The Role of the Actuary in Employee Benefits

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SEPTEMBER 12-15, 2017
SOUTH LAKE TAHOE, CA

Topics to Cover

- Healthcare Review
- Underwriting Review
- Funding Mechanisms in Employee Benefits
  - Fully Insured
  - Self-Insured
- Actuarial Practice Overview
  - Role of the actuary

Health Care Review

Health Care Participants

- Individuals/health care consumers
- Providers
- Insurance companies
- Employer/client
- Broker/consultant
- Government

Health Care Context

Patients

Out-of-Pocket Payments

Providers of Care

Health Services

Regulation

Regulation

Government or Professional Body

Taxes/Insurance Premiums

Coverage

Claims

Payments

Regulation

Financiers of Care

Additional Health and Welfare Benefits

- **Prescription drugs are separated into two broad categories**
  - Brand Name: Drugs that are manufactured and marketed under a product name by a pharmaceutical company
  - Generic: Drugs that have the same chemical components as brand-name drugs (and are certified by the U.S. Food & Drug Administration) but are marketed without a brand, using the chemical name only
- **Dental**
- **Vision**

Additional Health and Welfare Benefits

- **Disability is typically separated into two classes:**
  - Short-Term Disability (STD): Usually a disability not lasting longer than six months
  - Long-Term Disability (LTD): A significant period of disability generally ranging from six months
    to life
- **Life insurance**
- **Accidental Death & Dismemberment**

Underwriting Review

Underwriting in the H&B Practice

The Aon H&B practice uses underwriting in different situations:

- To assist self-funded clients in projecting future claims costs and setting fully-insured equivalent rates, budget/funding rates, and COBRA rates
- To properly negotiate fully-insured renewals, we evaluate the carrier's fully-insured underwriting line by line and complete our own internal underwriting projections to compare to the carriers projections to see where any disagreements may arise
- To evaluate the impact of changes to the plan and how the timing of these changes effects the impact
- On an ad hoc basis, to provide projections for non-standard time frames (i.e. projecting calendar year costs for a client with a July-June plan year)

Required Data

- There are three main components of data needed in underwriting:
  - **Claims**
    - Medical/Rx/Dental/Vision claims for the experience period (rolling 12 or 24 months depending on credibility)
    - This will most likely come from a carrier web site or provided by the client
  - **Enrollment**
    - Medical/Rx/Dental/Vision enrollment by tier for the claims experience period
    - Note that lagged enrollment is needed when using **paid** claims
      - Usually 2 month lag for medical. 1 month lag for Rx/Dental/Vision.
    - This will most likely come from a carrier web site or provided by the client
  - **Large Claims**
    - Large claims over the stop loss threshold/pooling point during the claims experience period
      - For clients with Stop Loss coverage, this is essentially the reimbursement amount
    - This will most likely come from the medical carrier or a Third Party Stop Loss Administrator
- Additional data may be needed to adjust claims in the projection. This may include but is not limited to:
  - Plan designs
  - Census
  - Current Rates and Contributions

Basic Underwriting Template

- There are many variations of how medical claims underwritten, but in it's simplest terms it follows this Formula:

	Incurred Claims
(-)	Claims over Stop Loss
(=)	Net Incurred Claims
(/)	Average Enrollment
(=)	Incurred Claims Per Capita
(x)	Adjustment Factors
(=)	Adjusted Incurred Claims Per Capita
(x)	(1 + Trend Rate)
(=)	Trended Incurred Claims Per Capita

- Major steps (details covered on slides in Appendix):
  - Figure out gross claims and enrollment during the experience period
  - Figure out stop loss eligible claims for experience period
  - Calculate PEPM net claims for experience period
  - Find both midpoints and calculate months between
  - Calculate trend rate
  - Calculate PEPM projected claims

Funding Mechanisms Overview

Funding Contracts

- The two most common contract types we work with in H&B are fully-insured and self-funded contracts. At a high level, they are defined as such:
  - Fully-insured: Employer/insured pays a set premium amount to the insurer and the insurer accepts all risk. The insurance company absorbs any losses or gains that the plan may experience
  - Self-funded: Employer/insured establishes an internal budget and pays for claims as the are incurred and paid. Typically will pay a third party to administer the plan and may elect to pay a stop loss vendor an additional premium to fully-insure claims above a certain level
- There is no magic number, but typically self-funded contracts are more advantageous/appealing to larger employers (500+) with predictable claims experience and a comfort level with claims fluctuations and absorbing additional risks.
- The percentage of employers self-insuring versus purchasing a fully-insured contract varies significantly by market and region.

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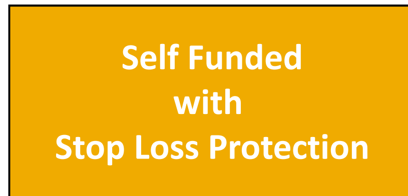
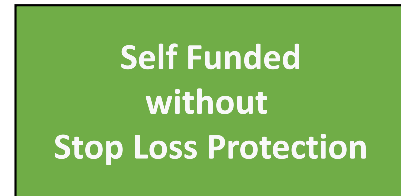
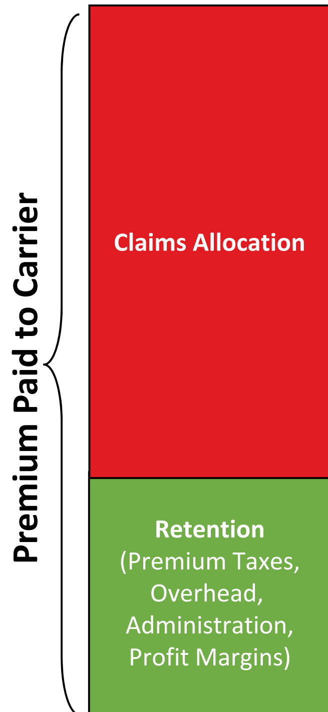
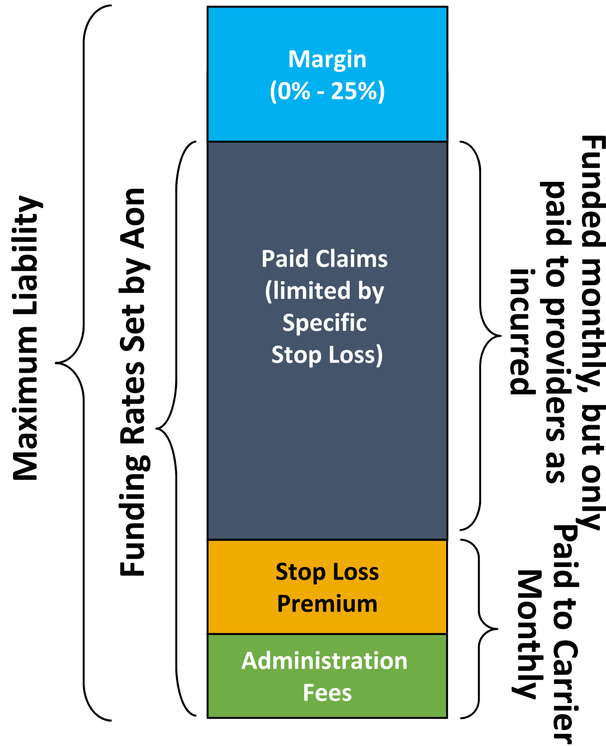
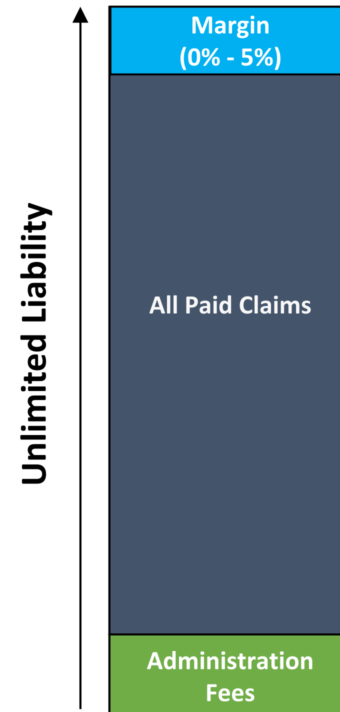
Insurance Funding Spectrum











Fully-Insured Pros and Cons

Pros

- Insurance company bears the risk of poor/adverse claims experience
- Employer's costs are guaranteed by the insurer
- Monthly costs are fixed and easy to budget – consistent cash flow
- Insurer assumes role of HIPAA Covered Entity and claim fiduciary liability

Cons

- Additional administrative costs due to premium tax, profit margins, insurer fee, and state mandated benefits
- Premiums are paid by the employer and held by the carrier – carrier earns interest on monies held
- Limited claims and utilization reporting which hinders plan management and decision making
- Limited plan design options and vendor choices
- Cost saving measures (wellness programs, disease management, consumer driven plan designs, etc.) directly benefit the insurance company

Self-Funded Pros and Cons

Pros

- Lower administrative costs due to no premium tax, limited profit margins, no insurer fee, and reduced overhead
- Improved cash flow and interest earnings on monies held – claims are paid as they occur
- Exempt from state insurance laws and mandates
- Greater flexibility and control in plan design, financing and vendor selection
- Routine access to claims and utilization data – you own your claims data
- Cost saving measures directly benefit client

Cons

- Less predictability in monthly budgeting due to claims fluctuation
- Increased exposure if claims exceed expected levels
- Must fund plan reserves (in the event of plan termination) – book liability
- Plan sponsor (usually the employer) assumes the role of HIPAA Covered Entity and claim fiduciary liability (fiduciary role can be assigned to plan administrator for a small fee)

Funding Considerations

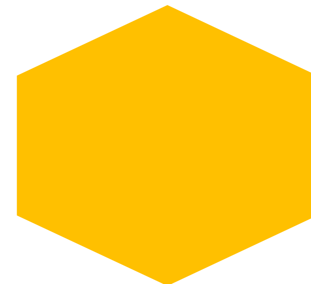
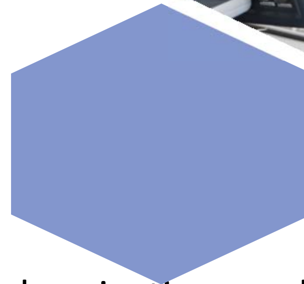
Self Funding	
Plan Risk	Client will maintain all plan risk outside of reinsurance; additional funding may be required
Stop Loss	Client will need to purchase stop loss insurance to protect against catastrophic loss
Funding Rates	Actuarial assistance needed to develop plan funding rates and COBRA rates
Plan Reserving	Must maintain "Incurred but Not Paid" (IBNP or IBNR) reserve as calculated by actuaries
Taxes and Margins	Not subject to state imposed premium tax or insurance company profit (risk) margins
Plan Design Flexibility	Significant flexibility on covered services and plan design; ERISA preemption
Banking	Centralized location with one banking feed set up with claims administrator
Internal Cost Allocation	Divisions pay actuarial developed fee to central banking location
Reporting	Improved reporting package and ownership of claim level detail

Fully Insured	
Plan Risk	Insurance company will maintain all plan risk; additional funding is not required
Stop Loss / Pooling	Insurance company will maintain stop loss insurance to protect against catastrophic loss – referred to as **Pooling**
Funding Rates	Insurance company will develop premium rates and COBRA rates
Plan Reserving	Reserves are maintained by insurance company
Taxes and Margins	States may impose premium taxes to fully insured premiums and insurance carriers build in profit (risk) margins into premiums
Plan Design Flexibility	Limited flexibility on covered services and plan design; must be state filed and follow state mandates
Banking	No banking set up required
Internal Cost Allocation	Divisions pay fully insured rates directly to insurance company
Reporting	Limited reporting based on carrier standard reports and no claim level detail

Actuarial Practice Overview

Actuarial Practice Overview

- **What Does An Actuary Do?**
  - Apply mathematics and statistics to financial situation in order to analyze the consequences of risk
  - Evaluate the past, apply known changes, interpret expected changes, and set future directions
  - Work with facts, figures, and people to solve business and economic problems
- **Types of Actuaries**
  - Health
  - Investment
  - Life
  - Pension
  - Property & Casualty
  - Risk Management
- **Why Work with an Actuary?**
  - More accurate scientific financial projections and Results
  - Advice from a valued, seasoned financial partner to see things from a financial perspective

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Health & Benefits Actuary Value …

- Assist clients with **pricing and budgeting**
- Help clients comply with **governmental regulations**
- Help determine the cost impact of **health care reform provisions**
- Assist with analysis of the various **health care marketplaces (exchanges)**
- Develop **medical, prescription drug, and dental claim reserve estimates** for clients
- Provide **medical plan design and cost benchmarking** [Health Value Initiative™ (HVI)]
- Assist with **discount analysis** projects
- Provide **union negotiation** support
- Help with **carrier negotiations**

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Questions?

Appendix

Additional Health Review

Individuals/Health Care Consumers

- Seeks health care services for sickness or injury
  - Hospitalization
  - Doctor visits
  - Prescription drugs
  - Other services
- Wellness and prevention care—treatment to avoid disease occurrence
- Choice of provider based on health needs and personal preference, and availability of providers in the network
- Eligible employees—individuals who are offered health care insurance through their employer

Providers

- Providers are individuals, corporations, institutions, or facilities who are licensed by the government to provide medical care, services, goods, and supplies to patients
  - Examples: physicians, nurses, hospitals, outpatient surgical centers, and nursing homes

Types of Providers

- **Individual Physicians**
  - Primary care—annual physical, immunizations, routine care, etc.
  - Specialty care—specialize in a particular area of medicine such as, cancer/oncology, heart/cardiovascular, skin care/dermatology, etc. or provide a special type of service like a surgeon or therapist
- **Hospitals**
  - Inpatient, outpatient, and emergency care
- **Ambulatory Surgery Center**
  - Freestanding care centers that provide outpatient services
- **Skilled Nursing Facility**
  - Used for patients who need medical, nursing care, or rehabilitation services
- **Home Health**
  - Used for patients who are recovering or disabled
- **Hospice**
  - Used for terminally ill patients

Insurance Companies

- **Insurance company services:**
  - Provide "insurance" in exchange for premium
    - A contract (policy) in which an individual or entity receives financial reimbursement against losses (health care expenses) from an insurance company
    - The insurance company pools client's risks to make payments more affordable, in exchange for a premium
    - The result is a large number of individuals pay a small sum of money to cover the large losses of a small number of individuals
    - Can be offered to an individual or group
  - Negotiate the fees charged by the providers
  - Administration (claims processing, customer service, etc.)
  - Charge premium for the services listed above (premium = price tag)

***Examples:** Aetna, Cigna, UnitedHealthcare, etc.*

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Employer/Client

- Provides insurance to its employees
  - To attract and retain employee talent due to competitive market conditions
  - To insure the wellbeing of their human capital
  - Spread risk across larger group of employees vs. one individual (to provide group insurance at a lower cost than individual)
  - Common eligible employees: full-time employees, terminated employees who are eligible under COBRA, retirees under and over age 65
  - Less common eligible employees: part-time employees
- Selects the insurance company that will provide services to all employees
- Employer contribution
  - A portion of the total premium for each employee is paid by the employer
  - Then, the employee contribution is the remaining balance
  - The employee's family (spouse and children) is allowed to be covered under the group insurance for an extra cost to the employee

Government

- Regulates the interaction between all key players
  - Regulates federal laws such as ERISA, HIPAA, and COBRA
  - Health Care Reform (PPACA/ACA): U.S. Federal Government passed laws to reform U.S. health care system in 2010
- Mandated Benefits—certain benefits that must be offered through the health care plan
- Medicare—insurance for individuals over age 65 (offered through federal government)
  - In some cases, may be the only coverage available to a retiree
  - Employer/client may also offer insurance to retirees in addition to Medicare
- Medicaid—insurance for individuals below a certain income level (offered through state governments)

Additional Underwriting Review

Data Utilized

- There are three main components of data needed in underwriting:
  - **Claims**
    - Medical/Rx/Dental/Vision claims for the experience period (rolling 12 or 24 months depending on credibility)
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Claims Experience

- When dealing with claims experience, you must account for paid claims and incurred claims—and the lag time in between the two.
  - **Paid Date**: When the claim is actually paid by the carrier
  - **Incurred Date**: When the service was performed.

  Example: An employee receives physical therapy for a broken leg on July 8th. The claim for this service is submitted on July 12th. The claim is actually paid on August 1st. The claim was incurred in July and paid in August.

- **Lag**: The time between when a claim is incurred and the time it is paid.
  - Lag varies by product (medical vs. Rx), managed delivery system (HMO vs. PPO vs. POS), TPA, and region.
  - Typical Lag periods:
    - Medical Claim: 1.5-2 months
    - Prescription Drug Claim: up to 0.5 – 1 month
    - Dental Claim: 1 month
    - Vision Claim: 1 month

Claim Adjustments

- An adjustment is made to paid claims to compensate for the lack of incurred claims in the initial months of an experience period. (Used for first year renewals when full 12 months of experience is not available and / or first few months of claims are immature)
- **IBNR (Incurred But Not Reported) Reserves**: Estimated costs for claims that have been incurred, but not yet received by the carrier.
- **Adjusted Paid Claims/Non-Pooled Claims**: Paid Claims minus credit for Large Claims over the Pooling Point.
- **Setback Enrollment:** The average number of lives for the time period that is "setback" from the experience period. This "setback" adjustment is related to the estimated "lag" for the group.
- **Lag Factor**: Current Enrollment divided by setback enrollment.
- **Incurred claims :**
  - Change in IBNR reserves + Adjusted Paid Claims

Setting Experience Periods

- Years of data to use —one to four years of historical data
  - Most plans exhibit some degree of seasonality due to plan year deductibles and out-of-pocket maximums. If an experience period less than 12 months is to be used, this seasonality must be accounted for.
- A balance should be struck between:
  - Credibility: smaller groups may not accrue fully credible experience with just one year, so adding more years of data is necessary
  - Relevance: for larger groups, more recent data is a better predictor of future claims than older data.
- Weighting:
  - Because recent experience is a better predictor of future costs, underwriters often use weighted averages of the experience periods rather than straight averages.
  - Common examples are 2-1 (or 67%-33%) for two periods, or 3-2-1 (50%-33%-17%) for three periods. Judgment should be applied, considering the volatility of the experience, data quality, and large claim pooling.

Large Claims Adjustments

- Large claims cost can introduce significant volatility into a client's overall claims cost for any given experience period.
  - Adjusting for large claims (also called "pooling") is a way of "forgiving" the effect of random or unusual experience for any particular period.
- In a rate setting exercise, large claims are typically removed from the experience period claims. The remaining claim amount is then used to develop the baseline claim rate, which is then adjusted for other factors.
- If the stop loss deductible has changed over time, the deductible level for the projection period is typically appropriate for experience rating, rather than reflecting historical stop loss deductible levels.

Trend

- The projected increase in medical costs. Includes inflation, leveraging, utilization, cost shifting from the government to the public sector, emerging medical technology, and other factors.
- Typically, trend is expressed as an annual percentage.
- Trend varies by product and managed arrangement, as well as by geographic location.
- Claim costs typically represent anywhere from 75% - 90% of our health care premium dollars, which makes trend highly important to underwriting.
- While fixed costs for services can certainly be re-aligned to provide the highest quality assistance and the best cost, in order to manage health care claim costs, it is important to understand the various components of what is published as "healthcare cost trend" and how healthcare cost trend differs from CPI.
- Trend rates guidance is provided in our Aon Internal Trend Guidance

Midpoint to Midpoint Calculation

- **Trend Months Calculation**
  - A renewal takes information from the **experience period** and projects it to the renewal effective period (**projection period**). Trend is calculated from the mid-point of the **experience period** to the mid-point of the **projection period**.
- **Midpoint rule :**
  - Claims are trended from the middle of the experience period to the middle of the projection period at a trend rate that is a time weighted average of the trends applicable during that period.
- **Example:**
  - 6% annual trend.
  - Experience period is from 4/1/2015 thru 3/31/2016.
  - Projection period is 1/1/2017 thru 12/31/2017.
  - Midpoint of experience period is 10/1/2015.
  - Midpoint of projected period is 7/1/2017.
  - There are a total of 21 months from midpoint to midpoint.
  - Therefore, adjusted trend is equivalent to 10.74% ((1+6%)^(21/12)).

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Effective Trend Factor

- Trend adjustment factor that anticipates both the trend period and annual trend.

Effective or Compound Trend	$(1 + \text{Annual Trend\%})^{(\text{Trend Period}/12)}$ $= (1+6.0\%)^{(21/12)}$ $= 1.107$