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Evolution of the Health Actuary

A Health Section Strategic Initiative

By Joan Barrett

What an exciting time to be a health actuary! There is so much going on: health care reform, big data, MACRA and so much more. Surely, these changes will create both risks and opportunities for us. The question is: How can we get our arms around all these changes, and what do we need to do to make the best of the situation? To assist in this effort, the Health Section Council (HSC) of the Society of Actuaries (SOA) created the Evolution of the Health Actuary Task Force to identify the key disruptors to the health insurance industry and to recommend a strategy for dealing with these changes.

Although there are countless issues that could be addressed, the task force decided to focus on three major disruptors. The first disruptor is the American Health Care Act (AHCA) or whatever alternative replaces or amends the Patient Protection and Affordable Care Act (ACA). The main focus for both the ACA and the AHCA is the financing of health care. In this article, we will continue to use the abbreviation AHCA to refer to this alternative, although the bill that was recently introduced is no longer being actively considered at the time this article is being written.

The other two disruptors deal with the cost of care:

- A major change in the business model on the part of providers, spurred in part by the enactment of the Medicare Access and CHIP Reauthorization Act (MACRA)
- An acceleration of efforts to reduce the chronic disease burden

The HSC has chartered several strategic initiatives to make sure members have the information and tools they need to do their day-to-day work and to build their careers. In addition, these initiatives will address ways to make sure the voice of the actuary is heard during this time period.

THE DISRUPTORS

The AHCA

The ACA, including Medicaid expansion, was successful in reducing the number of non-elderly uninsured from a high of 18 percent in 2010 to 10 percent in 2015.[1] Recently, however, there has been a lot of controversy due to the high rate increases in the exchanges and the fact that health plans are dropping out of the exchanges in certain areas. In both cases, these issues are generally attributable to a lack of predictability and stability in the exchange risk pools. Specifically, some of the reasons cited for this lack of predictability and stability include inadequate enforcement of the special enrollment period rules and the 3:1 age-rating rule that may have discouraged younger consumers from entering the marketplace.

In March, the House of Representatives introduced the AHCA. Although this bill was touted as a "repeal and replace" of the ACA, many provisions, like the exchange marketplace concept, are carried over in the AHCA. This bill was criticized and is no longer under consideration as of the writing of this article.

Regardless of the structure of the final bill, health plans will be faced with some immediate strategic decisions such as whether they will participate in the exchanges and, if so, which ones they will participate in. Once a health plan has decided to participate in an exchange, a pricing strategy must be determined for each exchange. From an analytical viewpoint, one of the most difficult parts of this process will be estimating the change in the risk pool, net of rating factors and risk adjustments, and similar changes. Although several health plans have developed some models to address this, there is still a lot to learn about

this process, especially as it pertains to consumer behavior. In addition, health plans will likely require a more precise estimate of the risk associated with the final pricing decision. Since the pricing process will be more complex than in the past, the risk measurement and monitoring process will need to be more sophisticated. Again, we have a lot to learn about what that will mean in practice.

Overall, this change will create opportunities for health actuaries as we help health plans develop their overall strategy, price plans, implement systems changes, file rates, and measure and monitor risk. There will also be a reputational risk given the innate volatility of the rates.

The Chronic Care Burden

One of the most pressing health care issues facing the United States is the high cost of health care. The cost of care in the United States is about twice that of other developed countries and almost 50 percent higher than the second costliest country.[2] According to the Centers for Disease Control and Prevention (CDC), 86 percent of all health expenditures are for individuals with one or more chronic diseases, such as diabetes, heart disease and cancer. In addition, 75 percent of the expenditures are for the direct treatment of these diseases.[3] Although there are certainly genetic and environmental factors causing these diseases, there are also several behavioral contributors like tobacco use, poor diet and lack of physical exercise.

Most patients rely on their doctors for treatment and prevention advice. Physicians in turn rely on published research and evidence-based medicine rules. In addition, other organizations like employers, health plans and public health organizations provide services like:

- Population health and employee wellness programs that encourage a specific population to adopt a healthier lifestyle or receive preventive care. Examples include anti-smoking campaigns, biometric screenings in the workplace and free immunizations.
- Disease management programs designed to assist an individual with a chronic disease or at risk for a chronic disease in getting the information and support services they need.
- Save-as-you-go programs, like concurrent inpatient reviews that reduce length of stay by coordinating post-discharge care.

Although these methods have shown some signs of success, the expectation is that there will be an accelerated interest in finding solutions to control costs. Some examples include:

- Many vendors, like IBM, are currently promoting the notion that predictive analytics will be the key to lower costs by developing more sophisticated techniques for identifying people at risk and gaps in care. We expect to see an acceleration in this regard as new data sources, like electronic health records, become more available and as health plans and providers build infrastructures to do this type of analysis.
- New technologies like tele-monitoring and 3-D printing will provide lower treatment costs. These techniques are still under study but should move to the mainstream in the next few years.
- Consumer health applications will encourage consumers to take a more active role in the management of their health care. Some applications, like Fitbit, will lower costs by encouraging people to exercise; others will result in over-utilization of resources.

Each of the efforts described holds great promise for reducing the cost and increasing the quality of care. For health plans, providers and others whose financial fortunes are at stake, however, it is important to be able to predict the savings accurately and on a timely basis so that the results can be reflected in premium rates, fee schedules and budgets. Historically, the value of new techniques for generating savings has been greatly overstated. For example, when high-deductible health plans were first introduced in the early 2000s, many private studies projected savings well over 10 percent. More recently, the private studies show savings in the 1 to 2 percent range. Although these long-term savings are material, the overstatements caused short-term pain in the form of financial losses and missed budget projections.

Historically, medical economics, the field associated with calculating medical savings and evaluating program effectiveness, has been the purview of data scientists, epidemiologists and other near professions, rather than actuaries. There are, however, some weaknesses with the techniques currently in use. In addition to the inaccuracy of initial estimates, which was noted earlier, they are not readily adaptable to actuarial control cycle functions, like monitoring experience, measuring

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risks and taking corrective actions in a timely manner. This may provide a major opportunity for health actuaries if we can adapt our current methods to reflect the specific needs of medical economics.

Provider Strategy Shift

According to a recent survey from the Economist Intelligence Unit (EIU), almost 60 percent of U.S. hospital executives say that they must make substantial changes to their business models if they are to survive.[4] Most say that the major reason for this change is the movement from a fee-for-service (FFS) reimbursement methodology to a value-based reimbursement (VBR) methodology. In particular, there are concerns about the impact of MACRA, which requires a VBR for most Medicare professionals.

Providers are also facing more demands for transparency and personalization of medicine from consumers. This trend is being reinforced through quality strategies like the Centers for Medicare & Medicaid Services (CMS) strategy and the Triple Aim, which has been adopted by the American Hospital Association. Both strategies emphasize the need to reduce clinical errors and increase patient communication.

To deal with the macro-trends described, providers, especially hospitals, will have to restructure their business models, including:

- Developing an overall reimbursement strategy that provides the right balance between income level and stability of income
- Investing in new technologies such as electronic health records, which will accommodate the reporting needs for VBR, identify inefficiencies in the system, and determine the needs of patients. This effort will include both a capital investment and a human resource effort.
- Developing strategies for talent retention that include not only new compensation formulas but ways to engage staff

Disruptive changes will create opportunities for health actuaries as we help health plans develop their overall strategy, price plans, implement systems changes, file rates, and measure and monitor risk.

Most of CFOs surveyed say they should do a better job of leveraging financial and operational data to inform strategic decisions. They are also concerned that constrained resources and outdated processes stand in the way of achieving their organization's goals. This will provide many opportunities for health actuaries if we can adapt our analytics to meet the needs of providers.

Health plans, consumers and employers may benefit from this strategic shift, especially if providers make significant efficiency improvements. There is always the risk, however, that as Medicare puts more pressure on providers, the providers will cost-shift to commercial carriers as they have done in the past.[5] Either way, this creates new opportunities for actuaries as health plans enhance their analytical capabilities in both traditional areas, like pricing and reserving, and nontraditional areas, like network contracting.

RECOMMENDATIONS

During the development of this report, the task force worked closely with the HSC on developing recommendations. As a result, the HSC chartered the following initiatives to make sure member needs are met during this time:

- The Value-Based Care strategic initiative, designed to develop a framework of actuarial skill sets to assist providers
- The Commercial Health Care: What's Next? strategic initiative, designed to focus on providing updates as various bills move through Congress
- The Self–Insurance strategic initiative, designed to provide members with the information needed to support actuaries in this field

- The Public Health strategic initiative, designed to not only provide members with the information they need regarding public health, but also to form partnerships outside the profession

THE TASK FORCE

Finally, the HSC wishes to thank the members of the task force:

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ENDNOTES

1 EBRI Issue Brief No. 419, "Sources of Health Insurance Coverage: A Look at Changes Between 2013 and 2014 From the March 2014 and 2015 Current Population Survey" by Paul Fronstin, Ph.D., *https://www.ebri.org/publications/ib/index.cfm?fa=ibDisp&content_id=3280*

2 *https://www.oecd.org/unitedstates/Country-Note-UNITED%20STATES-OECD-Health-Statistics-2015.pdf*

3 CDC, *http://www.cdc.gov/chronicdisease/overview/index.htm*

4 *http://www.beckershospitalreview.com/finance/survey-almost-60-of-hospital-executives-say-hospitals-must-transform-business-models.html*

5 *http://www.aha.org/research/reports/tw/chartbook/2015/15chartbook.pdf*