Standardization of Data Collection in All-Payer Claims Databases

January 2011

What are All-Payer Claims Databases?

In the context of the current national dialog about health care and reform, states are trying to better understand and control healthcare costs and utilization. Over the past five years, at least twelve (12) states have enacted legislation and/or started to collect healthcare claims data from commercial and public payers in an effort to establish all-payer claims databases (APCDs). These data are being analyzed to understand patterns and trends of healthcare use and costs.

These databases hold the potential for a much deeper understanding of quality and cost of care across populations. The source of the data is from healthcare billing systems that process claims for private and public payers. In addition, some states are developing methods to capture data for uninsured individuals.

While the contents of individual states' APCDs vary, they typically include data from member eligibility files, provider files, medical and pharmacy claims files, and in a few states, dental claims files. The medical claims files include healthcare related data elements such as diagnosis codes, types of care received (procedure and pharmacy codes), insurance product type (HMO, PPO, POS), facility type (hospital, office, clinic), "cost" amounts (charge, paid, member liabilities), and provider information.

The medical claims files include healthcare related data elements such as:

- *diagnosis codes*
- *types of care received (procedure and pharmacy codes)*
- *insurance product type(HMO, PPO, POS)*
- *facility type (hospital, office, clinic)*
- *"cost" amounts (charge, paid, member liabilities)*
- *provider information*

APCDs are being constructed and used for various research and policy purposes, from public health to health services and public policy research, consumer tools, employer coalition reporting, and payer and provider negotiation. For example, in New Hampshire, claims data have been used to better understand the distribution of health insurance coverage. Massachusetts has used the data to develop a public portal for pricing and quality information. Vermont has conducted a tri-state study of use of care in the Northern New England area. Minnesota will be using APCD data for development of provider peer grouping analysis (a method to compare providers based on a combination of cost and quality measures)[i]. Beyond public policy efforts, APCDs are being used by employer coalitions, insurers, providers, think tanks, and consumer groups. More examples can be found in the APCD Fact Sheet (available at www.apcdcouncil.org)[ii]

Why data collection standardization?

While APCDs represent a great opportunity to advance the understanding of cost, utilization, and quality of healthcare, currently each state is collecting different data by different methods and with different definitions. This non-uniform approach to developing APCDs is limiting the ability to share analysis and applications across states, and is raising costs for payers submitting data to the states (especially those payers that are operating in multiple states).

THE COMMONWEALTH FUND

NAHDO
National Association of Health Data Organizations

APCD COUNCIL
All-Payer Claims Database

University of New Hampshire
New Hampshire Institute for Health Policy and Practice

Standardization of data collection would ensure that states collecting the same data would do so in the same manner. A standardized data file submission would use an identical file structure (i.e., data element positioning and field lengths) in each state's database, but would not require that every state collect data for each element. Also, because individual states will likely want to have some data elements that are unique, processes for modifying the standard file structure to include additional data elements will need to be developed.

There has been some effort in the New England area to harmonize data collection efforts among Maine, New Hampshire, and Vermont. The initial rationale for this work towards standardization was to support regional-level analysis for these states that share borders and have cross-state use of the healthcare system. The harmonization of the data supported a tri-state comparative study of healthcare cost and utilization across these three states, for example[iii]. As another example of the utility of standardization, the similarity of the data elements in Maine and New Hampshire allowed Maine to adopt the New Hampshire HealthCost[iv] methodology to efficiently create a similar web application[v] for Maine's APCD data.

What does it take for payers to provide this data?

As APCDs are required in more states, the cost to payers will become significant. APCD stakeholders have a common interest in reducing administrative costs associated with health care, and working together to establish an efficient, cost-effective APCD process should be a common goal. Because payers each use unique systems to administer their business, the challenges for payers to provide the required data vary. In general, a state will be more successful in collecting data elements if payers need those data elements to conduct their core business (versus situations in which states request data elements in the APCD that are not normally collected by insurance carriers). For example, payers have data needed to pay a provider, because claim payment is a core business function. Payers are less likely to know whether a provider has electronic medical records, for example, because that is unrelated to a core business function. Stakeholders should consider the relative costs and benefits of including a particular data element in the APCD if payers do not ordinarily collect it. This can be done through engagement of industry partners to determine the business case for collection of additional data elements. Where feasible, the data elements and value sets proposed should be derived from existing and accepted data standards. For example, for the collection of patient language, International Organization for Standardization has several existing value code sets (e.g. ISO 639-2, 639-3).

Payers need a minimum of nine months to make systems changes and program the initial APCD data sets, and they recommend limiting changes to once a year, with six months advance notice. This allows payers to allocate programming resources and funding and creates a predictable schedule for all parties. Having standardized data elements, a predictable schedule with sufficient lead time for changes, and an ongoing collaborative process with all stakeholders on which data elements are required will support an efficient, cost effective APCD.

How can standardization of APCD data collection be achieved?

Existing Data Standards Maintenance Organizations (DSMOs), such as ANSI X12N (www.x12.org) and the National Council for Prescription Drug Programs (NCPDP, www.ncpdp.org), are responsible for developing and maintaining industry standards for insurance claims and eligibility files. These organizations have formal processes for maintaining standards, including input, discussion, and publication. Many of the states that have developed APCDs reference the X12 standards in eligibility files and medical claims, and NCPDP standards in pharmacy claim files.

The Agency for Healthcare Research and Quality (AHRQ) has supported the APCD Council (www.apcdcouncil.org) to draft a core set of data elements for both the eligibility and medical files of APCD data submissions[vi]. The temporary core set of data elements is intended to foster harmonized data collection across states, and to start the process of developing a formal national standard for state-based APCD data submission. The process for creating the temporary core set of data elements for APCD includes three stages:

(1) Develop and vet a draft of a common core set of APCD data elements based on an inventory of the data elements for six APCDs from the states of Maine, New Hampshire, Vermont, Minnesota, Tennessee, and Massachusetts. (A draft of the state-by-state comparison and the details of the APCD elements can be found at: http://apcdcouncil.org/econometricaagency-healthcare-research-and-quality-ahrq)

(2) Vet draft recommendations with a larger group of other relevant national and local organizations in order to build consensus to harmonize data collection

(3) Engage the relevant DSMOs in the standards development

Similar pharmacy data standards work is being coordinated by the National Council for Prescription Drug Programs (NCPDP). Future work will need to occur with dental claims and provider index files.

The United States Health Information Knowledgebase (USHIK; http://ushik.ahrq.gov) project has inventoried the data collected by several states, and has established a metadata registry that enables comparisons of data element collection standards across data organizations. This is especially useful for states who are considering developing an APCD, or states who wish to change their data collection rules.

Summary

Over a dozen states across the country have enacted legislation and/or started to collect healthcare claims data from commercial and public payers in an effort to establish all-payer claims databases (APCDs). The state APCD efforts have begun as a way to better understand healthcare costs, quality, and utilization. While APCDs represent a significant opportunity to advance the understanding of these issues, currently most states are collecting different data

by different methods and with different definitions. This non-uniform approach will limit the ability to share analysis across states and has negative cost implications for the payers who are submitting the data. Standardization of state APCD data collection would address these issues. With assistance from existing DSMOs (i.e., ANSI X12N, NCPDP, in collaboration with the Agency for Healthcare Research and Quality (AHRQ), the APCD Council (www.apcdcouncil.org) has begun efforts to draft a temporary core set of data elements for both eligibility and medical files of APCD data submissions. Though this draft is the first step in a process of standards development, it begins the process of developing a formal national standard for state-based APCD data submission. Working with NCPDP and ANSI X12, final data collections standards will be developed for state adoption.

There is a clear goal to ensure that standards are available in 2011 for adoption by states as they develop new legislation or modify existing legislation.

Fact sheet prepared by the All-Payer Claims Database (APCD) Council in collaboration with the National Association of Health Data Organizations (NAHDO). Lead authors, Ms. Amy Costello, Project Director with the New Hampshire Institute for Health Policy and Practice at the University of New Hampshire and Ms. Mary Taylor, Head of Regulatory Compliance with Aetna.

For More Information on APCD's visit the following sites:
All-Payer Claims Database Council: http://www.apcdcouncil.org/
National Association of Health Data Organizations: http://www.nahdo.org/

[i] Minnesota Department of Health, *Provider Peer Grouping,* http://www.health.state.mn.us/healthreform/peer/index.html
[ii] APCD Council, *APCD Fact Sheet 2010*, http://www.apcdcouncil.org/sites/apcdcouncil.org/files/APCD%20Fact%20Sheet_FINAL_1.pdf
[iii] Onpoint Health Data, *Tri-State Variation in Health Services Utilization & Expenditures in Northern New England*, http://www.bishca.state.vt.us/sites/default/files/Act49-Tri-State-Commercial-Variation.pdf
[iv] NH Healthcost, http://www.nhhealthcost.org
[v] Maine HealthCost, *Procedure Payments for the Insured,* http://www.healthweb.maine.gov/claims/healthcost/procedure_pricing_insured.aspx
[vi] Dental files and provider index files are currently not being addressed in the first phase.

THE COMMONWEALTH FUND
NAHDO National Association of Health Data Organizations
APCD All-Payer Claims Database COUNCIL
University of New Hampshire New Hampshire Institute for Health Policy and Practice