Benefits of Centralized Risk Adjustment Data Collection

Methods and the Use of All-Payer Claims Databases

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What is Risk Adjustment?

Risk adjustment is one of the critical aspects of the Affordable Care Act with regards to state and federally facilitated exchanges. Risk adjustment is intended to mitigate adverse selection by health insurers seeking the healthiest patients and avoiding more risky patients. Starting in 2014, risk adjustment systems will apply both inside state health exchanges and to plans offered from employers that operate outside the exchanges. Health insurance exchanges are an online marketplace where individuals and groups will be able to compare various insurance plans with different premiums and benefits and purchase health insurance. 2014 marks the deadline for when state health exchanges must be implemented and the deadline corresponds with the timing of when other major health reforms will begin, such as a ban on discrimination based on preexisting health conditions and a mandate for all American citizens to have health insurance. ¹

Risk Adjustment deals with two types of adverse selection. First, insurance plans on the state-exchange could feature a more unhealthy pool of enrollees than the traditional insurance market. The pool of individuals purchasing insurance on the exchanges is expected to be poorer and less educated than those who receive employer based insurance. This is because those with higher paying jobs often receive greater benefits than those with lower paying jobs. In addition the health exchanges are expected to provide insurance to unemployed people. Poorer individuals tend to be in worse health than more wealthy individuals.² A more unhealthy pool of enrollees would mean the insurance company must spend much more to pay for treatment for beneficiaries than if

²Marmot, Michael G. “Social Differentials in Health within and between Populations” Daedalus Vol. 123, No. 4, Health and Wealth (Fall, 1994), pp. 197-216
the pool of enrollees was healthy. If people who purchased insurance from exchanges were unhealthier than those who receive insurance benefits off the exchanges, premiums in exchanges would rise relative to traditional insurance plans off the exchanges. This would cause the pool of individuals on the health exchanges to shrink as those capable of finding insurance elsewhere would do so. Thus insurance premiums on the exchange could spiral upward perpetually until failure. Risk adjustment works to combat this problem.

Risk adjustment combats adverse selection in a second way. Without Risk Adjustment, plans on the exchanges could target healthier beneficiaries. Thus unhealthy beneficiaries would end up in the same plan, with premiums progressively rising in a spiral as described previously. This would make premiums unaffordable for unhealthy enrollees on the exchanges.³

The Mechanics of Risk Adjustment:

Risk Adjustment works by calculating which plans have sicker-than-average enrollees and which plans have healthier-than-average enrollees. Once these calculations are made, plans with healthier-than-average enrollees must pay the state or the Department of Health and Human Services (HHS) money that will be redistributed to those plans with sicker-than-average enrollees. The risk adjustment methodology can be customized by each state but the system prescribed by the Department of Health and Human Services is a good example of how risk adjustment is calculated. HHS gives “risk scores” assigned to each enrollee. A “person of average health is assigned a score of 1.0,

while a person in poorer-than-average health is assigned a score of greater than 1.0 and an individual in better-than-average health is assigned a score of less than 1.0.” These scores are typically based on patient diagnoses (i.e., what kind of condition they had that required treatment) as well as other factors (such as demographic characteristics like age and gender). “To ensure that the diagnoses used are correct, diagnoses are usually determined based on claims and encounter data related to that enrollee. Insurers typically submit these data in specified formats to the entity administering risk adjustment.” This methodology is similar to the manner in which risk adjustment is collected and administered by the Center for Medicaid and Medicare Services (CMS) in implementation of Medicare Part C’s risk adjustment system.6

For the health exchanges, HHS will administer risk adjustment in states that do not elect to administer risk adjustment themselves.7 “Although HHS (2012) has indicated that it would use a Distributed Approach when operating a risk adjustment program on behalf of a state, it also announced that it was permitting states that elect to operate a risk adjustment program to choose the data collection approach that best suits their needs.”8 A Distributed Approach is a system where insurers score their claims data themselves and send their score to the state or HHS. This is distinguished from a Centralized Approach in which states collect claims data from insurers in one large database and then analyze the data to provide risk scores. HHS allows only those states which develop their own state based health exchanges to customize their risk adjustment system. As of August 2012, 15

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5Id.
6Id.
states and Washington D.C. have established their own exchanges. Three more states are planning a hybrid federal-state exchange. 16 states are still in the planning stages and have not committed to any exchange strategy. The rest of the states have either determined they will not have an exchange or have made no movement towards an exchange.9

In states that do pursue operations of their own exchange, collecting data for risk adjustment is an opportunity to update their understanding of the health of their population. An all-payer-claims database (APCD) utilizes data from insurers throughout the state to find inefficiencies and problems in provider care and increase transparency for those who need health care. If states were to implement APCDs with the claims information they gather to manage risk management programs, not only can the states’ reduce the risks of upcoding, which entails insurers exaggerating (or even lying about) the seriousness of insurance claims, but states can discover data helpful to exposing inefficiencies vis a vis providers and location. This paper will explore the synergies relating to starting an all-payer claims database and collecting information for risk adjustment. It will also explain the benefits of using an APCD and the reasons why a centralized data collection approach is superior to a Distributed Approach for collecting risk adjustment data.

There are two ways for states to collect data for risk adjustment: a Distributed Approach and a Centralized Approach. HHS will use a Distributed Approach for risk adjustment on Federally Facilitated Exchanges.10 This means there will be no Federally Centralized database with all state risk adjustment data. However, states that operate their

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own exchanges are free to design an exchange that meets their state’s needs and states are allowed to use a Centralized Approach to collect data. The following sections will analyze the pros and cons of each approach with particular regards to risk adjustment. Once these approaches are explained, the benefits of APCDs will be discussed as will the possibility of collaboration between risk adjustment data and APCDs.

The Distributed Approach

The Distributed Approach is a decentralized data collection system. HHS describes this as an approach “in which insurers retain possession of raw claims data, but pass on summary statistics to HHS and state authorities as necessary.”\(^{11}\) In a Distributed Approach “Risk adjustment authorities conduct their analyses by submitting a computer program … to each insurer, retrieving summary statistics, and aggregating the statistics to make the necessary calculations.”\(^{12}\) This system has some advantages over the alternative Centralized data gathering which entails a large database operated by the state. First, privacy concerns for patients are reduced in a Distributed Approach. In a Distributed Approach patient claims are not stored in one large database. Instead they stored by insurers and only the data necessary to risk adjustment scoring is sent to the government. Insurers standardize their data and apply risk adjustment methodology to calculate their own scores. The insurers submit the scores to the state. The state does not receive any

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\(^{11}\) 45 CFR § 153, 17233, 5

claims data, merely the risk adjustment scores. The underlying claims data would only be verified in a Distributed Approach in retrospective audits.13

The Distributed Approach is generally preferred by insurers.14 Insurers favor this approach because they want to keep their customers privacy intact. Insurers also prefer the Distributed Approach because reduces oversight from the government into their claims data. Supporters of the Distributed Approach also prefer it because it reduces the burden on government to control the data compared with the more infrastructure intensive Centralized Approach.15 Critics of the Distributed Approach, on the other hand, stress the risk of upcoding. The Center on Budget and Policy Priorities, among other detractors of the distributed system say “the greater likelihood of coding errors, upcoding, and fraud under a distributed data approach means that the risk adjustment system would almost certainly be less effective under that approach than it otherwise would be; some insurers would be overcompensated for their actual risks, while others would be significantly undercompensated.”16

Despite these concerns HHS is, in fact, using a Distributed Approach to collect data on the insurance exchanges they operate.17 HHS explained that they chose this manner of data collection due in large part to privacy concerns. They outlined their rationale in the Regulatory Rules Governing Risk Adjustment, Reinsurance and Risk Corridors.

“Protecting the privacy and confidentiality of an individual’s personal health information continues to be among HHS’ highest priorities. Under a Distributed

15Id.
Approach, issuers will need to format risk adjustment data, maintain that data in a manner that complies with State or HHS specifications, and in some cases run risk adjustment software.\textsuperscript{18}

In addition to a reduction in the government’s privacy responsibilities, the Distributed Approach reduces the burden on the states to collect all data and analyze it themselves. It is possible that HHS chose the distributed method in Federally Facilitated Exchanges because distributed networks require less infrastructure to implement and therefore take less time and money to establish than a centralize database. The distributed network requires fewer security safeguards and also fewer resources from the state to manage.\textsuperscript{19} Some detractors from the Distributed Approach disagree about its burden compared to the Centralized Approach and consider “it may also produce less-accurate results while increasing the administrative burden on the states, which still have to assemble and collate the submitted results.”\textsuperscript{20} The thinking behind this criticism is that because insurers do not have to submit underlying claims data to the state they will be more likely to provide inaccurate scores. Because of this risk, there will need to be more thorough audits of the data thereby creating more burdens for the state.

This concludes the explanation of the Distributed Approach. The Distributed Approach is less expensive to implement than the Centralized Approach and it is favored by insurers. The Distributed Approach also features few privacy concerns. Next the paper will analyze the Centralized Approach to risk adjustment data.

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\textsuperscript{18}Id.
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The Centralized Approach

In a Centralized Approach to risk adjustment data collection issuers submit raw data claims to the state (or an entity hired by the state) and then the state analyzes the data. “Centralized systems are generally run by government agencies or contractors and work by collecting data supplied by insurers. It is easier with a centralized system to ensure the integrity and consistency of data and thus to produce accurate assessments of the impact on insurers.”\(^{21}\) The benefit of a Centralized Approach is that since all of the data is located in one place, analysis of the data on a large scale is easier. This is helpful for use of the data in other ways, such as All Payer Claims Databases, discussed supra.

The Centralized Approach is superior to the Distributed Approach in several ways. While both data collection systems require auditing, the accuracy will be easier to verify in a Centralized Approach as more data will be available to the government on immediate demand. Claims and encounter data are invaluable in ensuring that insurers comply with regulations. In a Distributed Approach claims data is not provided to the governing body. Instead audits of a sampling of claims are the only time a governing body verifies the accuracy of risk adjustment data.\(^{22}\)

A common argument against the use of a Centralized Approach to risk adjustment focuses on privacy concerns. In a Centralized Approach a large body of data is stored in one location. This means that there is a copy of claims data held by the insurer and by the government. Each extra copy of claims data created creates more vulnerability for exposure. The claims data includes personal health information, and even though it does not include the name of the person in the insurance claim, the person could be identified

\(^{21}\) Id.

by geographic location, demographic, age and illness.\textsuperscript{23} The government database would also likely be larger than the insurer database because the government database would be comprised of claims from all insurers throughout the state. A hacker of the government database could have access to more information in that huge centralized database versus the smaller individual insurer database. Therefore more insurance beneficiaries could have their health privacy at risk in a centralized system.

In addition to privacy concerns, some critics, such as the Center for Democracy and Technology (CDT), worry about the use of medical databases by the government in ways that were not originally intended. “When government possesses copies of health data, there is a risk that the government will incrementally expand its uses of the data beyond the limited set of purposes described when the program was established.”\textsuperscript{24} The CDT fears nefarious uses of the data by the government to intrude on its citizens’ privacy. These concerns stem from an idea that over time the public will not have a way to vet the manner in which the government uses the data. This concern seems based as much on paranoia as reality.

Privacy concerns, while legitimate, do not outweigh the benefits of a Centralized system. This is particularly true when looking at the benefits of an APCD that can be utilized with risk adjustment data. Furthermore the government has decades of experience controlling huge databases of private information. “Medicare already collects, uses, and protects such data for tens of millions of beneficiaries. In addition, strong privacy protections would apply to risk adjustment data collection under the ACA, and the

\textsuperscript{23}Daniel P. Kessler, \textit{How Should Risk Adjustment Data Be Collected?}, Inquiry 49: 127–140 (Summer 2012)
entities administering risk adjustment would not collect personal identifiers like names, addresses, and Social Security numbers.”\(^{25}\) As noted previously, despite the lack of personal identifiers claims data could still be used to identify individuals through other information. The fact that the government already controls huge databases does not mean that centralized databases are free from privacy risks though it does show the government has experience controlling private information.

Another issue facing states that consider setting up a Centralized database is the startup cost. “States that run a Centralized Approach will need to develop the data collection and storage capabilities required to intake, securely store and analyze carrier claims and enrollment data, including the acquisition of data warehousing hardware and software, along with a dedicated staff to manage, analyze and report on this information.”\(^{26}\) This centralized infrastructure takes a large amount of resources to create. Compared with the distributed system the startup costs are higher. On the other hand the centralized system may make some of that investment back in the long term with a reduced burden for auditing.

So far this paper has analyzed the pros and cons of the two data collection systems. Next this paper will examine APCDs, their benefits and the possibility of using risk adjustment data to create APCDs.


What is an All-Payer Claims Database?

An all-payer claims database includes claims data from commercial health plans, and sometimes Medicare and Medicaid as well. The definition of an APCD according to the Commonwealth fund is “databases, created by state mandate, that typically include data derived from medical claims, pharmacy claims, eligibility files, provider files, and dental claims from private and public payers. In states without a legislative mandate, there may be voluntary reporting of these data APCDs use claims data to find inefficiencies and problems with care across various health care provider systems.”27 The goal of these APCDs is to increase transparency and information with regards to health care markets.

There are numerous benefits that flow from the use of well developed APCDs. An APCD gives policy makers information to analyze problems in health provider systems. Without an APCD there is a lack of comparable claims data available for the government, for citizens and even for the health insurers and providers themselves. One area or health provider may be far more inefficient than a different area or provider. Organized claims data can identify such problems. The comparable claims data reveals outlying expenses and poor health care results located in particular regions and health care facilities. APCDs can illuminate cost comparisons and disease prevalence, help develop quality measures, and identify barriers to care for particular patient populations.28 The data can be used to evaluate the health of populations and the results of particular treatments. “APCDs analyze for cost, efficiency, and quality of care across

28Id.
geographic regions, plans, and facilities." An APCD gives the government a better understanding of the quality of care versus the cost of care. It also can allow consumers a more active role in their health care decisions by making the market more readily observable. It is important for policymakers and consumers to have access to this information so a more effective health market can emerge.

States can design APCDs with varying levels of detail and make such data available to various stakeholders. For instance, states can use the APCD solely for their own policy decisions and keep the information private. Or the state could allow the APCD to be accessed by providers and insurers for their own information. Providers could use this information to identify problem areas themselves without government intervention. States can even decide to make some or all of this information available to the public, with individual identifiers left out. The individuals could use the information to make better decisions about their own health care. Ideally APCDs would provide enough transparency for consumers that the fog of the health care marketplace could be lifted and health care consumers could make decisions based on price and quality like a more standard market.

The benefits of APCDs should be clear. But for effective comparable claims data apparatuses to be created, state legislatures need to act. APCDs are created by state statute and then through regulations. The specific requirements on insurers are individual to each state. Nine states currently have existing APCDs, four more are in the process of

29 Id.
30 Id.
implementing APCDs and several other states have shown interest in developing an APCD.  

There are various methods in which the state can create APCDs. The state legislature will usually give broad authorization to a delegated department, (e.g. the state health department). That delegated authority will then create the requirements for the state health insurers. Some existing APCD legislation includes mandates for health insurers to provide claims data to the centralized database. In other states there is no mandate and it is optional for the insurers to provide data to the state. Voluntary reporting of claims data is an inferior way of collecting data as it is likely to create a less than completed impression of the state marketplace. The reason some states elect to go the route of voluntary data submission is because it faces minimal opposition. Whereas some insurers may lobby against requirements to have their claims data submitted to the state, when the requirement is not mandatory those challenges are silenced. Furthermore, as is the case with risk adjustment data, privacy issues are a concern. The centralized database of an APCD is prone to security breaches and the privacy of individuals could be compromised despite the lack of identifying data. States should face the resistance to APCDs and create the best, most complete comparable health claims database they can and that requires creating a mandate for the collection of insurance claims.  

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Massachusetts is one of the states to recognize the benefits of an APCD. In a 2011 examination Attorney General Martha Coakley cited the use of an APCD as a way to drive down health care costs. “The ability of the market to encourage coordinated care and to measure system-wide performance is hampered by the lack of transparent and reliable information. Various health care stakeholders believe that care coordination, generated through provider risk payments or otherwise, will result in cost savings. Generally speaking, those cost savings may be generated by: (1) decreasing utilization by eliminating unnecessary care and increasing preventive care or (2) use of lower cost health care providers. In order for providers to influence the cost and quality of care that their patients receive, and for policymakers to measure the success of delivery and/or payment system reform, the system needs actionable data on these issues.”

By using an APCD the state could coordinate data that otherwise would not be shared between insurers and between providers. An APCD gives providers access to all claims data for patients “in order to better manage the cost and quality of the care they provide to their own patients. In addition, providers should have access to detailed statistical and de-identified information for all other patients in Massachusetts in order to analyze cost drivers and identify strategies to improve quality and efficiency.” When insurance providers have transparent comparable claims data of their rival providers it ought to produce more competition among the providers. Imagine a situation where Health Care System A views a report showing they spend 30% more on ACL surgery claims than Health Care System B. Health Care System A would surely want to investigate where this discrepancy came from and try to become more efficient. This is

34 OFFICE OF MASS. ATTORNEY GEN MARTHA COAKLEY, EXAMINATION OF HEALTH CARE COST TRENDS AND COST DRIVERS (Mar. 16, 2010)
35 Id.
particularly true among Accountable Care Organizations and those other organizations that are paid not on fee for service but based on results.

New Hampshire is another state with an established APCD. In that state “the data products furnished by New Hampshire’s APCD are broken into three general categories, containing varying levels of detail and subject to different rules. State regulations require New Hampshire’s APCD to make available on request “public use data sets,” “limited use health care claims research sets,” and “confidential health care claims research data sets.” Giving varying levels of access to the APCD is a shrewd consideration as it reduces some privacy concerns by limiting the information given to the public and can give particular stakeholders the information they need. Other states should consider this method when creating their own comparable health claims apparatus. It will be likely to be met with less resistance from privacy activists.

The benefits of an APCD should now be clear. Next this paper will address the synergies between collecting data for an APCD and collecting data for risk adjustment.

**Risk Adjustment Data Collection Provides an Opportunity for States to Create All-Payer Claims Databases.**

State Health Exchanges, and thus risk adjustment data collection systems, will go into effect in 2014. Because states already must collect claims data for risk adjustment there is an opportunity for states to use that data for other purposes. Legislating risk adjustment laws to correspond with setting up an APCD is an efficient solution to updating the knowledge of their health systems and population. A centralized method for

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collecting risk adjustment data set would provide the simplest method for setting up an APCD. The centralized model mandates that insurers to submit the relevant claims and encounter data to an entity that can analyze the data. This type of model also “is consistent with how Medicare Advantage, Medicare Part D, and some Medicaid managed care programs work today and can be done in a way that protects patient privacy while also ensuring an accurate risk adjustment system that is credible to all insurers.”

Turning the data from a centralized risk adjustment system into an APCD would require the expansion of the number of claims the insurers must provide to the state. In centralized risk adjustment insurers submit a sample of risk adjustment claims. In a comprehensive APCD insurers would need to submit many more claims so that the state could reach the level of detail needed to garner the full benefits of a comparable health claims apparatus.

The other great synergy between an APCD and a centralized database is the infrastructure. The IT infrastructure needed to set up an APCD can also be used to create a centralized system of risk adjustment data. Both APCDs and risk adjustment feature large databases of claims information that must be protected from the public and align with HIPAA rules. Additionally a centralized model and an APCD are located in one database and can be easily analyzed by a state entity.

The challenge in creating a centralized model is that states are currently on deadlines to create exchanges by 2014. States may not have the resources to legislate laws regarding an APCD along with setting up the exchanges. A consulting agency to New York illustrated this concern: "Ultimately, we recommend collection of detailed data by the State rather than the Distributed Approach where health plans run the risk

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adjustment model and provide summary level information back to the State… However, New York’s APCD will likely not be ready for use in 2014. Therefore, New York risk adjustment in 2014 and possibly 2015 should follow a Distributed Approach.  

Despite the short timeline there is nothing preventing a state from using a Distributed Approach in 2014 and changing to a Centralized Approach later. If a state cannot set up a centralized model in time they can temporarily use a distributed model for risk adjustment and meanwhile set up an infrastructure that can be used for a centralized risk adjustment method as well as an APCD. Then once the infrastructure is ready the state could switch to the centralized model and reap the benefits.

**Legal Issues for States that set up an APCD with Risk Adjustment Data**

In HHS’s Final Rules governing the “Patient Protection and Affordable Care Act; Standards Related to Reinsurance, Risk Corridors and Risk Adjustment” it states in a comment that "Because we maintain the flexibility for States that operate risk adjustment programs to choose their data collection approaches, we are including a requirement that States limit their collection to the information reasonably necessary to operate the risk adjustment program.” This brings up some questions as to the legality of collecting detailed enough information from claims data to use for the purposes of an APCD. One could interpret “information reasonably necessary to operate a risk adjustment program” in a number of ways. It could be that the data needed to set up an APCD is considered reasonably necessary to operate a risk adjustment program. Massachusetts is planning to

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use its already existing APCD to implement its risk adjustment system. “Due to the unique features of the Massachusetts healthcare market, namely, merged market, lowest rate of uninsured, and progress in provider payment reform, we think it is in the best interest of all stakeholders in the State to explore a Massachusetts risk adjustment methodology instead of adopting the federal model, and that the preferred approach to developing such a state-specific model is by leveraging experience from our own market. To this end, we plan to develop the model using data from the APCD.”

Conversely one could interpret “information reasonably necessary” in a different way. The State Health Reform Assistance Network considers the comment by HHS to restrict gathering enough information to set up an APCD through risk adjustment data collection. “However, if a state already has an APCD and state regulations currently allow or could be modified to allow use of the APCD in risk adjustment, our understanding is that this would be acceptable.”

HHS should clarify this limitation on the collection of claims data. HHS provided states with a great deal of flexibility to set up their exchanges. Not allowing harmonization between APCDs and risk adjustment systems would be inefficient and unnecessary. It is also important to note the context of their statement about “information reasonably necessary”. HHS was responding to comments about the various possible methods of risk adjustment and explaining that they chose to use a Distributed Approach based on the privacy concerns associated with a centralized database. However the

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comment goes on to say “We considered requiring that all States utilize a Distributed Approach to risk adjustment data collection, as HHS will do. However, we believe that requiring a particular approach runs counter to the flexibility generally afforded States by the Affordable Care Act and HHS.” It seems that though HHS is worried about privacy concerns expressed by insurers, they are also intent on leaving states to determine for themselves the best practices with regards to the collection of risk adjustment data. In this context it seems likely that they would not disallow a state from using risk adjustment claims collection for the purpose of an APCD.

Conclusion

As states build their health exchanges they should use the opportunity to build a centralized risk adjustment model. This type of risk adjustment model requires a substantial use of state resources to set up a secure database but is well worth the investment. The centralized model is likely to provide more accurate claims data and reduce the risk of upcoding. Better yet the infrastructure of a centralized data collection model can be used to create a comparable health claims database known as an APCD. APCDs offer many benefits for the state. The APCD will provide governments, insurers, providers and possibly consumers information that will identify delivery problems, find market inefficiencies and increase transparency. HHS should support states in this endeavor and not limit the flexibility of states who want to set up a centralized model. Over time the collaboration between risk adjustment data collection and implementation of APCDs could prove beneficial to state budgets and the health of the population.