

# What Kind of Risk Adjustment Systems Are Necessary for Health Insurance Exchanges?



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## RISK ADJUSTMENT IS ESSENTIAL IN EXCHANGES

The Patient Protection and Affordable Care Act (PPACA) mandates that states establish one or more health insurance exchanges by January 2014. Premium credits, cost-sharing subsidies, and small business tax credits will be made available to eligible individuals and small businesses who purchase their health insurance through the exchange. Under this business paradigm, private health insurance carriers will compete on price and quality in order to attract this new pool of insured consumers. Those who are previously under- or uninsured may find the exchange an attractive option when purchasing health insurance.

Claim experience, including cost and utilization patterns, of the under- and uninsured population are mostly unknown to private health insurers. Concerned about potential adverse selection, private plans may feel reluctant to participate in health insurance exchanges. Risk adjustment is considered the most effective tool to address risk aversion and manage adverse selection, and the PPACA adds it to the requirements for exchanges. Risk adjustment uses patient-level information such as age, gender, medical diagnoses, and prescription drug information to calculate the expected individual healthcare spending, utilization, and health outcomes in the future.

Internationally, risk adjustment is often referred to as “risk equalization” and is used by government organizations to allocate budget resources according to the healthcare needs of regions and groups of people.<sup>1</sup> In the United States, risk adjustment is used by the Centers for Medicare & Medicaid Services (CMS) in the Medicare Advantage and prescription drug plans, and by state Medicaid managed care programs to adjust prepaid capitation payments to private health plans. The Massachusetts Health Exchange (Connector) uses risk adjustment to reallocate premiums among participating health plans.

<sup>1</sup> The Risk Adjustment Network (<http://www.riskadjustment.net/>) has excellent discussions and references on the applications and practical issues relating to risk adjustment and risk equalization in European countries. <http://www.riskadjustment.net/>

Many in the industry believe that risk adjustment will play an important role in the exchanges, and they are beginning to ask the right questions. What kind of risk adjustment systems need to be in place for exchanges? Particularly, is there a risk adjustment system suitable for the blended population expected to be covered by plans in the new exchanges? Will existing risk adjustment systems work, or more importantly, will their methodologies “fit” for assessing risk in these blended populations of previously under- and uninsured, small employers, individuals, and perhaps others? Is one risk adjustment system good enough for all states, or should each state have its own risk adjustment model? What can states do to address weaknesses in risk adjustment systems for use in exchanges?

States and organizations tasked to develop exchanges may be wise to prepare to deal with the imperfections in risk adjustment, but they’ll want to set realistic goals and gear up to communicate effectively with private health plans about risk adjustment.

This paper examines the adequacy of current risk adjustment systems when applied to a wholly new type of enrollment—the “all-population risk pool”—and offers considerations and explores options for exchange designers.

## ARE CURRENT RISK ADJUSTMENT METHODOLOGIES ADEQUATE FOR THE EXCHANGES?

Health exchanges can be attractive to small employers and individuals, whose age, sex, industry, income levels, eligibility duration, access to care, disease profile, utilization pattern, and other characteristics may vary significantly from state to state. Because of the nature of their employment and other socioeconomic characteristics, these small employers and individuals can also be highly seasonal and their mobility may adversely impact risk management in the exchanges.

Some of these characteristics, such as age, gender, disease profile, and utilization, may be well captured by a risk adjustment model. But other factors, such as previous coverage, ethnicity, and socioeconomic factors, are not used in existing risk

adjustment systems. Incorporating some of these factors might improve the risk assessment process and lead to fairer payment approaches, lessening “risk anxiety” for both exchanges and their participating plans.

Existing risk adjustment systems are not perfect and may never be perfect. Almost all risk adjustment models overpredict for healthy people and underpredict for sicker people. The underprediction problem could very well be magnified should an exchange attract sicker-than-average people, leading private health plans to avoid participation and reducing the exchange’s sustainability.

Specifically, not one of the existing risk adjusters is fit on an “all-population” enrollment. From the get-go, risk adjustment systems were designed for specific populations, and it continues today. The model choices available today are fit to one of three population types: commercially insured, Medicare, or Medicaid fee-for-service (FFS). But with an exchange—which aims to create a central, go-to insurance marketplace—these population types are blended, creating a new challenge for risk adjustment.

The good news is that there are statistical modeling techniques to correct the under- or overprediction problems to a certain extent, although it is unrealistic to assume that there will be a short-term or even an ultimate fix to these problems.

Risk adjustment models are good at predicting systematic changes in a population—aging, progression of chronic diseases, complications, some acute exacerbations of chronic diseases, etc. They cannot predict events such as accidents and injuries, and will only be able to make an average guess at the age/gender group level at best.

#### **CAN ONE RISK ADJUSTMENT SYSTEM FIT ALL EXCHANGES? CAN ONE EXCHANGE BE SUCCESSFUL WITH ONE RISK ADJUSTMENT SYSTEM?**

Let’s look at existing risk adjustment practices in the United States and in other countries. Countries that have risk adjustment in place, such as Germany and the Netherlands, have social insurance or universal healthcare, and they only have one risk adjustment system. In the United States, we see a hybrid approach—Medicare Advantage (MA) uses the same risk adjustment system for all MA plans, but applies county adjustment factors outside of the risk adjustment model.

In Medicaid managed care, states typically choose a risk adjustment system and recalibrate to their own populations. Different risk adjustment systems have been implemented in different states. The commercial population is considered a lot more standard across the country; risk adjustment models for the commercial population generally fit well for all geographic areas, and a number of competing risk adjustment systems exist for this market.

To answer the question of whether one risk adjustment system will work for all exchanges, we first need to know if any of the existing risk adjustment systems—when calibrated on other population types, or even when recalibrated to an exchange’s population—will work for each and every state. At the very least, we need to question whether an existing risk adjustment system will work

for the states that have data on all population types. There are established methods to test the goodness of fit of risk adjustment models. It is likely that we may find one or more risk adjustment systems that fit generally well for many states, but not for every single one. For those that do not fit, exchanges might either recalibrate or find an alternative risk adjustment system.

There are important practical issues to consider when implementing a risk adjustment system in exchanges, and the greatest hurdle is a lack of data or inconsistent data. While diagnosis-based risk adjustment is considered to be more robust and less sensitive to coding patterns than pharmacy-based risk adjustment,<sup>2</sup> not every state has good encounter data, and some do not even have systems to collect encounter data. In this case, pharmacy-based risk adjustment might be used as an interim step before moving to models when more complete coding becomes available.

Another significant factor to consider is the adoption of ICD-10-CM. As of October 1, 2013, diagnosis coding of all HIPAA-covered entities will be on the new ICD-10-CM system. ICD-10-CM is much more expansive, complex, and precise than the current ICD-9-CM system. It is conceivable that the quality, consistency, and accuracy of coding under the new system will take some time to achieve a steady-state status, which could cause unwanted fluctuations in risk scores when diagnosis-based risk adjustment systems are in use. Prior to ICD-10-CM conversion, states may be wise to launch exchanges using a pharmacy-based risk adjustment system, perhaps recalibrated to its own data, and transition to a diagnosis-based system when ICD-10-CM coding stabilizes and data become mature.

#### **HOW IMPORTANT IS TRANSPARENCY IN SELECTION OF A RISK ADJUSTMENT SYSTEM FOR EXCHANGES?**

For an exchange to be a successful marketplace for health insurance, transparency is very important. Today’s risk adjustment systems are not very well communicated nor understood. There is a serious information gap between what current risk adjustment systems provide and what policymakers and health plans need. For instance, none of the existing risk adjustment systems provide clear information on the underlying drivers of risk—how much is due to aging of the population, how much is due to acute but manageable conditions, and how much is due to chronic problems, etc.

Current risk adjustment vendors may disagree; however, providing customers with a list of conditions that accompany a risk score, or a flag on whether a condition is chronic or acute, is simply inadequate for the exchanges to properly allocate budgets, understand risk levers, and establish funds for risk management interventions. Current risk adjustment systems provide no information about which categories of healthcare services will be hit hardest. A single risk score may be adequate for global budgeting, but to truly understand, manage, and measure spending, exchanges need to be more enlightened by their risk adjustment system. They need to ask where projected risk will most affect the delivery

2 American Academy of Actuaries (May 2010). Risk assessment and risk adjustment. Issue Brief.

systems—is it, for example, inpatient, outpatient, professional, or prescription resources? There is also very little information on risk adjustment's credibility on small groups and individuals, as well as on members with less than 12 months of eligibility, which will be a significant issue in the exchanges.

Another important factor to consider is the accuracy and completeness in diagnosis coding. Diagnosis-based risk adjustment relies on precise and specific coding of medical conditions to accurately assess and compare the relative health status in different populations. Missed diagnosis, inconsistent coding, and incomplete claims will lead to unfair and lower payments under risk adjustment. In Medicare Advantage, health plans have engaged in improving the quality of their diagnosis data in order to ensure a fair payment. As a result, Medicare Advantage data quality has been improving over the years relative to the fee-for-service data.

To allow for the possible budgetary impact of continual improvements in overall coding practices, Section 3203 of the PPACA introduces a coding intensity adjustment factor for Medicare Advantage between 2011 and 2013, and gives the Secretary of Health and Human Services (HHS) authority to apply appropriate adjustments in 2014 and subsequent years. An even better approach may be to design a more robust risk adjustment system to accommodate imperfect data ex ante, and have rigorous claims audit systems to deter gaming ex post.

#### WHERE DO WE GO FROM HERE?

Risk adjustment is important in the success of health insurance exchanges. The convergence of a wholly new coding system with the aggressive timelines for exchange implementation is a cause for concern for policymakers and plans that intend to participate. It's time for all stakeholders to think carefully about what they need from risk adjustment systems by getting up to speed on current methodologies, practices, and limitations.

Stakeholders will need independent expertise to advise them on approaches to address even the few issues discussed in this paper. Some issues may be mitigated using better research methodology, such as the over- and underprediction problems. Other issues might call for changes in paradigms, such as incorporating socioeconomic status in risk adjustment, demanding more transparency, and custom calibrations. Although risk adjustment may never be perfect, stakeholders don't need to accept the status quo. There must also be realistic expectations of risk adjustment's success, and an expectation that vendors of risk adjustment have real strategies to improve risk adjustment in the longer term.

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