

# Health Insurance Underwriting

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**Münchener Rück**  
**Munich Re Group**

# Agenda

Risk Assessment in Health Insurance

Individual Underwriting

Group Underwriting

Underwriting supported by IT-Systems

Practical Examples - India

# **Risk Assessment in Health Insurance**

## Risk Assessment

... in Private Health Insurance is essential in order:

To arrive at risk commensurate premiums  
based on the equivalence principle  
(= congruence of performance and counter-performance).

To develop a profitable portfolio which supports  
competitiveness of the standard insurance premium.

## >> Risk Assessment

Adverse selection and moral hazard is more likely than in other classes of insurance.

*“People tend to palliate their health status at the point of application.”*

*“People are more likely to know when they will get sick than when they will die.”*

*“People can easily influence the time and scope of treatment.”*

# **Individual Underwriting**

## Individual Underwriting

Why is individual underwriting/assessment necessary?

For the premium calculation (standard premium) only the general (statistical) risk circumstances are taken into account which as a result represents the “average sick or healthy person”

Therefore, each individual risk has to be evaluated separately by considering

- adverse selection,
  - excess-morbidity risk
- and additional
- the possibility of moral hazard.

## >> Individual Underwriting ... Different types and aspects

Risks in health insurance business

Objective risks as

- Age and Sex, Profession, Health status, Family history

Moral hazard as

- Over-cautious behaviour and treatment, non-disclosure of pre-existing conditions, submission of invoices for uninsured persons, attempts to influence doctors, hospitals, socio-economic class etc.



**>> Individual Underwriting**  
**... Different types and aspects**

General exclusion of pre-existing conditions.  
“Point of claim underwriting”

Medical Underwriting  
“Qualified assessment at point of application”

## >> Individual Underwriting ... Different types and aspects

### Advantages of Qualified Medical Underwriting

#### For the policyholder

Fair underwriting process

Full protection

Prompter payment in the event of claims:  
(reduces point of claims underwriting to non-disclosure cases)

#### For the insurer

Less administrative work in the event of a claim

Risk-adequate premium

Better portfolio performance

Less “negative press”

# **Group Underwriting**

## Group Underwriting

Why do we differentiate  
between

individual

and

group

underwriting ?

Individual business is  
underwritten according to

the individual risk of the  
insured person

Group business is  
underwritten according to

the structure and needs of  
the insured group

## >> Group Underwriting

Therefore, the following items are relevant for group underwriting:

- size of the group
- type of the group (voluntary or compulsory)
- geographic distribution of employees
- industry
- sex distribution
- age distribution
- number of dependants including age and sex distribution
- number of dependant children
- salaries of insured group
- policy holder's (employer's) administrative facilities

# **Underwriting supported by IT-systems**

## Underwriting supported by IT-systems

Knowledge creating systems (actuarial approach)

- Lack of data and often too small database for reliable results.

Rule based expert systems (knowledge based systems)

- High flexibility. Good controlling and transparency of data.

Self learning systems

- There is a high risk of: Garbage in → Garbage out  
Lack of transparency on decisions

## **>> Underwriting supported by IT-systems**

A consistent underwriting approach at point of application is in our point of view one important key to create profitable health insurance business

Only an IT-based assessment system can “guarantee” a consistent approach.

Our preference is clearly a rule based system.



## >> Underwriting supported by IT-systems

How can a rule based system be used?

for a centralized Underwriting  
(integration as “black box” into an existing IT-environment  
or as simple as a PC stand alone solution)

at the Point of Sale (PC-Solution) or at branches  
(Client-Server)

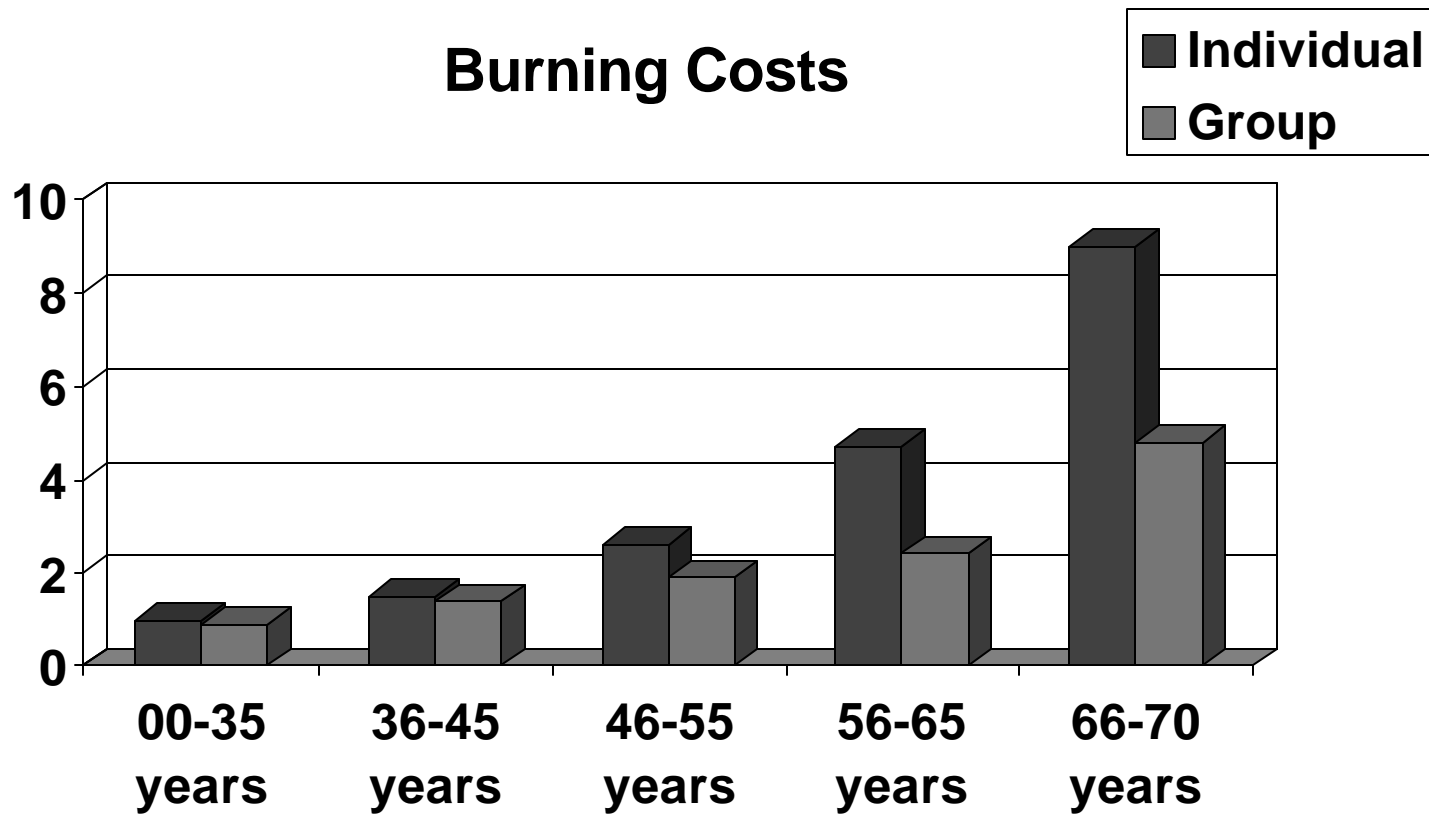
or for direct selling via Internet

# **Practical Examples**

## **India**

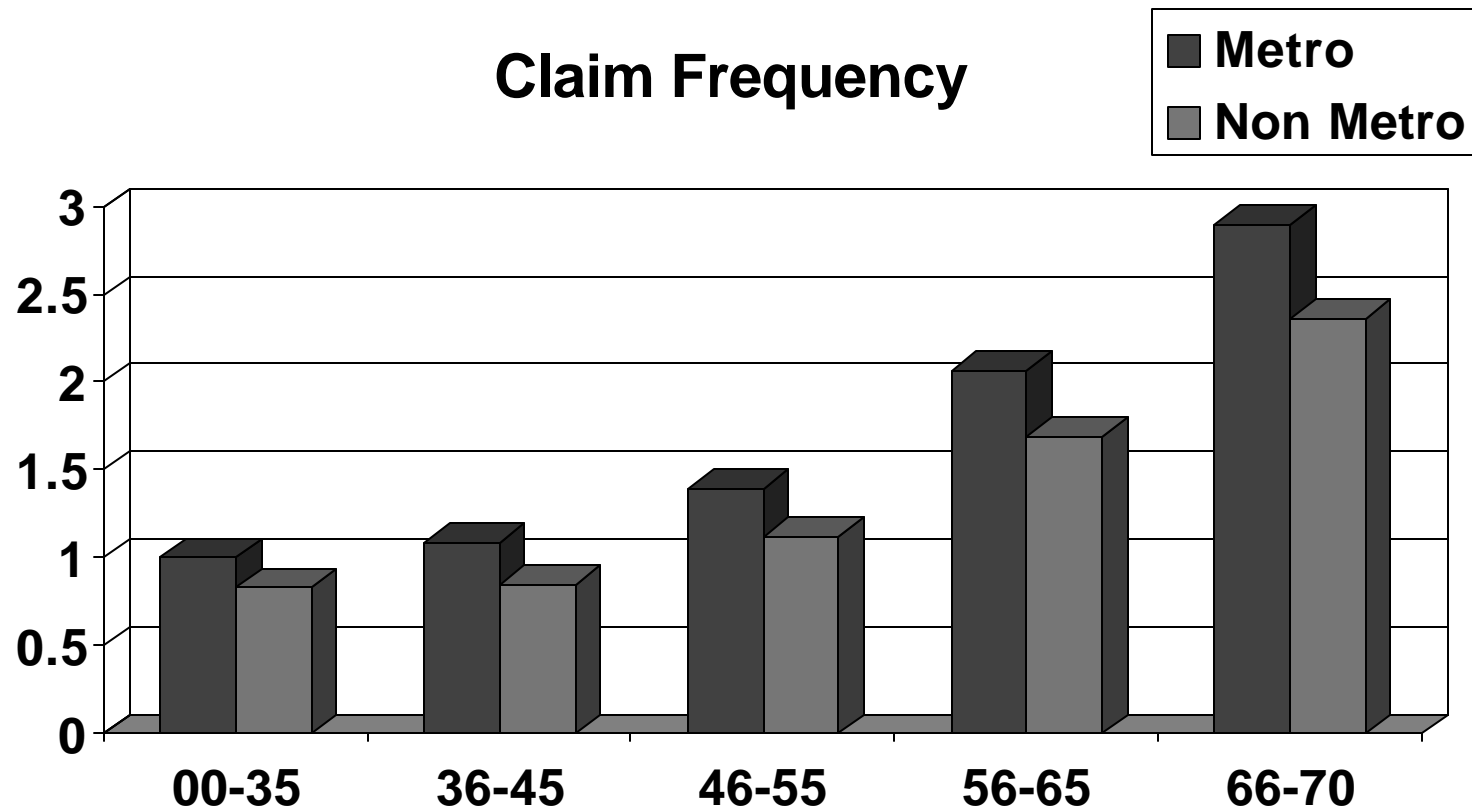
# Practical Examples - India

## ... Effects of Insufficient Underwriting



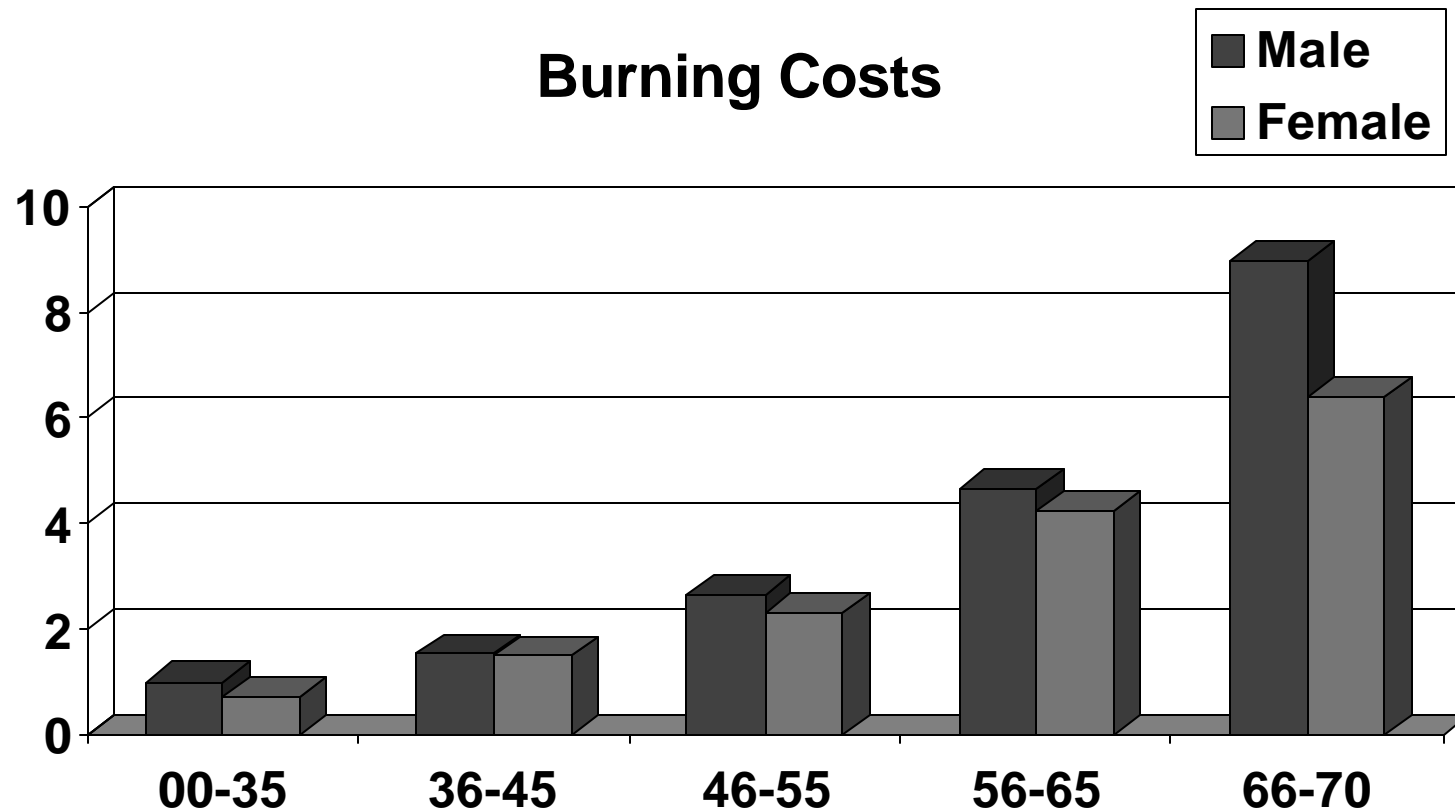
# Practical Examples - India

## ... Detecting an Objective Risk



# Practical Examples - India

## ... Detecting an Objective Risk



# Thank you for your interest

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