

# **Critical Illness Insurance**

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**The Actuaries' Club of the Southwest**

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# Agenda

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- Background
- Product Design
- Pricing
- Risk Management
- The Regulatory Environment
- About Tillinghast

# Background

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# Critical illness insurance is not new

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- Sold since 1980 in the U.K. and other markets
  - Over 1 million policies sold in the U.K. in 2002
- First sold in the U.S. in the mid-1990s
  - Earlier forms were primarily cancer insurance
- Recent U.S. interest for broader critical illness insurance has been growing
  - Insurers are looking for product differentiation
  - Consumers are looking for broad, supplemental coverage

# Insurers are looking for product differentiation

- There are few large players
  - AFLAC, Unum, Mutual of Omaha
- The market is unsaturated in the U.S.
  - In force annual premium is roughly \$100 million
  - Most carriers have only recently entered the market
- Critical illness insurance is ideal for many distribution many channels
  - Individual sales
  - Direct response
  - Worksite
  - Group
- Critical illness insurance does not replace life, health or long-term care insurance

# Consumers are looking for broad, supplemental coverage

- The statistics are staggering
  - Each year, over 1 million Americans have a heart attack
  - Nearly 5 million living Americans have survived a stroke
  - 64% of adults diagnosed with cancer live at least 5 more years
- The financial impact can be enormous
  - Loss of income
  - Unreimbursed medical expenses
  - Experimental treatments
- Plan provisions are easy to describe
  - Pays upon first occurrence or initial diagnosis
  - Does not depend on expenses incurred, ability to work, activities of daily living (“ADLs”), or life expectancy
  - Provides a “living benefit” to be used as desired

# Product Design

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# Benefit design

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- Typically a single lump sum cash benefit
- Payable upon the occurrence or diagnosis of specified diseases or conditions
- May have restrictions
  - Waiting periods
  - Survival periods
  - Pre-existing conditions
- Some conditions may result in a partial payment



# Five core conditions are usually covered

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- Heart attack
- Cancer (life threatening)
- Stroke
- Kidney failure
- Major organ transplant

# Additional covered conditions are also common

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- Alzheimer's disease
- Multiple sclerosis
- Bypass / angioplasty
- Paralysis
- Loss of limbs
- Blindness
- Deafness
- HIV under restricted conditions
- Other forms of cancer

# Types of plans

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- Stand-alone
- Acceleration
- Group

# Stand-alone plans

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- Filed as a guaranteed renewable individual health product
- Generally a lifetime benefit
  - Common to reduce benefits at higher ages
    - May need to avoid age discrimination
    - Allows for lower premiums
  - Can be designed similar to term life
- Policy terminates once 100% of benefit is paid
- Supplemental benefits are often available
  - Wellness benefit
  - Return of premium
  - Spouse/child riders

# Acceleration plans

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- Critical illness insurance rider is attached to a life insurance policy
  - Not filed as a health product
- A predetermined percentage of the coverage amount is paid upon diagnosis of a critical illness
- Remaining coverage amount is payable upon death
- “Triggering” event differs from terminal illness

# Group plans

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- Filed as a group product
- Similar to group term life
  - Employer-paid coverage
    - Provides a base level of coverage
    - Guaranteed issue
    - Employer pays a flat rate per thousand based on census demographics
    - May be portable/convertible
  - Employee-paid coverage
    - Buy-up option
    - Step rated by age
    - Simplified issue
    - Often portable/convertible

# Pricing

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# Pricing

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- Methodology
- Claim costs
- Lapse rates
- Other important assumptions
- Sensitivity analysis



# Pricing methodology

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- Stand-alone design
  - Typical to use a standard claim cost based health insurance pricing structure
    - Decrements for mortality and lapse
    - Claim costs applied to the in force population
  - May overstate benefit payments
    - Better to split the mortality decrement
      - Claim payment (with or without death)
      - Death due to a non-covered condition

# Pricing methodology

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- Acceleration design
  - Single pool of money for life insurance and critical illness insurance
  - Multiple decrement model - mortality, morbidity and voluntary lapse
  - Conservation of mortality approach
  - Separate mortality assumptions for people with and those without a critical illness claim
- Premium for life insurance policy with a critical illness rider is lower than combined premium for separate critical illness and life insurance policies

# Claim costs

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- Limited insured experience within the U.S.
- U.S. population data frequently used to develop basic incidence rates
- Adjustments to reflect an insured population are needed
  - Selection factors
  - Credibility of data
  - Emerging trends
  - Smoking status
- May need to adjust for overlap between related illnesses
- Can also consider experience from other countries

# Claim cost data sources

- Cancer
  - National Cancer Institute, SEER Study
  - [seer.cancer.gov](http://seer.cancer.gov)
- Cardiovascular diseases
  - American Heart Association, Framingham Heart Study
  - [www.americanheart.org](http://www.americanheart.org)
- Organ transplant
  - Organ Procurement and Transplantation Network
  - [www.optn.org](http://www.optn.org)
- Kidney failure
  - US Renal Data Systems
  - [www.usrds.org](http://www.usrds.org)
- Alzheimer's Disease
  - Alzheimer's Disease Education and Referral (ADEAR) Center
  - [www.alzheimers.org](http://www.alzheimers.org)
- Multiple Sclerosis
  - National Multiple Sclerosis Society
  - [www.nmss.org](http://www.nmss.org)

# Claim cost data limitations

- Most public data is for the general population
- It can be difficult to find incidence rates by age
- We are interested in “first occurrence” only
- Most data is not segmented between smokers and non-smokers
- It can be difficult to determine emerging trends
  - Has the method or criteria for diagnosis changed over time?
  - Have medical advances made some procedures more common, even routine?
- It can be difficult to hypothesize on future trends
  - What will be the impact of medical advances?
  - How will the obesity crisis in the U.S. impact claims?
  - Will high-stress jobs result in increased cardiovascular diseases for women?

# Lapse rates

- Critical illness insurance is a lapse supported product
  - Premiums are typically level for life
  - Policies usually provide no cash surrender value
  - Similar to Long-Term Care (“LTC”)?
- Early duration lapse rates are usually higher than LTC
  - Premiums do not increase as steeply as LTC
  - Average issue age is younger than LTC
- There is limited information available to determine ultimate lapse rates
  - Certainly lower than for a cash value product
  - Probably higher than LTC

# Other important assumptions

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Don't ignore the importance of other assumptions

- Interest
- Reserving methods and bases
- Expenses and distribution costs
- Average size
- Risk-based capital
- Target profit margins

# Sensitivity analysis

Profitability measures can be very sensitive to key assumptions

- Morbidity
  - Morbidity is the primary assumption
  - Future projected claim trends can have a significant impact
  - Focus on “The Big 3”
    - Cancer, heart attack and stroke
- Lapse rates
  - Profitability is very sensitive to the assumed ultimate lapse rate
  - Variation in lapse rates in the early policy durations has little impact on profitability
- Interest
  - Large impact even though liabilities are not interest sensitive
  - The investment earnings rate does not impact loss ratios



# **Risk Management**

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# Risk management

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- Underwriting
- Policy definitions
- Claims administration
- Experience analysis

# Underwriting critical illness

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- Prior history of illness
- Family history
- Risk factors
  - Smoking
  - Hypertension
  - Build
  - Cholesterol
  - Diabetes
- Presence of pre-cancerous conditions
- Beware of anti-selection

# Definition of critical illness

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- Each critical illness must be carefully defined in the policy form
  - Definitions should be consistent with claim cost development
- The Association of British Insurers (ABI) has developed standard definitions for the U.K. market
- Policy wording of an event can lead to a wider range of conditions than anticipated
- Close consultation with the medical department is strongly suggested
- Sales and marketing personnel may face difficulties
  - Important to communicate accurately with customers
  - Must avoid complex medical terms and emphasize product simplicity

# Claims administration

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- Easier than disability income
- More difficult than life insurance
- Some critical illness claims are not clear cut

# Experience analysis

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- Industry standard tables for critical illness insurance are either out of date or non-existent
- Company differences in underwriting, policy definitions and claims administration can cause experience to vary
- Emerging experience should be monitored closely
  - Morbidity by condition
  - Voluntary lapses
  - Death due to a non-covered condition
- Poor experience can result in:
  - Lower profits
  - A need to increase rates
  - A need to increase reserves

# The Regulatory Environment

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# Critical illness regulations vary by state

- Loss ratio requirements
  - 15 states require minimum loss ratios to be met
  - New York requires at least a 60% loss ratio
- “Gatekeeper” provisions may be troublesome
  - Survival periods and waiting periods may be limited or require partial benefits
  - “first occurrence” and “first diagnosis” language can be problematic
  - New Jersey does not allow a waiting period
- Some states require additional benefits not typically provided under critical illness insurance
  - Iowa requires an indemnity benefit for hospitalization



# Critical illness regulations vary by state

- Underwriting restrictions
  - Some states limit the “look-back” period for underwriting questions
  - Three states currently prohibit questions regarding family history
- State approvals
  - A “generic” critical illness product may get approved in about 20 states
  - Another 15 states may require minor changes that may not effect pricing
  - State specific pricing may be needed for many states

# Contact Information

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