# Creating a Path for Reliable Provider Information

NAHDO's 35th Annual Conference
August 25, 2020

HSRI

# Objectives

Examine Provider Complexity in APCD Data

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Discuss Provider Index vs Directory

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Understand Value and Importance of NPI and NPPES

# Defining a Provider

What is
a provider?

What is
the provider
universe?

# Defining a Provider

> **What is a provider?**

> **What is the provider universe?**

**Context of the inquiry**

Define the use case

Define the unit of analysis
for specific provider-level inquiries

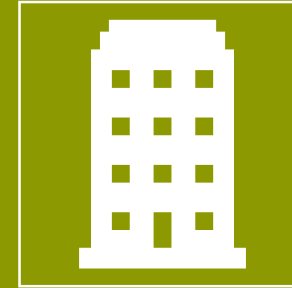# Provider Elements on APCD Claim Records

| Billing | Rendering | Service Facility Location | Attending | Operating | Referring | Prescribing | Pharmacy |
|---|---|---|---|---|---|---|---|
| *Organizations & Individuals* | *Organizations & Individuals* | *Organizations* | *Individuals* | *Individuals* | *Individuals* | *Individuals* | *Organizations* |
| Provider Num, NPI, Tax ID | Provider Num, NPI, Tax ID | Location Num, NPI | Provider Num, NPI | Provider Num, NPI | Provider Num, NPI | NPI, Tax ID, DEA | Provider Num, NPI, Tax ID |
| Name (L or Org) | Name (F, M, L, S) | Name (Location, L or Org) | Name (F, M, L, S) | Name (F, M, L, S) | Name (F, M, L, S) | Name (F, M, L) | Name (Org) |
| Street Address | | Street Address | | | | | Address (City, State, ZIP) |
| | Specialty, Entity Type | | Specialty | | | | |

L = Last Name;   F = First Name;   M = Middle Name or Initial;   S = Suffix (e.g., Jr., Sr., III)

# Two Organizing Approaches

## Provider Index

Inventory of the provider 'units' submitted on APCD records + provider details

## Provider Directory

Provider nesting & other relationships, analytical groupings + enhanced provider details

# APCD Provider Index: Where to Start?

| Billing | Rendering | Service Facility Location | Attending | Operating | Referring | Prescribing | Pharmacy |
|---|---|---|---|---|---|---|---|
| *Organizations & Individuals* | *Organizations & Individuals* | *Organizations* | *Individuals* | *Individuals* | *Individuals* | *Individuals* | *Organizations* |
| Provider Num, **NPI**, Tax ID | Provider Num, **NPI**, Tax ID | Location Num, **NPI** | Provider Num, **NPI** | Provider Num, **NPI** | Provider Num, **NPI** | **NPI**, Tax ID, DEA | Provider Num, **NPI**, Tax ID |
| Name (L or Org) | Name (F, M, L, S) | Name (Location, L or Org) | Name (F, M, L, S) | Name (F, M, L, S) | Name (F, M, L, S) | Name (F, M, L) | Name (Org) |
| Street Address | | Street Address | | | | | Address (City, State, ZIP) |
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# National Provider Identifier

## WHAT IT IS

10-digit intelligence-free identifier for providers of healthcare services

Assigned through the National Plan and Provider Enumeration System (NPPES)

## HISTORY

HIPAA Administrative Simplification Standard for identification of covered healthcare providers in administrative and financial transactions

Created to "improve the efficiency and effectiveness of electronic transmission of health information"

2004 (Jan): NPI Final Rule published

2005 (May): NPI becomes effective

2007 (May): Compliance deadline

2007 (Sep): Dissemination through NPI Registry, NPI Downloadable File

## DATA ELEMENTS

NPI

Entity type ('1' Individual; '2' Organization)

Provider name(s)

Business mailing and practice location street addresses

Other identifiers (Medicare, Medicaid, DEA, etc.), licensing and taxonomy information

Sole proprietor, organization subpart, parent organization

Dates: enumeration, last update, deactivation, reactivation, certification
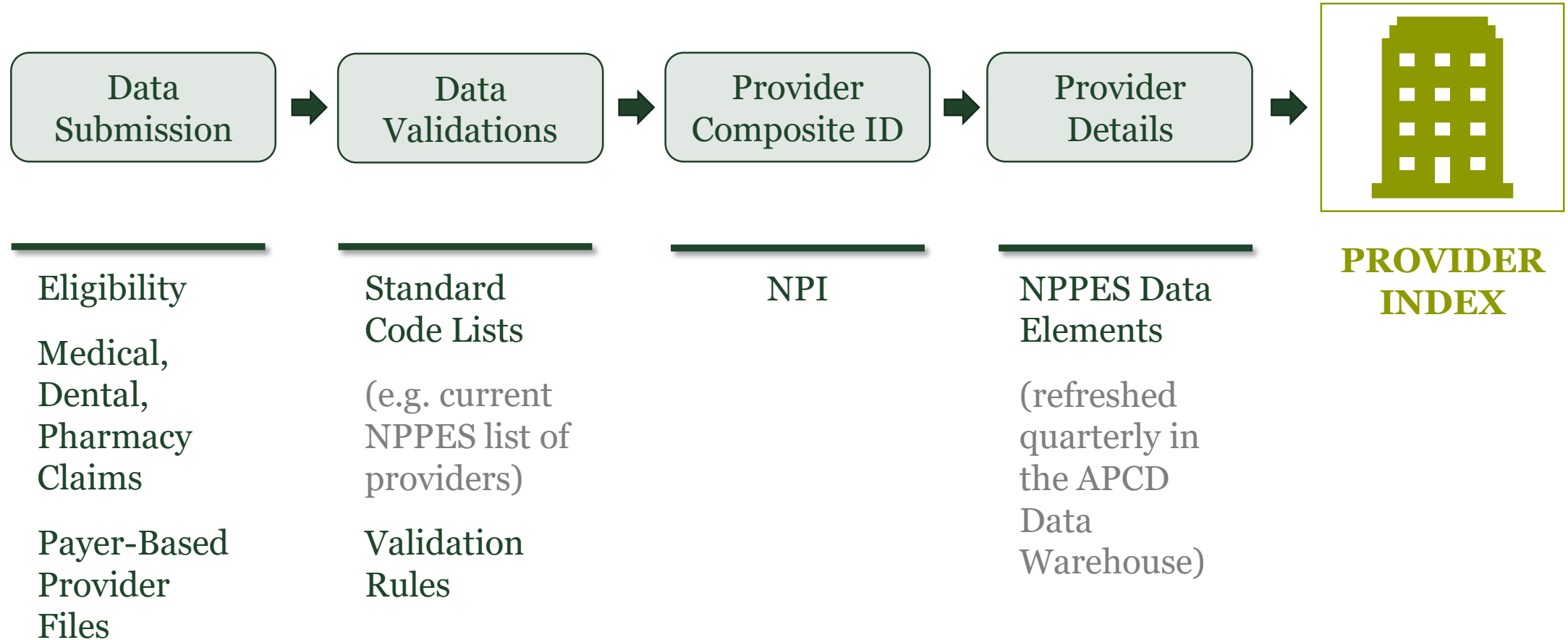
Deactivated NPIs

## VALUE

Available at the national level

Available publicly, at no cost, in a machine-readable format and through a website query tool

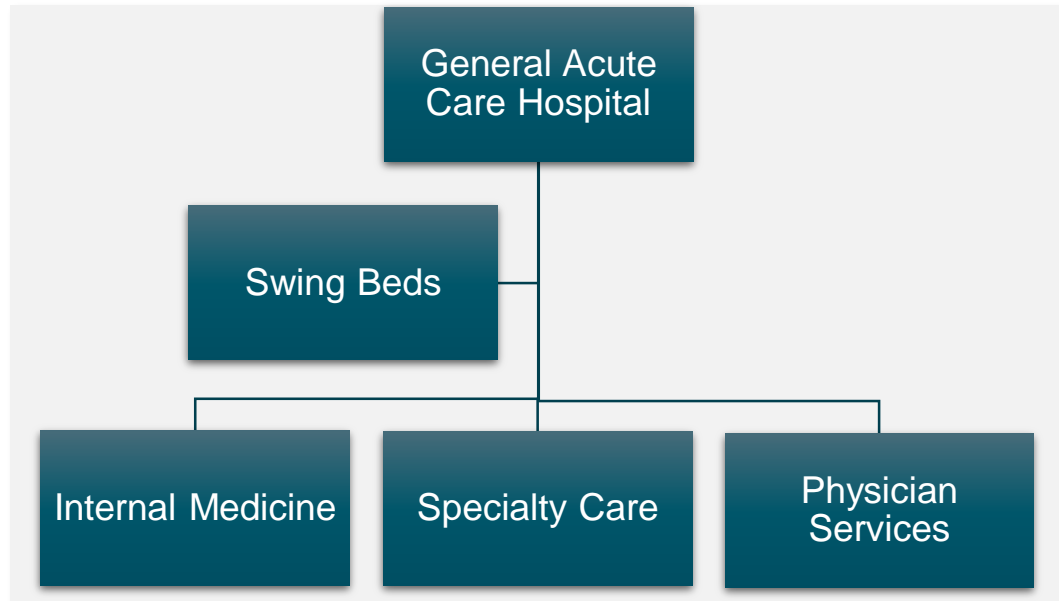Monthly updates available for full replacement files

Wide range of potential uses
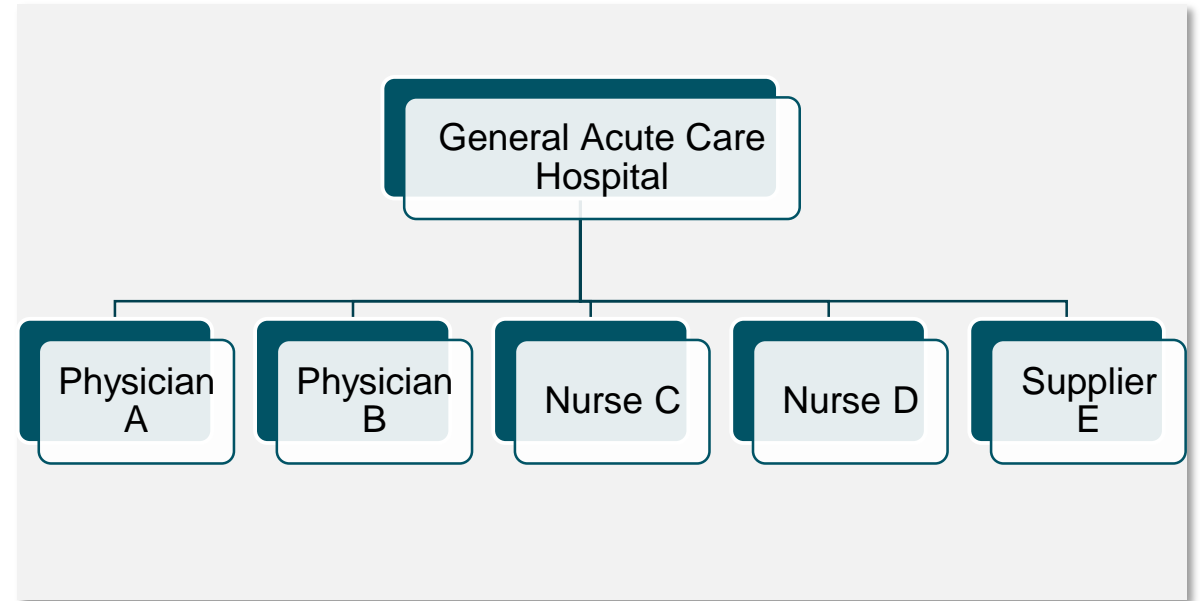
# APCD Provider Index: Processing Steps

```
Data          →   Data          →   Provider       →   Provider      →
Submission        Validations       Composite ID       Details
```
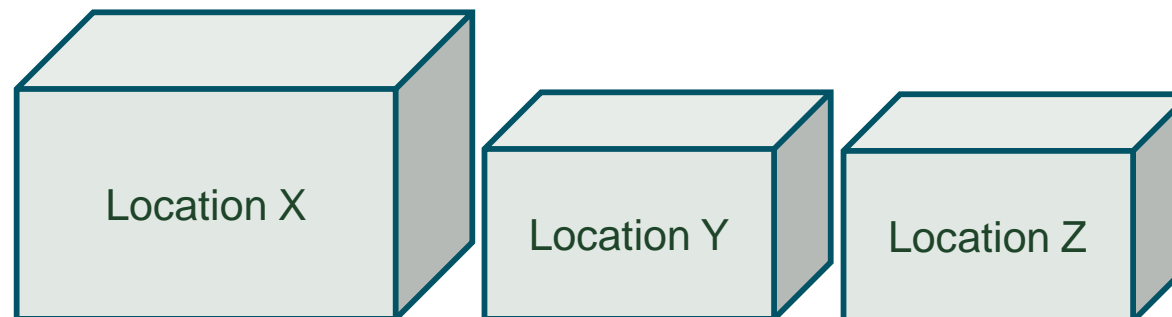
**PROVIDER INDEX**

| Data Submission | Data Validations | Provider Composite ID | Provider Details |
|---|---|---|---|
| Eligibility | Standard Code Lists | NPI | NPPES Data Elements |
| Medical, Dental, Pharmacy Claims | (e.g. current NPPES list of providers) | | (refreshed quarterly in the APCD Data Warehouse) |
| Payer-Based Provider Files | Validation Rules | | |

# Example: Hospital Provider

**FACILITIES, DEPARTMENTS**

- General Acute Care Hospital
  - Swing Beds
  - Internal Medicine
  - Specialty Care
  - Physician Services

**INDIVIDUALS**

- General Acute Care Hospital
  - Physician A
  - Physician B
  - Nurse C
  - Nurse D
  - Supplier E

**PHYSICAL LOCATIONS**

Location X

Location Y

Location Z

# Hospital Providers *for a Specific Use Case*

MHDO — Maine Health Data Organization
Information | Insight | Improvement

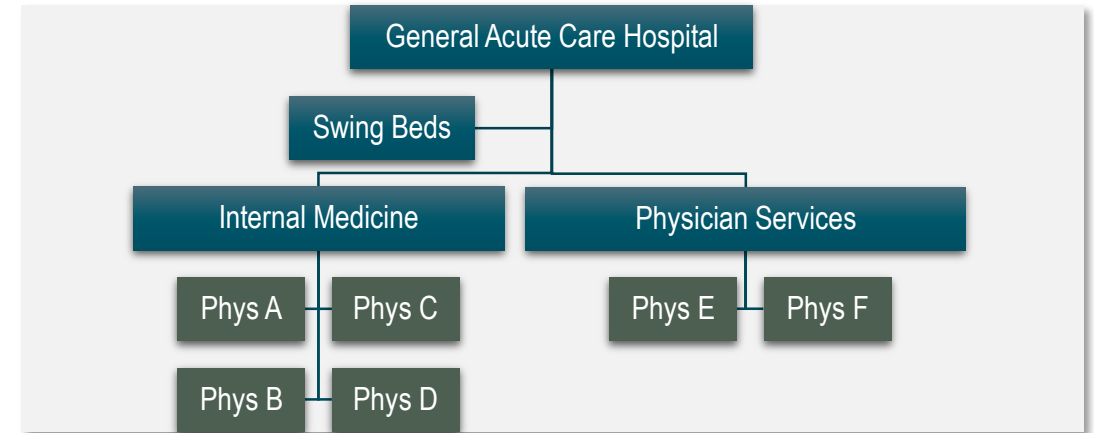CompareMaine
health costs & quality

www.comparemaine.org
Healthcare transparency website; shows the average cost of common healthcare procedures at different facilities in Maine.
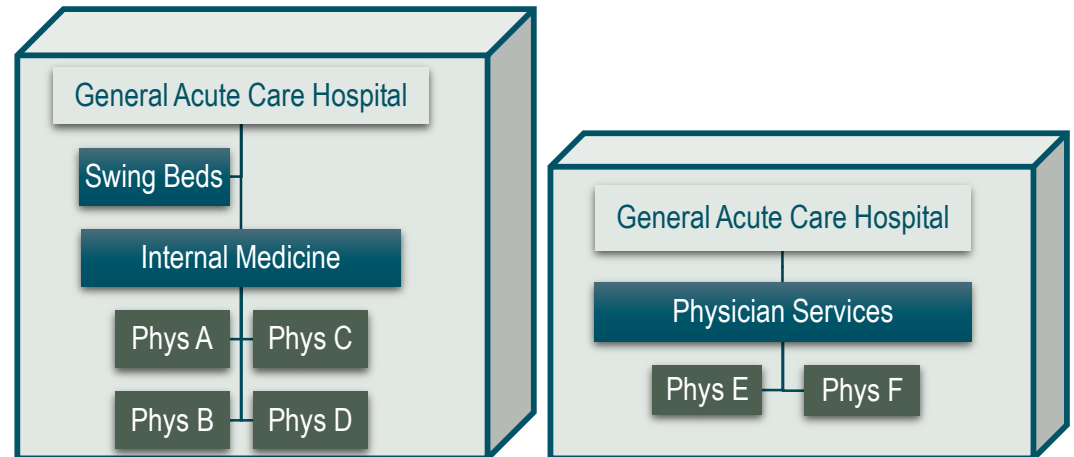
MHDO and HSRI worked directly with hospital providers to:

- Validate the list of *billing* NPIs to include in analysis

- Validate the facility location(s) address(es)

- Confirm the consumer-friendly display name

- Decide on analytical grouping for cost estimates: rollup across all locations (Scenario 1) or separate for each location (Scenario 2)

- Revisit and confirm accuracy of all the above during each release of CompareMaine

Scenario 1 | All Hospital Locations Combined



Scenario 2 | Hospital-Location X; Hospital-Location Y

# Building a Provider Directory

**PROVIDER INDEX**

**Standards and reference information**
(e.g. facility, professional, state or national inventories)

**Audience**
(e.g. health systems, healthcare consumers, researchers)

**Methodological considerations**
(e.g. universe or subgroup, provider detail elements to include and maintain, custom or standard provider groupings)

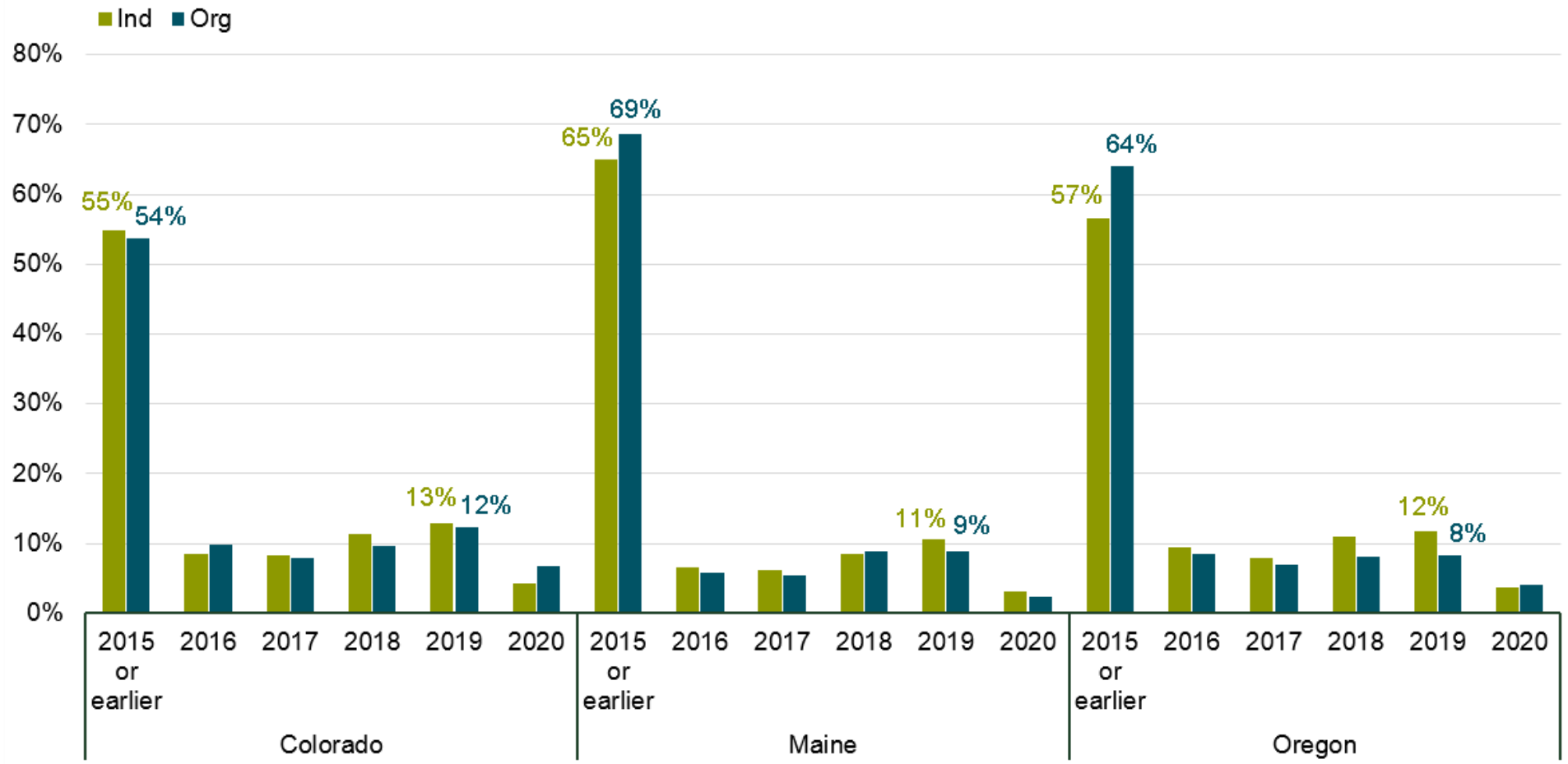**Time and resources investment**

**PROVIDER DIRECTORY**

Context of the Inquiry | Use Case

# Challenges & Limitations

| Provider Index | Provider Directory |
|---|---|
| • Absent NPIs<br><br>• Using NPPES for the provider name is not always straightforward (e.g. occasionally the alternate "doing business as" name is preferred)<br><br>• NPPES may be incomplete (e.g. determining primary taxonomy where not indicated)<br><br>• NPPES recency of updates | • Difficulty in determining relationships between providers<br><br>• Time and resource intensive<br><br>• Maintenance may not be sustainable<br><br>• "Does it scale?" |

# Challenges & Limitations



UPDATE RECENY IN NPPES

# Recommendations

To build reliable provider information:

- Monitor APCD submissions to detect data quality issues and changes over time and between payers; refine intake validations

- Improve data users' knowledge and understanding of the provider complexity in APCD

- Use opportunities to promote the NPPES and to increase its completeness and accuracy

- Continue to explore pathways towards a national Provider Directory using best practices, streamlined validation processes, and additional provider resources (e.g., state or national databases for provider licensure information, DEA database)

# Contributors

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# Thank You.

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