



# Reading an Actuarial Analysis

By Bill Daley, Alliance for a Just Society  
Winter 2012

With a title like that, do I dare read any further?

**A**s the debate on health care reform plays out across the country, it will be common for policymakers to hire consulting firms to do big, expensive studies called “actuarial analyses.” These studies examine what might ensue when alternative policies are implemented.

An actuarial analysis will be treated like the Holy Grail by governors, legislators, and other decision-makers. The insurance interests will inevitably push these analyses, because they will draw the debate onto insurance turf. Advocates should use the ideas in this paper to get the debate back onto policy grounds, where the interests of consumers might have a chance to be considered.

Because these analyses often recommend options that are either harmful or indifferent to consumer interests, advocates need to understand how they work. An old labor negotiator once said, “When you get them by the ‘technical,’ their hearts and minds will follow.” The “technical” in insurance discussions are actuarial analyses. If consumer advocates do not understand these analyses, they will surrender much of the policy debate to the insurance companies.

*If consumer advocates do not understand these analyses, they will surrender much of the policy debate to the insurance companies.*

Political decision-makers often let these analyses drive policy. This is absolutely upside-down. There first should be a policy decision about what the system wants, and then an actuarial analysis examining how its goals can be achieved. Alas, seldom will this approach occur. So the role of advocates in this process is crucial.

Learning to challenge these studies, on a routine basis, should be a primary mission for advocates. Admit that not everyone on your staff is going to want to wade in here, so find someone in the organization who will do it. (Supply them with a copy of “How to Lie With Statistics” by Darrel Huff so they can learn to recognize techniques used to mislead.)

## Vocabulary

In the new world of exchanges, many advocates will find themselves wrestling with insurance company advocates who will try to talk over us by using terms that make them sound as though they have exclusive rights to this debate. Before getting into actuarial analysis, let's review some terminology.

Adverse Selection: When an insurance product attracts customers who actually file claims in a proportionately higher rate than other products. If this persists, the product may not be sustainable in the market, or the price will rise steeply.

Cost Shifting: This term refers to the circumstance where someone who does not have the means to pay goes to a physician or emergency room for treatment of a medical problem and the cost of this treatment has to be absorbed by others, usually resulting in higher insurance premium costs. Eliminating this shift by insuring more consumers is one of the objectives of the ACA.

Risk: The statistical chance that a customer will file a claim. In insurance speak, risk is bad and has to be avoided. In the actual world, people get sick and are injured. There are a couple of types of risk — medical risk and statistical risk. Medical risk is based on whether one is likely to get sick or not. Statistical risk is a factor built into the insurance premium price to account for the fact that the insurance company cannot predict medical risk in small groups. Insurance companies often manipulate this type of risk for their own purposes.

Risk Adjustment: A system whereby the increased risk generated by insurance products that attract customers who put in claims at a disproportionately higher rate are mitigated by the transfer of payments from plans with lower-risk enrollees, and by assessing products that attract less risk. These systems exist and help reduce adverse selection. For advocates wishing to protect exchanges, it is important that risk adjustment include products sold in a state that are outside exchanges.

Elasticity: If the price goes up, fewer buy. If the price goes down, more will buy. (This is not always true, but the concept is key to their modeling.)

Medical Underwriting: This refers to an insurance rating system where the actual medical experience of an individual or group is used as a basis for setting the price of a premium. Because such a rating system would result in prohibitively high premiums for those who actually get sick, this rating method is usually regulated through some form of community rating or pooling of medical costs. The ACA generally prevents this type of rating associated with exchanges, but using this system or substitutes for it remains an objective of some insurance companies because it saves them a pile of money.

Rating: How insurance companies set the price of a premium. The Affordable Care Act (ACA) seeks to prohibit using some systems that base rates on actual experience — known as medical underwriting. There are several other ways to rate individual consumers or groups — pool risk and average cost out or use age and wellness as “stalking horses” for medical underwriting.

Risk Premium: Risk premium is often built into rates and it sounds like it is associated with medical risk, but it actually is not. Risk premium is a purely statistical calculation to

cover for the inability of actuaries to predict risk in small groups. So, since they cannot predict the risk, they toss on an additional cost to cover for the chance that the consumers will get sick. The insurers manipulate this factor to attract business or to get rid of it.

Rate Review: An analysis of the justification for a change in the premium to be charged for an insurance product. Rate review is a common feature of most state insurance law, but the character of this review varies substantially from state to state. Some systems merely do an analysis of the insurance company's justification, some state laws actually require that the reviewer (usually an Insurance Commissioner) give prior approval to the rate before it can be used, and some states require public hearings before a rate can be used. Normally the review assesses whether the rate to be charged is inadequate, excessive, or unfairly discriminatory.

Medical Loss Ratios: A requirement in the ACA that insurers must put out a minimum percentage of the premium that they receive in payments for actual medical services — as opposed to administration, advertising, lobbying, etc. Rules requiring companies to achieve these ratios are being implemented now by the U.S. Department of Health and Human Services.

Active Purchasing: Active purchaser exchanges negotiate with insurance companies about the price and quality of insurance products before they are allowed to be sold in the exchange. This is in contrast with exchanges that permit any minimally qualified plan into the exchange without doing any up-front negotiation.

Community Rating: A method of pooling insurance risk and spreading out the cost through a large population. Typically, an insurance company is required under community rating to assess the medical risk in its entire customer base and then to spread the risk evenly among all the customers, no matter the risk for each individual customer or small group. Community rating systems typically permit some limited variations based on age, family size, location, or wellness. Community rating is a critical protection for older consumers and small groups that may experience a dramatic increase in claims because someone gets sick.

Group Size: Insurance regulation has traditionally differentiated between individual, small group, and large group markets and has regulated each of these differently. There normally are more legal protections in place for individual and small group markets on the assumption that consumers in these markets will not have the technical expertise to evaluate complicated insurance policies. Many systems limit small group size to under 50, but the ACA permits this size to move to 100 if state law so defines it. (It moves to 100 in 2016 under the ACA no matter what state law says.)

## **What Is an Actuarial Analysis?**

Actuarial analyses assess “risk.” Because the ACA gave such a prominent role to private insurance companies, insurance risk will be the criteria used by many decision-makers to score the merits of various policies. Insurance risk boils down to a very simple thing: “What are the odds that a customer will put in a claim?” That’s pretty much it. Actuarial analyses take huge population groups and analyze the odds of whether various categories of customers will file claims. Insurance companies use these analyses to guide their business decisions.

## What Is a Market Analysis?

The so-called “actuarial analyses” probably will be accompanied by a *market analysis*, even though it is a separate thing. There will be a subtle cloaking of the market analysis as “actuarial” in order to give it additional credibility.

The market analysis will assess “Who will buy this policy or plan?” This analysis will be based *entirely* on a computer program that models a consumer’s reaction to price: “Will I buy or stop buying this policy or plan because of its price?” Market analysis will be used to assess policies that are critical to consumers — adverse selection issues, design of markets, benefit design.

## Go Boldly into This Space.

Here are some reasons these studies should be viewed with a critical eye.

1. They Make Policy Decisions. Actuarial reports usually will contain decisions about what the mission of the health care reform really is. The analyses and recommendations commonly will be guided by the directions provided to the actuaries by whoever is funding the study. Be suspicious and ask questions about the policies that the reform is supposed to promote. These will vary: Here are some common policies: To create a “viable” exchange market, to insure as many as possible, to promote healthy outcomes, or to protect the “competitive marketplace” — the latter being a stalking horse for insurance company interests.

In analyzing any actuarial report, get to the bottom of this, and get into this debate as early as you can. You can promote policy objectives more important to consumers, like healthy outcomes, overcoming disparities, getting everyone insured, or helping small businesses. Your state is going to pay a pile of money for this stuff, and you should try to make this expenditure as useful for consumers as is possible.

2. Analyses Are All Based on Assumptions. No one actually knows what will happen. This should open the door to discussion and debate. Be confident that the actuary does not *really* know the future.

Here are some of the key assumptions to look for:

- Where will the economy be in 2014 or 2016? This is important, because it will determine both the demand for public programs and the number of consumers available to buy private insurance. Employment will increase or decrease. The housing market will stabilize or not. What assumptions do your actuaries make?
- Will population demographics remain static? Actuaries often make this assumption because it simplifies their analysis, but it is never true. Demographics are constantly changing — age groups, in/out migration, birth rates for various groups, ethnic mix, income levels, etc. If your actuary assumes that the population will remain static, surely this can be challenged based on available demographic projections.
- What will be the effect of the ACA mandate to purchase insurance, and how will it change market participation?

- What effect will ACA subsidies have on participation? Who knows? What does your actuary say about that and why?
- Will the regulatory climate remain stationary? The actuaries usually presume that regulations will not change because it simplifies their analysis. However, changes in the approach to regulation, such as rate review, medical loss ratios, active purchasing, risk adjustment, and community rating, will change the results of both actuarial and market analyses. (See more on this later.)
- Is there an assumption that getting everyone insured will reduce cost shifting? (Cost shifting occurs when an uninsured person goes to the emergency room for care and cannot pay, and the cost is absorbed by the system.) The effect of the ACA should be to reduce these costs, and market analyses should reflect this.

3. Alternative Scenarios May Be Overlooked. Typically, actuarial studies will lay out three different scenarios: high, medium, low; optimum, average, poor; etc. The factors that determine each level often fit policy objectives that have been predetermined. Policymakers, ever seeking to be “moderates,” will prefer medium-level scenarios. Sometimes the policy options will be outlined in advance to fit the political needs of whoever paid the actuary. You may find that small changes in the assumptions will mean big changes in the scenarios. Market analyses will examine different exchange structure scenarios. It will be important to analyze alternative ways of looking at the market. Here are some examples:

Market analyses will examine different exchange structures. It will be important to analyze alternative ways of looking at the market. Here are some examples:

- Will the choice to exercise the Basic Health Option actually reduce risk and price in the exchange market?
- What will happen to the rate of the uninsured if individual and small group markets are merged and the small group size moved from 50 to 100 immediately?
- What would be the effect of a public option competing with private insurance?
- What effect would risk adjustment, applied both inside and outside of the exchange, have on the market? What would happen if exchange operating fees are applied to all insurance sold in a state, not just the products in the exchange?
- What scenario produces the fewest uninsured in the long term?

4. Look at the Actual Numbers. Most of these studies will include a couple of huge charts laying out the results of computer runs in various categories. The charts are intimidating so few actually read them. Get yourself a glass of sherry and start messing around.

What you want to watch for are numbers that could just as well lead to conclusions not supported in the narrative of the report. This will occur not because the analysts are lying, but because they are interpreting information based on assumptions about the policy objectives. For example, if you believe that the objective of the exchange is to reduce the rate of the uninsured and they believe that the objective is to protect the competitive market system, you may find that the actual numbers in the study actually support your objective and not theirs.

5. Challenge Market Analysis Based Only on Price. Actuaries use big computer models and lots of data. The key to these models is *always* the assumption that market behavior is determined by the price of a premium. Actuaries have models and formulas that predict how individuals and groups will react to changes in price, and these formulas —

sometimes called price elasticity — are the key to all their market predictions. Here are some factors other than price that need to be accounted for:

- Ordinary desperation. Those most in distress — people with chronic diseases, those having babies, older workers not yet eligible for Medicare, AIDS patients — will react very differently to price. These types of consumers would be considered more “inelastic,” in that their behaviors are less likely to be influenced by price because of their great need.
- A sense of responsibility. Families and responsible businesses often make sacrifices to maintain good insurance in spite of price changes.
- Culture and ethnicity.
- A changing national sentiment about health care. We might as a nation just finally decide that the ACA is a good thing and get into the system in larger numbers than assumed.
- The individual mandate. How much will the mandate change market behavior? Does anyone really know? Will businesses and individuals thumb their noses and pay only penalties, or will many see the wisdom of the policy and finally get insured? (Bet the latter, the good bet, and the statistics change profoundly.)

6. Examine Data Sources. The data used in these models are derived either from the insurance companies or from the agencies that regulate them, and they therefore exclude important information.

These data rarely include family economics, ethnicity, language, or culture. Other data often are derived from U.S. Census surveys and a big data system called MEPS, which is an annual sampling of health care consumers. These surveys, with a limited sample size, often preclude the analysis of issues at the micro level. Important differences between urban and rural areas and differences by region, minority group, or neighborhood community cannot be analyzed because the samples are too small.

Figure out what data systems are in the actuarial analysis and raise questions about their limitations. This is enormously important if you are advocating policies that will overcome disparities based on race, culture and language.

7. Look for the Long-Term Outcomes. The exchanges are to begin in 2014, but they will continue to evolve over the next few years. Small group size will increase from 50 to 100, small business credits will change, etc. Policy recommendations based on Year 1 may be supported by the data, but will not be supported by the data in Years 4 or 5.

8. Does the Report Assume that the Regulatory Environment Has to Remain Static? This is a critical issue. Major changes being supported by consumer advocates may simply be ignored in these analyses. They will not look at the impact of important reforms that change either risk patterns or market behavior. In short, the analyses should examine alternative policies that could be put in place to make the exchanges better, not just what is there today.

There may be, for example, a conclusion that the exchanges will have problems attracting participants because the price of insurance will be too high. If this is in a state that does not have “active purchasing” or rate review, there should be an analysis of what would happen if these policies were to be enacted. Does the analysis assume that new

rate review policies will have no impact on the price of insurance? Will Medical Loss Ratio enforcement impact price?

Wherever possible, use this discussion to advance analyses that show what would happen if rate review were strengthened or if the exchange were an active purchaser.

Here are a few additional alternatives that should be examined:

- Using the Basic Health Option;
- Expanded prevention, wellness, and primary care access;
- Imposing administrative fees inside and outside of the exchanges;
- Risk adjustment inside and outside of exchanges;
- Community rating for an insurance company's entire book of business;
- Raising the size of small groups to 100 in 2014 instead of 2016; and
- Prohibiting association plans from doing any form of medical underwriting.