Registry information for corporations; contains entity numbers/corporation IDs |

Federal Government Data Sources Reviewed

| Department | Data | Description |
|--|------------------------|--|
| Agency for Healthcare Research and Quality (AHRQ) | AHRQ Compendium | Annually published data set that describes organizational landscape of care delivery entities nationally, including structure of health systems and ownership of outpatient sites; primary sources are IQVIA and American Hospital Association annual survey |
| Center for Medicare and Medicaid (CMS) | MD-PPAS | Medicare Data on Provider Practice and Specialty: database tracking Medicare participation and performance for healthcare providers |
| | NPPES | National Plan and Provider Enumeration System: national registry of healthcare providers, assigning each a unique NPI |
| | PECOS | Provider Enrollment, Chain, and Ownership System: online system for Medicare provider enrollment, capturing detailed information on provider credentials and affiliations |
| Internal Revenue Service (IRS) | IRS 990 | Annual filing required for tax-exempt organizations, detailing their finances, governance, and activities |

The AHRQ Compendium: Overview

The Compendium includes data on:



Health Systems



Hospitals



Group practices

Data Sources for Health System Files

- IQVIA OneKey
- American Hospital Association (AHA) Annual Survey
- Healthcare Provider Cost Report Information System (HCRIS)

AHRQ previously released 2016, 2018, 2020, 2021, and 2022 Compendium data

New 2020, 2021, 2022, and 2023 data were added in December 2024

Source: [Agency for Healthcare Research and Quality Compendium of U.S. Health Systems](#)

Provider Organization Index: Next Steps

- Assess results of proof-of-concept effort with AHRQ Compendium
- Continue effort or pivot to commercial data vendor and repeat proof-of-concept with new data source
- Develop implementation plan in Spring 2025