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Measuring issuer ACA grace period option risk

by Gerry Smedinghoff

The 90-day grace period mandated in Section 1412 of the ACA for policyholders eligible for Exchange subsidies, along with its codification in the CCIIO's July 16, 2014 Enrollment Bulletin,[1] changes how insurance companies must analyze, measure, track, and price the risk of policy lapses of their exchange products in two key respects:

- The grace period allows ACA policyholders an option to forgo paying December premiums since insurers will be obligated to provide coverage regardless if payment has been made.

- Subsidy-eligible members, who have a 90-day grace period, are likely to evaluate their emerging health status and need for services during the last three months of the year, and make purchasing decisions with awareness of their situation.

Pricing the standard grace period option

Standard insurance contracts usually contain a 30-day grace period which allows policyholders to keep their coverage in force, while paying their premium up to one month late. The assumption is the policyholder intended to pay the premium on time, while the objective is to avoid unintentionally canceling insurance protection due to an oversight. However, the grace period provision is not intended to provide policyholders a free 30-day option of coverage (which carries a risk premium).

The common actions or levers insurers have used to offset the cost of the grace period option include:

- The amount of the overdue premium can be deducted from any claim payment for a policyholder who files a claim for services provided during the 30-day grace period.

- The insurer can reject a policyholder's premium payment after the 30-day grace period expires, and reunderwrite the coverage based on the policyholder's current age and health condition.

Under the new rules promulgated in the Enrollment Bulletin, both of these options are no longer available.

ACA grace period option pricing adjustments

The biggest risk facing insurers is that subsidy-eligible members may be able to predict their short-term healthcare expenses, resulting in only those whose insurer-paid healthcare costs exceed three months of their premium payments (i.e., for October to December) having a financial incentive to pay premiums after September.

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[1] The CCIIO Enrollment Bulletin states, "*[I]n connection with a new application for coverage, issuers may not attribute payments made with the intention of effectuating coverage (sometimes referred to as "binder payments") to past debt, and then refuse to enroll the applicant based on failure to pay an initial premium … Issuers also may not attribute payments for the new coverage made subsequent to the binder payment to past debt.*"

For example, someone who pays a $200 monthly premium for a subsidized $400 policy visits a doctor in early October and gets a 90-day supply of a prescription drug before she paid her October premium. If the policyholder expects the total cost of the insurer-covered portion of her healthcare expenses for the remainder of the year to be less than $600, then it is financially advantageous for her to pay the expenses out-of-pocket and forgo paying premiums for those three months.

If her projections about her healthcare costs for the remainder of the year are accurate, she comes out ahead financially. And if she is wrong and has an unanticipated significant expense, such as a hospital admission, she can change her mind, pay the premiums for the months in arrears, and retain her coverage, thus assigning liability for the claims to the insurer.

In this instance, the carrier pays the October claims but is not able to deduct from them any offsetting premium (unless the policyholder pays the back premiums, which will be coupled with even larger claim costs to the insurer). It also provides *de facto* insurance protection for the months of November and December without any guarantee the premium will be paid.

Given these new grace period rules for ACA policies, actuaries need to adjust the lapse pricing assumptions for exchange insurance products in three ways:

- Increase the potential impact of the adverse selection risk to account for the longer 90-day grace period

- Replace the current policy lapse rates in their pricing assumptions starting from a worst-case scenario of 100 percent, because policyholders are guaranteed coverage regardless of whether the final month's premium is paid

- Prepare to adjust to new patterns of claim incidence and policyholder behavior in light of the free option given to subsidy-eligible Exchange members, who are able to decide after the fact whether they need to purchase coverage.

Building the grace period option pricing model

Estimating the potential cost of this 90-day grace period option is a multistep process. The first step is to analyze the historical 12-month claim incidence patterns of individual policyholders, assuming that everyone has perfect knowledge of their future healthcare expenses and uses the lapse period option to their maximum advantage, i.e., most policyholders lapse in September and save the cost of the premium, while the few with large claims eventually pay their premiums. The additional claims and lost premium revenue can then be calculated and incorporated in pricing.

The second step is to assume that future patterns of observed behavior become skewed as people become aware of and adjust to this new 90-day grace period option. In other words, the worst-case scenario calculated in step one will not be realized, because 100 percent of the policyholders will not be able to accurately predict their future healthcare expenses.

However, the potential impact calculated in step one is understated because the rules have changed. People will learn to change their behavior to adapt to a new set of incentives that they have not been exposed to in the past. Just as people used to rush to purchase healthcare services to exhaust the balance of their Flexible Spending Accounts (FSAs) in December, now they will start to plan to avoid purchasing healthcare services during the last three months of the year.

One way to gauge policyholder ability to predict their healthcare expenditures and optimize pricing differentials is to rerun members' historical claims through alternate cost-sharing scenarios to determine both (a) what percentage, and (b) to what extent, they are able to select the correct health plan option. A significant percentage of members selecting high-cost rich benefit plans will have little or no claims (little to no "return" in relation to their premium dollars spent), while a significant percentage of members selecting low-cost lean benefit plans will hit their maximum out-of-pocket (MOOP) limit due to unanticipated healthcare expenses.

In other words, this risk to the issuer is mitigated to some extent because a measureable percentage of policyholders will be unable to accurately predict their healthcare needs, and will either pay more premium or more cost sharing than intended given perfect insight or perfect information.

The third step is to replicate the impact of the grace period from the beginning of the year, starting in January and February. In January, policyholders have the option of scheduling a surgery, or a series of high-cost healthcare services, in the first few months of the year. After the treatments have been completed, they now have a 90-day grace period option to reassess their altered heath status, only continuing to pay premiums if they do not recover as expected and need more services. Thus someone who received a set of services in January and February while paying premiums has through the end of May to decide whether his or her expectation regarding future healthcare costs justify bringing his or her premium payments up to date.

Policyholders can iterate the evaluation of their health status on a monthly basis throughout the year, deciding at any point to drop coverage when they feel it is no longer necessary. Thus someone can use significant healthcare services for the first six months of the year, adopt a wait-and-see stance during July and August, with the intention of letting his or her policy lapse. Here the insurer pays six months of claims, while receiving premium for only five, and writes a naked option to the policyholder for the last two months.

Finally it is important to incorporate the benefit structure, especially MOOP and members' cost-sharing status, into the model because the "price" of the 90-day grace period option is unique to each member. Assuming a $2,000 MOOP, someone with no healthcare expenses during the first nine months of the year can potentially run up more than $2,000 in medical bills during the last three months and still have no financial incentive

to pay the associated premiums, if little or none of these costs will be paid by the carrier.

A few years from now, it is possible that insurers will see monthly claim per member per month (PMPM) costs dropping during the course of the year as subsidy-eligible members learn how to shift their demand for healthcare services towards the start of the year and exploit the 90-day grace period option to their maximum advantage. It is also likely that PMPM costs will spike in the last three months of the year as the healthier low-cost members exercise their 90-day grace period option and lapse, leaving only the high-cost members to pay premiums in the final months.

Conclusion

The new grace period rules create new modeling exercises for pricing actuaries as well as new risk management needs. We believe this could be a material risk to pricing accuracy as well as financial exposure that impacts balance sheets in addition to income statements. Careful review of existing Benefit Exchange pricing models, assumptions, and methodologies used to test and validate these models and assumptions is required in light of this new business risk.

Data analytics and medical cost reduction: A role for health actuaries
by Frank Qin

Traditionally, health actuaries have provided business insights through data modeling and analysis. This role puts them in an advantageous position today to lead data analytics initiatives in developing and implementing medical cost reduction strategies.

The healthcare industry generates substantial amounts of structured and nonstructured data. Examples of the former include medical and pharmacy claims, and examples of the latter include medical records, health surveys, and clinical research data. In this article, we will present two examples to demonstrate how health actuaries can use data in a meaningful way to address and potentially reduce medical cost spend for healthcare payers.

Advanced medical cost driver identification and monitoring

As an old management slogan goes, "You can't manage what you don't measure." All health insurers monitor standard cost metrics like PMPM payments and medical loss ratios. However, to understand and derive value from these aggregated metrics, health insurers are now turning to data analytical tools to dissect them. If we see that the PMPM of a specific business line is high, the root cause may be that certain types of high-cost patients are being overlooked by the disease management team, which results in a high readmission rate. Another reason could be that a large percentage of radiology imaging tests are being handled by high-cost out-of-network providers. Having an ability to identify these core cost drivers is a key pursuit or objective of data analytics, since management's effectiveness depends on how quickly and accurately these cost drivers can be identified and addressed.

Health insurers have invested heavily in information technology (IT) infrastructure for automatic claims processing and storage. These claims data can also be made accessible for data analytics purposes. Modern data analytic tools, such as SAS, R, and other query tools, make it possible to derive, customize, and analyze medical cost metrics from detailed claim-level information. External claim data sources, such as the de-identified CMS Medicare, or other commercially available benchmark data, can also be used to perform more detailed comparisons among patient groups. Such advanced benchmarking processes can quickly pinpoint underperforming areas based on utilization history as compared with industry peers, which allows management to design and implement effective improvement plans.

Health actuaries can play an active role in these data analyses because their business insights and technical knowledge can provide guidance on which key metrics to calculate. They can also make this information easier to understand to make meaningful business decisions. For example, the detailed information in a 20-sheet Excel report can be delivered in a

more compelling way if heat maps, bubble charts, and clickable graphs are created to illustrate a key metric (e.g., readmission rates) with the same data.

Detailed data analytic reports can also be distributed more widely and frequently. With the help of the latest innovations in data visualization and sharing, and more timely processing of claims, a wide range of stakeholders within an organization can benefit from the easy access to insightful data analytic end products. The emerging requirements to distill large amounts of data quickly and in an understandable and actionable manner is a challenge to the actuarial profession, where reliance on spreadsheets is so common. Health actuaries in particular should consider developing these data visualization skill sets and reporting capabilities to remain relevant and perceived as a proactive and value-added member of the management team.

Evaluation of cost-saving initiatives

While data analytics can help insurers identify process gaps for improvement in medical cost management, the evaluation of solutions—both from internally and externally sourced data—presents another challenge. The cost and benefit of each candidate solution need to be carefully evaluated to determine the most promising option within budget constraints. These evaluations are most often data-driven health outcome studies.

For instance, different wellness programs are available from vendors to monitor and manage members' health conditions and reduce overall healthcare cost. The idea is intuitive but it can be to the insurer's advantage if an experience study can be performed internally to evaluate the effectiveness among all the choices and applicableness based on the specific population profile of enrolled members. Historically, health actuaries have expertise in experience studies to evaluate reasonableness of actuarial assumptions. Now this skill can be applied to a broader range of situations by working with various sources of data.

Another important role health actuaries can play is in the evaluation of network management options that target medical costs. Specifically, health actuaries should be included in the design and contracting process of pay-for-performance arrangements between insurers and providers. The combination of health industry insights and analytic skills, applied to population-health-based dynamics and socio-demographic variances, creates an analytic solution that can directly target the amount of inefficiency and waste that has been shown to represent a significant percentage of total healthcare spend. The analyses actuaries can perform on clinical variances and population-based volatilities can accelerate the shift from traditional fee-for-service payment model to encourage providers to improve efficiency in using clinical resources and identify and adopt leading practice clinical pathways.

This is a risk transferring process where health actuaries can apply their expertise in risk pricing. Each of these arrangements can be highly customized, which requires analyses of data from various sources to reach reasonable assumptions. Historical claims, demographics, population health metrics, and other applicable clinical data are all meaningful information in the final equation.

Conclusion

As the whole healthcare industry is now facing tremendous changes and challenges, it opens up unique opportunities for health actuaries to wear different hats and extend their roles. With the combination of technical skills in data analytics tools and intensive training in cost evaluation methodologies, they can help deliver practical solutions to medical cost reduction to make the whole healthcare system more efficient. KPMG LLP (KPMG) believes strongly in the value of data analytics solutions and has been assisting healthcare payers in developing/implementing such tools in medical cost optimization.

Inpatient rehabilitation hospital stroke patient cost and quality analysis

by Gerry Smedinghoff

KPMG case study: Helping our clients address the quality problem

The KPMG client in this case study is a provider specializing in postacute care in the Inpatient Rehabilitation Hospital (IRH) setting. Their primary competition tends to come from Skilled Nursing Facilities (SNFs), which typically provide postacute care in a less intensive setting at a lower daily cost than IRHs.

The client management team focuses on active rehabilitation and care management processes that they believe deliver quantifiable value to both patients and payers in the form of higher quality at a lower price. However, until recently, it has not been able to demonstrate this because of the absence of quality-based studies of providers in the postacute rehabilitation care setting. Instead, it has been focusing most of its efforts on fighting the unit cost versus quality measurement battle with SNFs.

Measuring quality is a difficult task. There are multiple definitions in common use. The definitions for quality may differ depending on the perspective of the patient, the payer, or the government. And the data used to potentially measure or gauge *relative* quality may not be readily available.

Management looked to quantify the value its care management process delivered to its patients by evaluating average length of stay (ALOS), readmission rates, and the total cost of care (including pre- and postoperative expenses) for patients it managed against those they did not. However, data on postacute care SNF care delivery is not readily available, and neither was information related to readmission rates or the total cost of care. Management was able to source certain published high-level metrics, but these metrics combined data from all types of patient conditions, age groups, and insurance types. In other words, the existing studies do not control for inputs and do not attempt to measure the total cost of care.

Access to longitudinal patient data

For a provider to properly initiate its own robust quality study in the manner described above, it must overcome three challenges:

- It only has access to data on patients for services it provides. It does not have access to any claim data prior to the patient's IRF admission or after discharge.

- It requires a large regional or national dataset to isolate a sufficient number of homogeneous patients to include in the study to assure that the results are robust and the differentials are meaningful rather than random.

- It requires a dataset that covers a sufficiently long study period to capture all claims for patients for a sufficient period of time prior to the specific identified condition, as well as all claims for a sufficient period after the treatment in question.

Access to a dataset that meets these criteria requires contracting with a third-party vendor that specializes in aggregating longitudinal claim data. Consequently, the analysis completed for this client leveraged a longitudinal multimillion record dataset that KPMG has exclusive access to in order to perform studies like this.

Stroke study design

The purpose of the analysis was to determine how the client's IRFs compared relative to other IRHs and SNFs that are its competitors for patients. To control for inputs, the focus of the study was to analyze healthcare delivered to patients diagnosed with a specific condition (recovering from a stroke), who are covered by commercial health plans (i.e., not covered by government plan—Medicare, Medicaid, or TRICARE). Typically, patients who suffer a stroke are admitted to a hospital to be evaluated and stabilized, then transferred to an IRH or SNF for rehabilitation and recovery, and finally sent home.

The analysis focused on patients who were hospitalized for a stroke during the 42-month period from January 1, 2010 through June 30, 2013, and who had continuous healthcare insurance coverage both 90 days before and 90 days after their stroke.

To measure the total cost of care, the analysis was done both at (a) the facility level (i.e. cost and length of stay) and (b) the patient level, to measure the total cost of care for stroke patients. Segregating the cost of care by patient into three phases provides a more valid definition of healthcare quality—i.e., the total cost of care for stroke patients, immediately before, during, and after the unexpected/random incident of a stroke, from the customer's (payer's) perspective:

- The Pre-Stroke phase—The 90 days immediately prior to the stroke hospitalization

- Stroke phase—Comprising of the acute inpatient hospital admission for a stroke-related diagnosis immediately followed by a rehabilitation care admission (to an IRH or SNF within seven days) after the acute inpatient hospital discharge

- The Post-Stroke phase—The 90 days immediately after the patient is discharged from the rehabilitation care facility (IRH or SNF—presumably home)

Study results and conclusions

The results of the study demonstrated clear and significant advantages for the client in all three areas, and for all three phases of care:

- The total cost of care for all three phases for client-managed stroke patients ($85,000) was 38 percent lower than SNF stroke patients ($138,000)

- The ALOS in postacute rehabilitation for client-managed patients (21.1) was less than half the ALOS for SNF patients (43.1)

- The 90-day readmission rate of client-managed patients (13.4 percent) was almost half of the readmission rate for SNF patients (24.2 percent)

To further test the robustness of these results, we subdivided the stroke patients into three subgroups of Moderate Stroke (DRGs 65 and 66), Severe Stroke (DRGs 61-64), and Stroke with Complications (all other DRGs). We found that the relative advantages for this client for all three of the key metrics held, regardless of how the stroke patients were categorized.

Management now has quantifiable competitive advantage in postacute rehabilitative care, and is now leveraging this data to illustrate it.

Value of comprehensive data analytics

The results of this study produced an advantageous market-oriented reference point for this client. It also illustrates how providers who lacked the ability to properly evaluate the total cost and quality of the care they deliver to patients can reposition the dialog toward one of value as they look to partner or collaborate with payers focusing on lower total cost of care, lower ALOS, and lower readmission rates.
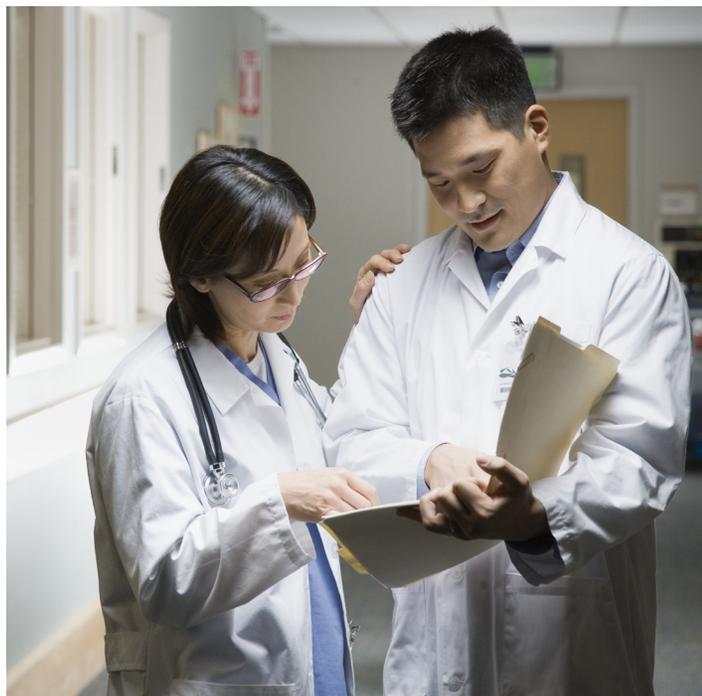
A&H valuation and regulatory updates

Long-term care update

The NAIC's Joint Executive Committee and Plenary officially adopted the proposed amendments to the Long-Term Care (LTC) Insurance Model Regulation in August. As reported in our last newsletter, the amendments impact many aspects of an LTC product, such as:

- Initial premium rates will need to include an explicit "composite margin" for moderately adverse experience.

- Justified premium rate increases will have to demonstrate that actual and projected claim costs exceed initial estimates plus the composite margin.

- Annual rate certifications will be required to demonstrate the current premium rates are sufficient.

An LTC carrier will need to comply with the new provisions after they are enacted by their domiciliary state. Lastly, they will only affect policies written after the effective date of the enacted legislation.

Individual disability income update

Updated statutory valuation tables to compute active and disabled life reserves for individual disability income products are being created to replace the current statutory tables (85CIDA and 85CIDC). The updated tables will be based on the recently created 2013 Individual Disability Income tables (2013 IDI). In addition to incorporating recent industry experience, the tables reflect additional product features and options as compared with the current tables to allow companies to generate reserves that more accurately reflect the risks that are covered. Examples of these enhancements include:

- A fifth occupational class in addition to the four classes in the previous tables. The new class is labeled "M" and includes all medical occupations, which had been in classes 1 and 2.

- Claim incidence rates for additional elimination periods have been provided to avoid the need to interpolate or extrapolate from published data. Claim incidence rates have also been extended from attained age 65 to 70 to permit more accurate valuation of policies with longer coverage periods.

- Claim termination rates have been provided for a more detailed select period. Termination rates will be available for the first 60 monthly durations and annually for the subsequent five annual durations. As with the incidence rates, termination rates will be available for the five occupational classes, the expanded array of elimination periods, and ages at onset of disability through age 70.

There are complicated rules which must be complied with if a company wants to use its own experience in the valuation process. Hurdles that have to be cleared include credibility measures, reflection of company margins, and the presence of required floors to the reserves. There are proposals to

allow retrospective application of the revised valuation table to existing claims under certain circumstances, which will probably vary by state.

As this newsletter goes to press, the AAA Individual Disability Valuation Table Work Group is addressing comments that were received when the original documents were exposed for comment. After this step has been completed, the states can commence their adoption process. DI carriers will need to evaluate their current valuation systems to determine what modifications, if any, will be required to use these updated tables.

Company implications

For any company affected by these valuation changes, there are a number of items that must be considered. For example, will the changes to the valuation standards require entirely new models, or will it be possible to modify existing models to handle the additional parameters? In either event, time must be allocated to test the resulting model and financial impacts well prior to its implementation in the company's valuation process. Will additional data be required in order to estimate the additional parameters that will be input to the new valuation process? Any additional data will need to be gathered and analyzed. For example, the expanded set of plan parameters that can be valued separately under the updated rules suggests that each company will need to revise the specifications for its experience studies to provide data consistent with the needs of the new rules. KPMG can assist with these evaluations and in developing and implementing suitable solutions.

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