The Task Force had broad, but not unanimous, support for its recommendations from its members. The primary recommendation to establish an APCD was supported by 36 members and opposed by two members with one member abstaining. All members voted. Voting on the remainder of the recommendations generally followed suit.

The Value of an All Payer Claims Database

Claims data can answer many questions about health care for policymakers, employers, health systems, researchers, and consumers, including the types of health care people are using and how much that health care costs in a state. Having this information from all payers across the state can also reveal geographic differences in utilization and cost. Currently, there is no readily available way to evaluate the total utilization and cost of health care provided in North Carolina. Measuring the cost of health care allows for better management of the costs of health care. Claims data can also show the impact of policy, allow benchmarking of private and public payers, show geographic disparities across the state for health conditions, determine the cost of those conditions, and more. The potential uses of an APCD and how APCDs are used in other states are explained below.

> **"Measuring the cost of health care allows for better management of the costs of health care.**

The Value of an APCD for Policymakers

North Carolina policymakers are concerned with the rising and unsustainable cost of health care as well as the uneven quality and delivery of health care across the state. An APCD would provide data that could be used to better understand and, potentially, manage health care costs. For example, some states are using APCDs to benchmark their Medicaid expenses against private payers within their states. Other state APCDs, like Massachusetts, analyze their claims data and release annual reports on the state health care system. Elements of the report include an assessment of total statewide health care spending and how it changed from the year before in terms of per member per month spending; Medicare spending; total pharmacy spending; provider quality within the state (compared nationally); enrollment coverage; number of high deductible plans; and cost sharing.[4] This annual report card helps the state measure and analyze its performance year by year.

Policymakers are also using APCDs to analyze the impact of health care legislation and determine whether it meets its intended goals. For example, the Maryland APCD issued a report on the impact of legislation intended to decrease the financial burden on patients obtaining care from an out-of-network provider in a hospital. This legislation, titled Assignment of Benefits and Reimbursement of Nonpreferred Providers, was designed to change how nonparticipating, hospital-based, or on-call physicians are reimbursed by insurance plans. The law aimed to reduce the burden on patients by discouraging balance billing, but without reducing the payment to the out-of-network provider. Using the state's APCD, analysts concluded that the law achieved its intended goal by reducing patient cost burden in these cases.[10]

Some states have identified specific goals or questions to be addressed by their APCDs. Tennessee, for example, has identified the following goals:

- Assess the accessibility, adequacy, and affordability of patient health care and coverage
- Identify health and health care needs and inform health care policy
- Determine the capacity and distribution of existing health care resources
- Evaluate the effectiveness of intervention programs on improving patient outcomes
- Review costs among various treatment settings, providers, and approaches
- Provide publicly available information on health care providers' quality of care.[11]

In Delaware, the proposed legislation for their APCD asked the following questions:

- How much does Delaware spend on health care?
- How much does a service cost at a specific facility?
- How have health care prices changed over time?
- Are Delaware's efforts to establish value-based alternatives to the traditional fee-for-service health care system effective?[12]

These goals direct the analyses of APCD data to answer specific policy questions for the state and provide clarity to stakeholders and researchers. Detailing the goals or questions that an APCD should address can ensure its effectiveness.

Similarly, in the statute for the creation of the Health Information Exchange (HIE), the North Carolina General Assembly laid out health care policy concerns it wanted the HIE to address, instructing it to "assess performance, pinpoint medical expenses, identify beneficiary health risks and evaluate how the state is spending money on Medicaid and other State-funded health services." The HIE has recently started collecting clinical data, and the statute for the HIE currently requires only submission of Medicaid and State Employee Health Plan data.[13]

Regional APCD collaboratives have linked clinical and claims data, but a state-based APCD has not yet linked to an HIE. An APCD would provide critical data to more completely answer the directives listed in North Carolina's HIE statute, especially if linked to the HIE in the future. Unlike the HIE, an APCD would include data on a broad population of consumers (all payers), would not require participation in an electronic health record or participation in Medicaid (all providers), and would include a greater array of services (eg, pharmacy filling, durable medical equipment, and oral health services). Furthermore, a large number of individuals in North Carolina come on and off Medicaid each year; in 2016 approximately 710,000 people became Medicaid beneficiaries while almost 626,000 beneficiaries dropped Medicaid coverage.[b] This 'churn' means that the availability of claims data from all payers would greatly improve our ability to understand the care of populations as they change insurance as well as the total care and cost of care for the population of the state.

"Therefore, a state APCD would complement the HIE and could advance the investment the North Carolina General Assembly made in the creation of the HIE.

The goals of the North Carolina HIE include, "enabling more effective population health management, reducing duplication of medical services, allowing more accurate measurement of care services and outcomes, increasing strategic knowledge about the health of the population and facilitating health care cost containment."[13]. The information obtained from an APCD further supports these goals, because claims data allow for analysis of population health and health utilization from a different angle. Therefore, a state APCD would complement the HIE and could advance the investment the North Carolina General Assembly made in the creation of the HIE.

How Policymakers in Other States are Using APCD Data

Policymakers in states with APCDs are using the data to inform decision making. APCDs have been used in market regulation to analyze the effects of mergers by health care facilities. For example, Massachusetts is concerned about the effect of rising health care costs on its ability to offer expanded insurance coverage. As a result, the state set a goal to constrain costs. Their APCD is used to monitor provider and insurer spending. The Massachusetts claims data were critical in assessing the impact of a health system acquiring a hospital, an analysis that ultimately led to the state's decision to bar the acquisition because they believed it would lead to higher spending and costs.[14]

APCDs can also be used to analyze the prevalence of various health conditions. In New Hampshire, claims data were used to analyze the prevalence of depression among the Medicaid population, the variation in services for beneficiaries with and without depression, the type of mental health treatment beneficiaries receive (if any), and the relationship between depression and chronic conditions. By analyzing the claims data using two methods—diagnosis of depression and use of an antidepressant—the report found that depression was more prevalent among women and that most Medicaid members with evidence of depression received treatment. The report also found that those with evidence of depression had "substantially higher costs than those without depression and that those with depression and other comorbid medical or mental health conditions had a two-fold increase in payments." Patients with evidence of depression had, on average, a payment 3.8 times higher than those with no evidence; emergency room usage was 2.5 times higher and hospitalization rates were 4.7 times higher.[15] Similarly, Utah published a report on antidepressant use in the state in order to analyze how antidepressants compared to other medications in terms of use and cost, and how usage broke down among age, sex, location, and health status. The report found that 68% of antidepressant prescriptions were for females (more than double the rate for males) and that most prescriptions were for people aged 55-64 years. Antidepressant use was also analyzed by geographic location; findings showed that in one area of the state, 21% of females were prescribed antidepressants in one year, compared to 7.5% of females in a different area.[16]

b Crosbie, Kelly. Senior Program Manager, Health Transformation, Division of Health Benefits, North Carolina Department of Health and Human Services. Personal (email) communication. Friday, January 20, 2017.

In Oregon, researchers are using state APCD data to review prescription drug costs and trends in order to identify recent utilization for both brand and generic drugs, identify the drugs that have the highest costs for payers, and identify the corresponding medical condition associated with the drugs. This data, requested by a legislative committee, is informing legislation that will be introduced during the 2017 legislative session. Additionally, Oregon is using their APCD to assess the Medicaid reform model and address racial and ethnic health care disparities. Researchers are also reviewing the impact of coordinated care organizations in reducing racial disparities and factors associated with health care performance differences. This analysis will be complemented by a broader assessment of Medicaid in the state and how it performs in comparison to private payers.[17]

“Claims data are also being used to assist with reversing the opioid overdose epidemic.

In Minnesota, counties use claims data analyses released by the state APCD for their Community Health Assessments. Their APCD produced a report entitled *Chronic Conditions Minnesota: New Estimates of Prevalence, Cost and Geographic Variation for Insured Minnesotans, 2012*. This report found that 35.4% of residents had at least one chronic condition, more than half of those had multiple chronic conditions, and that the cost per person for those with one or more chronic conditions was eight times higher than those with no chronic condition. The report also included maps showing the variation and prevalence in spending for chronic diseases by county.[18] Information from a state APCD can be very useful for counties in their community health assessments because it can provide community-level data, which allows for benchmarking both regionally and statewide.

APCDs can be helpful in analyzing a state’s health care workforce. In Oregon, a report was created to assist policy makers in determining the utility of health care workforce incentives. Using APCD data, the analysts were able to create a projection of future provider needs by looking at utilization of medical services (in the form of visits) by age group, race, gender, insurance type, and county. They combined these projections with US Census Bureau and American Community Survey data in order to project future utilization needs and to demonstrate the need for provider retention across the state. This report found that the incentive programs enacted by legislation in 2015 were successful at retaining and attracting providers to rural and underserved areas, and identified which specific programs were effective in recruitment, which programs were effective in retention, and which programs were successful in both recruitment and retention.[17] APCDs may also be helpful in determining state-based workforce needs. For example, claims related to specific diagnoses or procedures may suggest the need for certain types of providers or facilities in a state or region.

Claims data are also being used to assist with reversing the opioid overdose epidemic. The discussion about this epidemic is currently driven by fatalities because those are the data available to the state. In North Carolina, much of the work around opioid overdose and prevention is being driven by emergency department visits and emergency medical services data, since they are more timely and readily available than fatality data.[19] Adding prescription filling behavior, lab tests and procedures, and care or drug-seeking behavior can allow for a more comprehensive view of the problem. For example, states can look at typical opioid filling patterns, identify how many providers in a system are outliers, see how patients with chronic pain are using specialists such as behavioral health and pain specialists, and determine how often providers are obtaining urine toxicology results to inform prescribing. In Colorado, claims data are used to evaluate trends in opioid prescription fills. The goal of the study is to “define the incidence and dose of opioid prescriptions at 30 days, 90 days, and 180 days following hospital discharge after major surgery.” While the study is ongoing, the present data can be used to show providers and health systems how they perform on the prescribing spectrum and inform them about best practices.[20] Currently in North Carolina, using the very powerful controlled substances reporting system, we can study and report on prescription filling behavior in isolation. Also, Community Care North Carolina (CCNC) utilizes Medicaid claims data to identify individuals who may be at risk of opioid overuse and target them for care management services. The opioid risk “flag” looks for Medicaid patients with greater than 12 narcotic prescription fills and greater than 10 ED visits in the last 12 months and no cancer diagnosis in the recent claims history. These individuals are reported to the local CCNC Network to prioritize the work with them at the local level where it can be combined with local knowledge and resources to best serve the individual. An APCD would allow similar risk analysis for people without Medicaid patients.[c]

The Value of an APCD for Improving Public Health and Research

The Task Force found that an APCD has compelling opportunities in public health surveillance, planning, evaluation, and research. Currently, North Carolina lacks a comprehensive database for analysis of issues such as access to care, geographic variation of care, utilization of services, and disease reporting. An APCD

c Cline, Steve. Vice President for Strategic Partnerships, Community Care of North Carolina. Personal (email) communication. Thursday, March 16, 2017.

could help fill this existing data gap, allowing for a wider, deeper view of the population. A North Carolina APCD could be used for analysis and reporting of utilization patterns, including access to care, geographic distribution, and overutilization. For instance, looking at the cholesterol screenings in a geographic area can reveal how it impacts heart disease years later in that area. An APCD could help North Carolina researchers and practitioners develop and evaluate targeted public initiatives and interventions. For example, an APCD could provide a better understanding of antibiotic filling practices, health care associated infection rates, and antimicrobial resistance patterns. It could also assess the surveillance gap in occupational-related injuries and illnesses, by allowing for surveillance of work-related health care encounters that may not require hospitalization or review of emergency department utilization.[19] This could allow the state to target public health interventions to areas that need them most and could allow for better evaluation of the interventions that are implemented. In addition, an APCD allows other partners to analyze health care and utilization. For example, as part of the Fostering Health North Carolina project[d], in specific circumstances Medicaid claims data are shared with local Departments of Social Services to understand the children in their care and what their health needs may be.[e] A similar program in Oregon uses the APCD to examine factors that affect school performance and whether student outcomes correlate to insurance coverage.[17] In Maine, claims data was requested by the Raising Readers program to estimate program eligibility.

> **“Health systems and providers can benefit from an APCD by using claims data to evaluate trends in patient resource use and common practices.**

This program provides books through well-child visits, and the analysis uses information from vital statistics and the ages and rates of children who receive well-child visits to estimate eligibility and promote early childhood literacy.[21] An APCD can be used by traditional and nontraditional stakeholders to allow for a wider, deeper view of population health while also providing better data to inform health policy.[19]

How States are Using APCDs to Improve Public Health

Other states have successfully used their APCDs for public health purposes. In Colorado, researchers used APCD data to assess Hepatitis C prevalence and treatment. They found that only 11% of those with Hepatitis C were receiving any treatment, and of those 11% only 7% were getting the newest and most effective treatment, with 4% receiving older and less effective treatment.[22] Minnesota is using their APCD to estimate the prevalence, cost, and geographic variation of chronic conditions in the state.[18] In Oregon, the APCD is used for public health surveillance of chronic diseases and to describe the burden of those diseases.[17] An APCD cannot track prescribing behavior (a claim is not generated when a prescription is written) but can be used to evaluate treatment by analyzing prescription-filling behavior. It would be possible to evaluate the filling of prescribed medicines in the treatment of these chronic conditions. Such evaluation could lead to public health campaigns or provider education initiatives to improve care and decrease cost and variation of care. Quality measures would be based on real world, evidence-based research. For instance, if the state found that only 50% of prescriptions for blood pressure medicine were filled, then an intervention to improve use of prescribed medicines may be appropriate. Such a finding could also be paired with stroke rates (from the Hospital discharge database). If stroke rates were found to be higher in counties with lower blood pressure medication filling rates, the finding could lead to targeted interventions to improve health equity.

In addition, an APCD allows researchers to provide a snapshot of a community's needs by assessing the prevalence of chronic diseases. It could also describe trends in spending for chronic diseases and the attendant risk factors. In Oregon, the Oregon Health Authority Division of Public Health is reviewing claims data to understand the "magnitude and determinants of antibiotics use" in the state and to "inform policy discussion and education programs to decrease unnecessary use." They seek to reduce antibiotic resistance and will use the data to estimate the proportion of outpatient cases of certain respiratory infections that receive antibiotic prescriptions.[17] These are only a few examples of the many analyses and interventions that are possible with comprehensive claims data.

The Value of an APCD for Health Systems and Providers

Health systems and providers can benefit from an APCD by using claims data to evaluate trends in patient resource use and common practices. These can serve as indicators of quality, cost drivers, and population health trends, and can be used by health systems to compare themselves to others on both the state and national level.

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d Fostering Health North Carolina is a project of the North Carolina Pediatric Society, with support from The Duke Endowment and the North Carolina Department of Health and Human Services.
e Collins, Chris. Former Director, Office of Rural Health, Community Care of North Carolina, North Carolina Department of Health and Human Services. Personal communication. Friday, January 26, 2017.

How Health Systems and Providers are Using APCD Data

Hospital readmission rates are viewed as an indicator of quality. However, providers and health systems often only have access to their own patient records. This means that they can assess how often a patient visits their own hospital or an office within their system, but not how many other facilities that patient has visited that same month or year. APCDs could be used to determine trends in utilization across a spectrum of care settings. APCD data can answer questions such as, "Did a patient visit a primary care provider prior to their first hospital admission?" They can also provide information on post-admission care in a patient's home community.

Figure 1. Readmissions, All Cause 30 Day (per population) for Arapahoe, Denver, and El Paso Denver Counties Compared to the Colorado State Average in 2014

	Arapahoe		Denver		El Paso		State
Completeness Score	C3		C3		C3		C3
Illness Burden Score	0.83		0.79		0.87		0.81
	Value	**Index**	**Value**	**Index**	**Value**	**Index**	**Value**
All Cause 30 Day Readmissions Per Thousand Per Year							
All Cause 30 Day Readmissions	**1.7**	**1.13**	**1.4**	**0.93**	**1.4**	**0.91**	**1.5**
Percent of All Cause 30 Day Readmissions by Service Line							
Behavioral Health	3.90%	0.98	3.47%	0.87	1.61%	0.41	3.98%
Cardiology	8.23%	1.30	6.93%	1.10	4.84%	0.77	6.30%
Gastroenterology	8.23%	0.76	6.44%	0.59	18.55%	1.70	10.89%
General Surgery	10.82%	1.02	12.38%	1.17	10.48%	0.99	10.59%
Neonatology	2.60%	0.99	5.45%	2.07	1.61%	0.61	2.63%
Neurology	6.93%	1.18	6.44%	1.10	4.03%	0.69	5.88%
Obstetrics/Delivery	8.66%	1.01	13.86%	1.62	4.03%	0.47	8.57%
Orthopedic Surgery	6.93%	1.08	2.48%	0.39	6.45%	1.00	6.43%
Other	0.00%	0.00	1.98%	2.70	0.81%	1.10	0.73%
Other Medical	30.30%	0.97	31.19%	1.00	34.68%	1.11	31.33%
Other Surgical	2.16%	0.68	2.48%	0.78	4.03%	1.27	3.18%
Pulmonary	8.23%	1.26	3.96%	0.60	8.06%	1.23	6.55%
Urology/Nephrology	3.03%	1.03	2.97%	1.01	0.81%	0.27	2.94%

A pound sign [#] indicates that the actual data was suppressed due to small membership at this time. A dash [-] indicates that the index was not calculated due to suppression of the value.Values highlighted in red and green indicate noteworthy results above or below the statewide average.

Source. Center for Improving Value in Health Care. Readmissions, All Cause 30 Day (per population). CO Medical Price Compare. https://www.comedprice.org/view/reports/pdf.aspx. Accessed January 30, 2017.

Figure 1. Data Notes

Value represents the utilization for the indicated group

Index compares measure values for a specific geographic region to the state wide average (represented as 1.0). An index above 1.0 means the measure is higher than the state average, and below 1.0 is less than the state average. For example, an index of 1.11 is 11% above the state average, and an index of .83 is 17% below the state average.

Data Completeness: The Data Completeness Score is an indicator of how many people in an area are actually submitted by an insurance payer within the APCD data. Quartile categories are used to describe this completeness with scores ranging from C1 to C4 with C4 being the most complete. Lower scores indicate a greater degree of caution should be used in data interpretation.

Illness Burden: The Illness Burden for a population is a number used to measure the relative health of that group based upon the number and types of healthcare services used. A higher number indicates that population uses more and/or costlier services and is typical when a greater portion of the group has chronic disease. Likewise, smaller numbers (those below 1.0 - the average), indicate a healthier population using less services.

Understanding these trends not only helps a health system or provider evaluate their own quality of care, but can also help control health costs for the community and the state by identifying preventable admissions and readmissions.[23] In Colorado, aggregate claims data are available online to enable analysis on the causes

for readmission within 30 days, either by county, health statistic region, or the first three digits of a zip code. Figure 1 is an example of how readmission data are made available from the APCD in Colorado. The data can be customized for a variety of users and analyses.[24] This is a valuable tool for health systems that are penalized for readmissions.

In Maine, a hospital is using claims data for strategic planning; they want to determine patient origin and market share. By analyzing service line trends and assessing utilization patterns, they hope to understand patient demand and future resource needs.[21] In Oregon, researchers are using the state APCD to determine the amount of primary care spending in the state. The report will detail the primary care spending by payer, and will show the percentage of total spending that is allocated to primary care. The goal of this statutorily mandated report is to assist policymakers in understanding the resources that are allocated for primary care and to support a collaborative that assists primary care providers. Oregon claims data is also being used to evaluate quality of care due to integration of behavioral and physical health care. The goal of the research is to develop metrics to track integration claims data and identify best practices.[17]

An APCD can also be used to allow hospitals to benchmark cost of care and patterns of utilization compared to averages in the state. For example, an APCD could release to each hospital a complete description of cost of care for each procedure and diagnosis- related group, with a comparison to statewide averages. Similarly, an APCD could share information on care utilization, such as post-stroke rehabilitation (eg, physical therapy, occupational therapy, skilled nursing), and compare the system's utilization patterns to statewide averages. Using these data, a hospital system can evaluate the cost and care utilization patterns by service line in comparison to averages of peer institutions. This information can lead hospitals to identify expensive or inefficient service lines and design new care pathways to improve efficiency. Also, an APCD can streamline filing and synthesis of post adjudicated claims from insurers.

It is important to note that hospitals already have access to claims data that they submit for payment. In addition, due to contractual relationships with insurers, health systems generally have access to post adjudicated claims in a relatively short time frame. Large health systems also have the analytic capability to study utilization patterns and trends for the purpose of health system planning. Health care systems and providers are appropriately cautious about sharing data that may violate patient confidentiality law or contracts with payers. It is important that antitrust concerns are addressed when considering data requests; providers and health systems may need all of their own data, but they do not need all of their competitors' data.[25]Administrator of the Colorado All Payer Claims Database (APCD There is value to health systems and providers seeing where and what care patients receive in the state without necessarily receiving information on the cost of the care in a specific health system.

The University of Michigan is collecting claims data from Medicare, Medicaid, Blue Cross Blue Shield of Michigan, and Blue Care Network of Michigan. The initiative, called the Michigan Data Collaborative, also collects data from databases, including registries, immunizations, and self-reported data, in order to build a broad, multi-payer claims database that incorporates other datasets as well as claims data. The reports can be used to benchmark performance, identify opportunities for improvement, and assist in identifying high risk and at-risk patients. The collaborative releases reports on quality and utilization performance, feedback on the associated population for use in care management, and incentive payments.[26] This is an example of a regional claims database with powerful opportunities for quality improvement. An APCD designed with antitrust concerns in mind could replicate this opportunity on a broad scale for the health systems in a state.

The Value of an APCD for Employers

Health care costs are a top concern for employers. According to a recent poll, 90% of chief financial officers said that if health care costs were lower, they could invest more in their business.[27] In 2016, the North Carolina Chamber of Commerce chose health care as an advocacy issue and is currently striving to make North Carolina a top ten state for health and health care value. Currently, North Carolina is ranked 32nd in the nation.[1] A preliminary report entitled *Roadmap to Value-Driven Health* reviews the current state of health in North Carolina and defines the North Carolina Chamber of Commerce's Vision for North Carolina in 2030. The report identified population health as an important area for improvement and imperative to creating a strong business environment.[28]

Also critical for employers is the cost and utilization of health care by their employees and covered spouses and dependents. Employers need cost information, which an APCD can provide, in order to both understand and evaluate how to decrease expenses. According to a recent poll of 100 chief financial officers at large self-insured US companies, "80% say they feel powerless when it comes to managing their company's health care spending."[27, 29] An APCD would not, on its own, decrease an employer's costs, but by benchmarking one employer's health care costs with another's, it may allow for the identification of best practices. In addition, this data could inform employers on the impacts of plan changes or benefit changes. If an employer eliminated

dental benefits, for example, they could evaluate how the health and health care expenses of their employees are impacted. Currently, some of this work is done by insurance agents and benefit consultants in comparing products for employers. However, as employers move from one payer to another, the need to compare insurance benefits and products across payers becomes more acute. Further, employers or organizations that represent them could access this data to understand consumer behaviors that drive cost. This will allow employers to design workplace programs and benefit packages that more effectively limit the growth of cost. Also, as state policymakers measure and manage the total cost of care, quality of care, and ultimately the health of an entire state, an APCD adds to the opportunity to make a state more attractive for business investment.

How Employers are Using APCD Data

An APCD can help employers understand their employees' health needs and how these compare to the rest of the population. For example, in 2014, Maryland enacted extensive changes to their health care system; major provisions of the Affordable Care Act were implemented and the new state-based insurance exchange was established. This led to important changes in the individual insurance market. To understand the impact of these changes, claims data were analyzed for information on spending and use among privately insured citizens. The analysis found that between 2013 and 2014, the number of members in Maryland's population aged 64 and younger who were privately insured and in the individual market increased by 26%, that the cost per member per month increased by 31%, and that utilization increased across all service categories. In spite of the increases, however, the privately insured individual market had the lowest per member per month spending. The report also found that the per member per month spending for all services in the small employer and large employer market remained largely unchanged for the large employer market and decreased for the small employer market. The per member per month spending in patient services decreased for both of these markets.[10]

"Public and private payers can utilize APCD data to analyze health needs of the population, utilization of services, and costs compared to other plans' populations, in order to develop quality measures, analyze geographic variation in health care, and analyze episodes of care in order to create bundled payments.

In Maine, researchers are looking to better understand health care costs and their relation to specific diagnoses in order to support the growing self-funded insurance industry. Researchers want to understand the cost trends for high-cost diagnoses and believe that by analyzing claims data, they can assist payers with setting premiums that more accurately reflect actual outcomes and costs.[21]"

APCD data can also be used by employers to inform their employees about cost and quality of care. For example, in Colorado, claims data were analyzed and showed that freestanding emergency departments had higher costs than urgent care centers and gave employers information to educate their employees on the differences and costs associated with freestanding emergency departments versus urgent care centers.[30] Initiatives like this have the potential to save the employer money by encouraging employees to seek out not only the best cost of care, but also the highest quality of care that may prevent future utilization. Thus, APCD analyses can equip employers with information so that they can encourage and educate their employees to utilize certain aspects of health care over another.

The Value of an APCD for Payers

Public and private payers can utilize APCD data to analyze health needs of the population, utilization of services, and costs compared to other plans' populations, in order to develop quality measures, analyze geographic variation in health care, and analyze episodes of care in order to create bundled payments.[31] In Oregon, researchers are using the claims data to compare real–world pharmaceutical usage with clinical trials in order to help insurers establish better priced drugs.[17]

Overutilization of services can be an important area for an APCD to deploy analytics and care management resources. For example, a study by Community Care of North Carolina demonstrated some effect of an education-based intervention targeting individuals with ten or more CT scans in the last year.[32] One of the limitations recognized in the study was the large number of people that enter and exit Medicaid in a given year. This impacts all payers, and understanding utilization across payers could benefit payers, consumers, and decrease the total cost of care in North Carolina.

Increased payer reporting burden is a potential cost of an APCD. Reporting structures that are not connected to data that payers actually collect and reporting structures that change frequently can lead to increased payer reporting burden. However, there is some evidence that APCDs could ultimately reduce reporting burden of insurers. For example, Massachusetts is offsetting the payer burden by allowing data from the APCD to replace some existing required plan filings.[14]

Depending on the data release rules of a state, a payer can benefit from an APCD in a variety of ways. APCDs give payers a way to benchmark their own performance against competing commercial payers and against public programs.[33] Payers can also use APCD data to get a wider look at spending and provider practice trends across the state. Lastly, if health systems, state policies, and consumers can improve efficiency in health care utilization (higher value and/or lower cost) this would benefit payers.

It is important to recognize that payers, like health systems, have extensive health care data on their covered beneficiaries and are already engaged in analysis and programming to improve the health care efficiency of the beneficiaries that they cover. For example, insurers are already actively involved in analysis of beneficiaries that use the emergency department frequently, are subject to re-admission, get repeat high end imaging, or otherwise consume a large volume of services. These individuals may be offered care management services in an effort to improve the efficiency of care. An advantage to using an APCD for some payers may be to understand utilization as beneficiaries move on and off a health plan—and thus capture charges for an individual across time and payer. Also, insurers with smaller market share may benefit from an understanding of cost in a marketplace beyond their consumers. However, insurers do incur significant time -600-800 hours on average for each platform and business area- in preparing and submitting data for an APCD.[f] Further, insurers, like health systems, need to assure adherence to federal confidentiality law and respect proprietary contracting between insurers and providers of care. This can be achieved through appropriate APCD design.

The Value of an APCD for Consumers

Consumers can also benefit from an APCD. A New York study found that consumers are looking for health care information about their provider networks, formularies, insurance product value, provider procedure price, provider quality, and provider value.[34] New Hampshire and Maine have created consumer websites for reviewing price data and provider value. These two sites, nhhealthcost.org and comparemaine.org, are models for other states considering consumer transparency aspects for their APCDs.

The New Hampshire model, Health Cost, was launched in 2007 and includes information on 30 common services. Most of the services are outpatient, with the exception of childbirth. Health Cost reports the median total amount paid for each service, including the facility and provider payment.[35] The cost reported on the site is the average payment to the provider for that procedure, calculated from the claims data in the APCD. The Maine model, CompareMaine, provides average cost and quality information on over 230 health care procedures from over 270 facilities in Maine, drawn from the Maine APCD. The average cost amount represents both the amount that the insurer paid and the patient's expenses. The quality information is compiled from patient survey ratings in the Hospital Consumer Assessment of Healthcare Providers and Systems (CAHPS), the Alliance Health Project, Clinical & Group CAHPS, and Patient-Centered Medical Homes CAHPS as well as the Preventing Serious Complications measures and the Preventing Healthcare-Associated Infections measures. The Preventing Serious Complications measures use eight Patient Safety Indicators from the Agency for Healthcare Research & Quality. The Preventing Healthcare-Associated Infections measures that are used on comparemaine.org come from the federal Centers for Disease Control and Prevention. This site reports the rating using the Standardized Infection Ratio that adjusts for the characteristics of hospitals and patients. The comparemaine.org website shows, for example, that the price for surgical arthroscopy of the shoulder can range from $7,925 to $23,274, with an average price of $12,270. The price for surgical arthroscopy of the knee can range from $4,533 to $13,877, with a state average of $6,625.[36] These price transparency tools are valuable because they can inform consumers about average costs and quality of common procedures in their area, empowering them to make better health decisions.

Many insurers offer price transparency tools. Some include information on prices specific to the policyholder, incorporating his/her specific plan and deductible information. A price transparency tool offered by an insurer may be more helpful to the individual than a state-based model that does not incorporate individual plan information. In addition, consumers may require education on the usefulness of these tools; a 2013 report revealed that 98% of health plans offer or support cost calculator tools, but only 2% of their members use them.[37] State-based APCDs may be more useful for consumer advocacy groups and employers to use data and analysis to drive care and also offer information about variation across the state.

The Value of an APCD in Identifying Fraud, Waste, and Abuse

Claims data can also be used to analyze practice patterns and identify outliers. The North Carolina Dental Society is involved in an initiative to monitor claims data of over 154,000 dentists in the United States, analyzing more than 1.8 billion records. The standard deviation is determined by running approximately four hundred algorithms. By monitoring the claims, the North Carolina Dental Society and their partner, P & R Dental Strategies, identify dentists who have unusual billing patterns and focus on those practices for additional education on

f Inskeep, Bernie. Regulatory Financial Operations, APCD Program Director, UnitedHealthCare. Personal (email) communication. Thursday, March 16, 2017.