Overview

This report presents a summary of the costs to states associated with the development of All-Payer Claims Databases (APCDs). The findings are based on information gathered from states that have implemented APCDs, including review of state vendor contract documents and telephone interviews with state contacts. Both current and expired contract documents were reviewed.

Methodology

Ten (10) states provided detailed information that was analyzed for this study, providing both existing and expired contracts from a total of eight (8) vendors. A total of thirteen (13) contract or contract experiences were reviewed (one state could not provide the contract documents, but provided information about the contract in the interview). Several financial summaries and ratios were developed in order to provide for comparability across states. These are described in more detail in the "Summary Findings" section.

- The states that participated in this study are blinded due to the confidentiality of vendor contracts.
- This study did not include an assessment of vendor performance or perceived value of the vendors' services.

Summary Findings

- There is very little consistency among states in terms of staffing, contract content, or contract formats for APCD development.
- Most states rely on vendors for a significant portion of the APCD aggregation and/or analytic functions. Vendors are typically engaged in one of three ways:
  1. Aggregation services only: The vendor contracts are generally limited to the collection of data from the payers. The scope of work generally includes receiving data feeds, checking for errors, and combining the data sources into a combined set of files representing all payers. The contract can specify a range of services related to payer interactions and follow-up, particularly in contacting payers related to data errors and the needs for resubmission. Along with aggregation only contracts, states generally either contract separately for the analytic services, or plan to have analytic services performed by in-house resources. Separate analytic contracts are more common than in-house analysis, although some states have a combination of analytic contracts and some in-house analysis. Four (4) states had aggregation services only contracts.
  2. Aggregation and analytic services combined: These vendor contracts typically combine the aggregation and analytic components of APCD work into a single contract. The "early adopter" APCD state contracts often combined aggregation and analytics into a single contract; however, more recent contract arrangements have separated the services into two contracts (and, for some, with different vendors for the different pieces). The range of the analytic services varies greatly, including some that specify web-based analytic tools and others that are static reports. This

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NAHDO National Association of Health Data Organizations

may account for some of the variability in total contract amount by states (i.e., contracts that include very robust analytics can be more expensive). Some states supplement the analytic services with some in-house analytic capacity. Seven (7) states aggregation and analytics services combined contracts.

3. Analytic services only: These contracts are limited to analysis of APCD data files that are the products of the aggregation contracts. Again, some states supplement the analytic services with some in-house analytic capacity. Two (2) states had analytic services only contracts (note: one state is currently procuring a contract of this type, but that contract is not reflected in this study).

- The extent of services specified in contracts varies greatly. Some of the contracts have detailed schedules of services and performance guarantees, whereas others provide little detail to the scope.
- There is little consistency, and a wide range of vendor pricing, for what appear to be similar scopes of services among states, particularly in the aggregation realm. The average contract length is 3 years, with a range of 2 years to 5 years. In addition, some states extended the length of their contracts with non-competitive renewals or modifications.
- Some states have received grant funding that supports APCD development. Details about the grant funding were not shared, although it is worth noting that grant funding has been received from local (state-level) foundations, national foundation, and federal projects. States have not generally received grants for the sole purpose of developing an APCD; instead, the APCD has been a tool for larger projects (e.g., Health Insurance Exchange).
- One dimension that states could not consistently provide information about was the state-level resources required to support APCDs. States expressed concern about how to associate costs to the APCD when the individuals working on APCD are working across other analytic data systems at the state level. Internal resources varied from a 0.5 FTE contract manager, whose responsibility is to oversee vendor deliverables to multiple FTEs who work directly with the payers to address data submission issues. The case study below provides a summary of state experiences with internal costs.

Internal Costs: A Case Study

The following case study combines experiences from multiple states to summarize a possible approach to internal staffing, in order to guide agency planning and estimates of staff and budget needs. This case study summarizes the possible needs for internal support for ACPDs, after passing legislation. Estimates are made for different steps in the APCD development process.

- **Rule – making**
  The process of rule-making typically relies on project management and legal representation. If rules for data collection for other state-mandated data systems (e.g., hospital discharge data systems) are in place, the rule-making process can mimic existing rules development

processes and, to some extent, content. In addition, rules from other states with APCDs can be used as a basis for rule development. With that, the upper limit of estimated legal time needed is the equivalent of 0.5 FTE of the states' legal counsel staff for approximately one (1) year. In addition, a 1.0 FTE project management role is also suggested for one year. Ideally, this is split between two people. One person serves as the overall project manager, familiar with the actual rule-making process in a state, including the various phases of stakeholder involvement. The other 0.5 FTE is a technical resource, familiar with the collection efforts, who can provide input into how to write the rules to address the technical needs of the data collection efforts, as well as to assist in answering of technical questions (often from data submitters) related to how rules are written.

- **Vendor acquisition and management**
  The Request for Proposal (RFP) process requires up to 3 months of a 0.5 FTE project manager to manage RFP drafting, development, bidder calls and questions, and release of the RFP. Once a vendor is selected, the state support time can include up to 6 months of 0.5 FTE to manage the initial phases of the vendor implementation. In addition to this time, a technical resource (similar to the resource consulted in the rule-making process) can provide input into the implementation process. The technical resource can assist with working through the implementation process with the vendor and project manager to identify possible issues with the methods being implemented for data collection and aggregation.

  Once the contract is in place, the same project manager can be designated at 0.25-0.5 FTE to monitor contract deliverables, depending on the sophistication of the vendor's monitoring reports. Contracts that do not include the explicit role for the vendor to follow-up with carriers to address data submission and data quality issues should expect this need to be closer to 1.0 FTE.

- **Data release policy and process**
  States that develop data release policies to support the release and use of the APCD data should factor legal resources into the costs of APCD development. While the vendor may be responsible for the creation of the public use, limited use, and/or research files, the state will likely need to manage the release process through some type of Review Board. Coordinating the release of data and/or the Review Board could initially require 0.5 FTE for at least 6 months, depending on the level of intensity of the data release processes. In addition, an ongoing need for legal review may be necessary for reviewing applications for data release, depending on the process required and frequency of applications. A conservative estimate of the necessary time is 0.1 FTE annually. In addition, the data release process would likely require a project manager to maintain the ongoing release process, up to 0.25 FTE annually.

- **Data Management and Analysis Support**
  Even in states that have contracts that include analytic components, there will likely need to

be some internal capacity to address analytic needs post data aggregation. The linking of members and providers across payers, rolling up claims, and other processing to create analysis-ready files from aggregated data files can require 0.5 FTE of a technical/analytic resource.

The extent of the need for information technology is largely dependent on the existing infrastructure present in the state. States have typically been able to leverage existing infrastructure, storing APCD data in existing data warehouses. If this is the case, states may be able to create the APCD with no additional machines or Database Administrators specific for the ACPD. However, in one example, the implementation of the APCD project required the purchase of some additional hardware, at an estimated cost of $25,000.

Software needs are areas of the greatest variability, dependent on the extent of the state's interest in analysis and reporting of the data. Analytic software that is capable of ad-hoc analysis of large data sets (e.g., SAS®) and web-based reporting tools (e.g., Cognos®) are examples of software purchases that states have made to support internal analytic needs. Again, if the APCD can leverage existing software, states may be able to analyze the data with no additional licenses specific for the APCD. However, in one example, the estimated cost for analytic software for both the ad-hoc and sophisticated reporting tools was $275,000.

- **Other general administrative support**
  No additional, unique general operating expenses were identified. Conference call lines and webinar subscriptions were common, but costs were not attributed directly to the APCD.

Table 1: Summary of Internal Cost Estimates

	Year 1 FTE	Year 1 Costs*	Maintenance	Maintenance Costs
Rule making				
Project manager	0.5 FTE	$25,000	N/A	
Legal resource	1.0 FTE	$75,000	N/A	
Technical resource	0.5 FTE	$32,500	N/A	
Vendor acquisition and management				
Project manager	0.5 FTE	$25,000	0.5 FTE	$25,000
Technical resource	0.25 FTE	$16,250	0.25 FTE	$16,250
Data release policy and process				
Project manager	0.25 FTE	$12,500	0.25 FTE	$12,500
Legal resource	1.0 FTE	$75,000	0.1 FTE	$7,500
Data management analysis and support				
Technical resource	0.5 FTE	$32,500	0.5 FTE	$32,500
IT infrastructure		$25,000		$0
Software		$275,000		$20,000
TOTAL		***$593,750***		***$113,750***

*Assumes ($55,000 annual, project manager; $65,000, technical resources; $75,000, legal resources); Does not include fringe benefit costs

Contract Analysis Findings

Table 2 provides the range of the annual contract amounts for each of general contract type.

Table 2. Annual APCD contract ranges, by contract type

Contract Type	*Annual Contract Amount Range*	*Annual Contract Median Amount*
Aggregation Only	$202,125-$895,594	$812,765
Aggregation and Analytics	$461,712-$1,000,000	$672,404
Analytics Only	$244,000-$1,473,549	$858,774

A series of ratios were developed in order to attempt to provide comparability between states and vendors. The underlying denominators included: total state population, number of covered lives, and number of payers. The state contract information is color coded (as above):

Tables 3 and 4 provide two cost ratios, based on the individual state population.

1. **Cost/Year/ Person:** The annual contract amount is divided by the total state population, according to the 2010 United States Census.[i]
2. **Cost/Year/ Insured Lives:** The annual contract amount is divided by the estimated number of insured lives for the state. The estimated number of insured lives was determined by using the Health Insurance Coverage figures reported by the Kaiser Family Foundation (KFF) on their State Health Fact Sheets[ii] and the state lines of business (e.g. Medicaid, commercial payers, Medicare, etc.) included in the APCD. This number will not be the same as the total covered lives in the APCD, due to differences in thresholds for data submission in each state.

Table 3. Estimates per capita costs for APCD, total population and covered lives

	Aggregation Only							*Aggregation and Analytics*				*Analytics Only*	
Annual Cost	***State A***	***State B***	***State C***	***State D***	***State E***	***State F***	***State G***	***State H***	***State I***	***State J***	***State K***	***State L***	***State M***
Per Capita - Total Population	$0.18	$0.29	$0.57	$0.35	$1.29	$0.13	$0.25	$0.09	$0.67	$0.15	$0.07	$0.28	$0.09
Per Capita - Insured Lives	$0.24	$0.42	$0.78	$0.48	$1.70	$0.18	$0.31	$0.13	$0.72	$0.15	$0.10	$0.29	$0.12

Table 4. Median per capita costs, total population and covered lives, for APCD by contract type

Contract Type	*Median Per Capita Cost, Total Population*	*Median Per Capita Cost, Insured Lives*
Aggregation Only	$0.29	$0.42
Aggregation and Analytics	$0.12	$0.14
Analytics Only	$0.18	$0.20

Tables 5 and 6 provide the annual cost for the contract divided by the total number of payers that submit data to the APCD. Not all states provided the number of payers; therefore, the table reflects a limited number of states that provided the number of payers that submit to the APCD.

Table 5. Estimates per annual cost for APCD, per submitting payer

	Aggregation Only					*Aggregation and Analytics*		*Analytics Only*
Annual Cost	*State A*	*State B*	*State C*	*State D*	*State E*	*State F*	*State G*	*State H*
Per Payer included in the APCD	$58,823	$20,366	$12,479	$12,131	$69,638	$12,636	$9,528	$22,326

Table 6. Median annual cost for APCD, per submitting carrier, by contract type

Contract Type	*Median Annual Cost per Submitting Carrier*
Aggregation Only	$20,366
Aggregation and Analytics	$11,082
Analytics Only*	$22,326

*The analytics only "median" is based on one value, but is included here for comparison purposes.

Conclusion

Many states are engaged in contracting with vendors for aggregation and analysis of APCD data. This study found that there is considerable variability in the contract pricing, contract scope, and internal costs for APCD development. State efforts could benefit from more information sharing regarding existing contract efforts, and possibly joint contract template recommendations (if not joint purchasing).

Additional information about the costs of APCDs can be found in fact sheets on the APCD Council website: http://apcdcouncil.org/issue-briefs-and-fact-sheets.

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About the APCD Council

The All-Payer Database Council (www.apcdcouncil.org) is a partnership between the New Hampshire Institute for Health Policy and Practice at the University of New Hampshire (UNH) and the National Association of Health Data Organizations (NAHDO). The APCD Council is a learning network of states, insurers, vendors, and other stakeholders who are advancing the knowledge and development of APCDs. This includes the development of standards for data collection in partnership with national Data Standard Management Organizations (DSMOs), as well as early stage technical assistance for states, and state advocacy.

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[i] US Census: http://2010.census.gov/2010census/

[ii] http://www.statehealthfacts.org/healthreformsource.jsp?source=QL

Population and demographic data are based on analysis of the Census Bureau's March 2007 and 2008 Current Population Surveys (CPS; Annual Social and Economic Supplements) and may differ from other population estimates published yearly by the Census Bureau. U.S. and state population data displayed on this site are restricted to the non-institutionalized, civilian (not active duty military) population; state data represent 2-year averages.