SOCIETY OF ACTUARIES

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Insurers Giving Away the Store..
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flips from overaggressive to perhaps conservative when compared to the straight laser option. This is because the aggregating specific deductible applies to the group in total, while the laser is applied strictly to an individual.

Again, this point can be simply illustrated. Suppose a self-funded group of 200 employees with a $50,000 specific deductible has someone awaiting a $400,000 transplant. Instead of taking a laser on that individual for $400,000, they opt for an aggregating specific of $350,000 on what they assume is a guaranteed claim.

However, what if there is an unexpected death, or a cancer suddenly goes into remission, etc. and the guaranteed claim doesn't materialize? The policyholder is left with the $350,000 aggregating specific deductible without the expected large claim. Had the policyholder bought the laser, they would collect on anyone else who exceeds $50,000. Thus less protection was provided than under the lasering scenario.

If an employer wishes to lower their premium, and is willing to take on additional risk, it might be easier to increase the specific deductible. This action, instead of adding an aggregating specific deductible, will benefit both the employer and the insurer. It will certainly decrease the premium for the employer and make it easier for all parties to understand their obligations under the contract. In addition, it should reduce the complexity associated with administering the contract.

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Valuing Non-Traditional Health Products in the City by the Bay

Among the many health-related sessions planned for the Spring meeting (June 24 – 26) in San Francisco are several health valuation sessions. One of these, a panel Discussion, will examine valuation issues that arise in the context of such non-traditional health products as:

- Specific and Aggregate Employer Stop Loss
- Provider Exces
- Critical Illness

Liabilities for losses that have been Incurred But Not Reported (IBNR) and for losses that have been Reported But Not Paid (RBNP) will be examined. These liabilities will also be considered from the perspectives of the issuing insurer and its reinsurer.

Specific and Aggregate Employer Stop Loss is catastrophic protection sold to employers who choose to self-fund their employee medical benefits plan. Specific Stop Loss covers catastrophic losses incurred by any one individual, and Aggregate Stop Loss covers losses incurred by an employer group that exceed a deductible that is typically set well in excess of expected losses.

Jim Mange will examine typical Specific and Aggregate Stop Loss valuation tools and will also consider the volatility inherent in the loss development process. Jim is Chief Executive Officer of Health Reinsurance Management Partnership, a reinsurance management and third party administration firm that provides health reinsurance and outsourcing solutions in the U.S. and internationally.

Provider Excess Insurance and Reinsurance is similar in some respects to Employer Stop Loss, but the buyer is not an employer group; it is a provider of medical services. Provider Excess liabilities are often valued using tools that are similar to Employer Stop Loss, but due to the nature of the contracts the loss development process is unique.

David Wilson will examine the Provider Excess development process and illustrate how it is different than Employer Stop Loss. David is President of the Ventures Group of NiiS/APEX, a consulting and insurance services organization that specializes in actuarial, underwriting, claims management and audit services. Its clients include organizations in the accident and health and property and casualty insurance industries as well as employers, governmental entities and other risk assumption vehicles.

Critical illness insurance provides a benefit to individuals upon diagnosis of a pre-defined illness or event. The major covered conditions include myocardial infarction, coronary artery by-pass surgery, stroke, cancer, kidney failure and major organ transplant. Many other conditions may also be covered. There does not need to be a limited life expectancy for the insured to receive the benefit. In fact, the purpose is to provide a benefit to an individual who is expected to survive. Critical illness insurance can be offered as a stand-alone product or as a rider to life, health, disability or long term care policies. It can be sold on an individual or group basis.

Critical illness products have been successful in foreign markets. Indeed, more and more people around the world are adding critical illness coverage to complement their existing life, health and disability insurance. In the United States, interest in these products is increasing. The product provides assurance that funds will be available to meet the immediate and on-going expenses not usually covered under traditional insurance products.

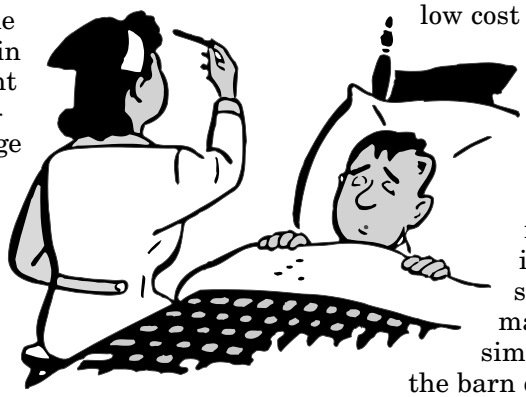
John Cathcart will focus on developing assumptions to calculate reserves for products such as critical illness, Cancer, and other types of individual health coverages for which there are no standard tables. Product features that should be considered in calculating both active life and claim reserves will be discussed. John is Vice President and Actuary with GeneralCologne Re, which is one of the leading reinsurers of critical illness throughout the world. As a relatively unknown product in North American markets, John's insights from around the world should be of great value to attendees.

We look forward to seeing you down by the Bay.

Population Risk Management: Identifying High-Risk Members to Reduce Costs

by Ian Duncan

All health insurers are familiar with the "80/20" rule: 80% of the costs in any given population usually come from only 20% of its members. For years, health care organizations worked to control costs on that 20% base—through network contracting, case management and utilization review and disease management programs, for example, that provide high-level interventions for high cost patients. However, these programs fail to distinguish between "high cost" and "high risk" members. "High cost" members are those who have already incurred dramatic costs—the diabetic currently in crisis, or the patient with a heart condition, or an end-stage renal disease patient. "High risk" members are the true ticking time bombs—the unseen, unrecognized, inexpensive member of today—who are going to become tomorrow's high cost members.



In many of these cases, the most frustrating aspect to the health insurer is that those costs (and health complications) were often preventable—the diabetes patient who could have avoided the health crisis if he/she had taken insulin as prescribed, or the at-risk heart condition patient who could have benefited dramatically from using a beta blocker. The Centers for Disease Control and Prevention believes that up to half of all morbidity and mortality can be prevented with simple interventions. Until recently, there has been no way to efficiently identify these members. These are the members for whom a carefully-timed intervention can make a real difference—both in health care and in health costs.

Targeting Risks: Finding "High Cost" Members *Before* The Problems Start

If members became "high cost" or "low cost" and stayed that way, controlling their costs would be simpler. But the truth is that a patient's status as "high cost" or "low cost" fluctuates. High cost members become low cost when their diseases are controlled and low cost members become high cost when conditions flare up. Focusing on "high cost" members with intervention strategies is, in many respects, similar to closing the barn door after the horse gets out—in many cases, the cost has already been incurred. The medical intervention has begun. And, inevitably, the patient's cost will decline—the diabetic crisis will be resolved, the heart attack patient will get bypass surgery. Sick people, in other words, get better. And the "high cost" member will subside into the "low cost" range again. Just less than one-half of high-cost members, left to themselves, will become low-cost in the following year—the concept of "Regression to the Mean." From this statistic it follows that half of a health plan's case-management dollars will be wasted—the trick is finding out which half.

On the other hand, in any given database at any time, a substantial percentage of members are currently "low cost" but are at risk to become high cost patients in the near future. A recent analysis of one 350,000-member regional HMO showed that 14% of "low cost" members in 1999 became high cost in 2000. This is the basis of population risk management—identifying, targeting and treating members of a health care database based not on their current disease state, but on their likelihood to incur costs. This allows population health management to identify individuals at risk before their disease develops into an acute episode(s) of care, avoiding both human suffering and accelerated health care costs.

Population Risk Management

Population-based analysis refers to members as "low cost, high risk" when they have risk markers (indicating either disease or behaviors, or both). Locating these members, and intervening before the high cost event occurs, is where health care organizations can achieve substantial savings. Although prediction includes disease markers in its algorithms, it differs in two respects: (1) not everybody has a traditional disease; there are at-risk patients who may otherwise "slip through the cracks of traditional Disease Management," (2) not everybody who has a disease needs management, currently. There are plenty of cardiac, diabetic and asthmatic patients (the three traditional DM diseases) who are not presently at risk of becoming high-cost future consumers.

How does it work? Prediction follows a simple, four-step process:

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