



QUANTIFYING RISK, ENABLING OPPORTUNITY

Subject:
**Value of influencing member behaviour
in medical schemes**

Author: Hannes Boshoff
and Joanita Dambisya
Date: May 2017

Content

Purpose

Methodology

Results

Significance

Points to ponder

Content

Purpose

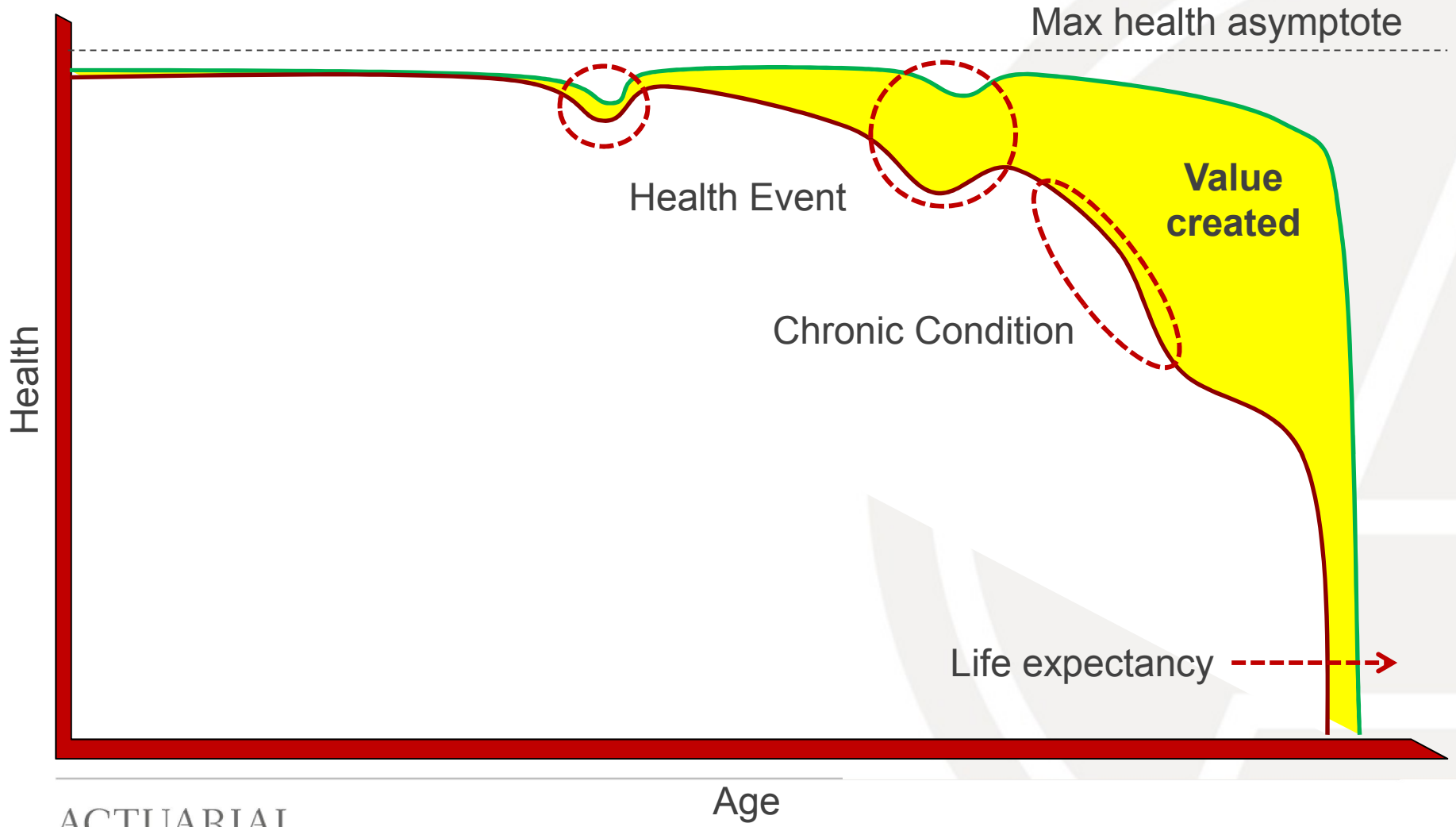
Methodology

Results

Significance

Points to ponder

Purpose



Purpose

What we want to know

- Is it worth it to get people to move more – In SA medical Scheme context
- Which activity measures are best correlated with health
- Is the impact of activity changed by factors such as
 - Age
 - Gender
 - Chronicity
- How behaviour changes if incentives change
- Other considerations

What we already know

- People who gym often claim less than those who do not
- People who started to gym eventually claim less – extent is uncertain
- Activity is the hardest to change and has a positive impact on other efforts such as smoking cessation and weight loss

What it is not

- Measuring selection impact
- Proof of causality
- Insurer/administrator Value
- Academic paper

Content

Purpose

Methodology

Results

Significance

Points to ponder

Methodology

The Honeymoon

- Beneficiaries must have been on the schemes at least at the start of this period to settle in
- We measure claims, but expect it to be lower for the active group

Activity - Cohort

- Test Group: Any measured activity of at least 7 active dayz™ per month for at least 4 months
- Control group:
 - No measured activity or
 - Measured activity but not more than 2 active dayz™

Claims Measure

- Main claims categories
- Standardised for age, plan and chronic status
- Split into different factors
- Tested for significance

Year 1

Year 2

Year 3

Content

Purpose

Methodology

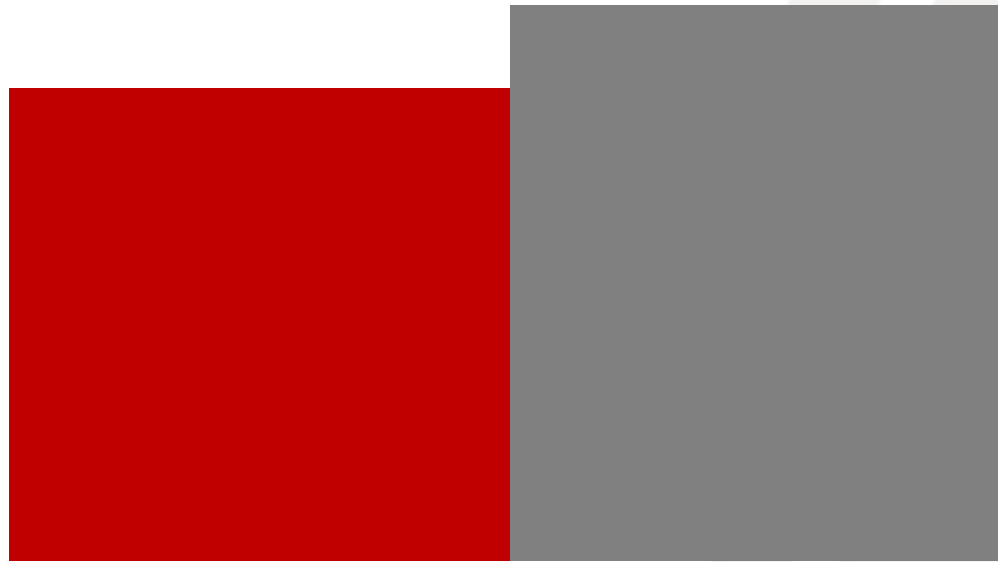
Results

Significance

Points to ponder

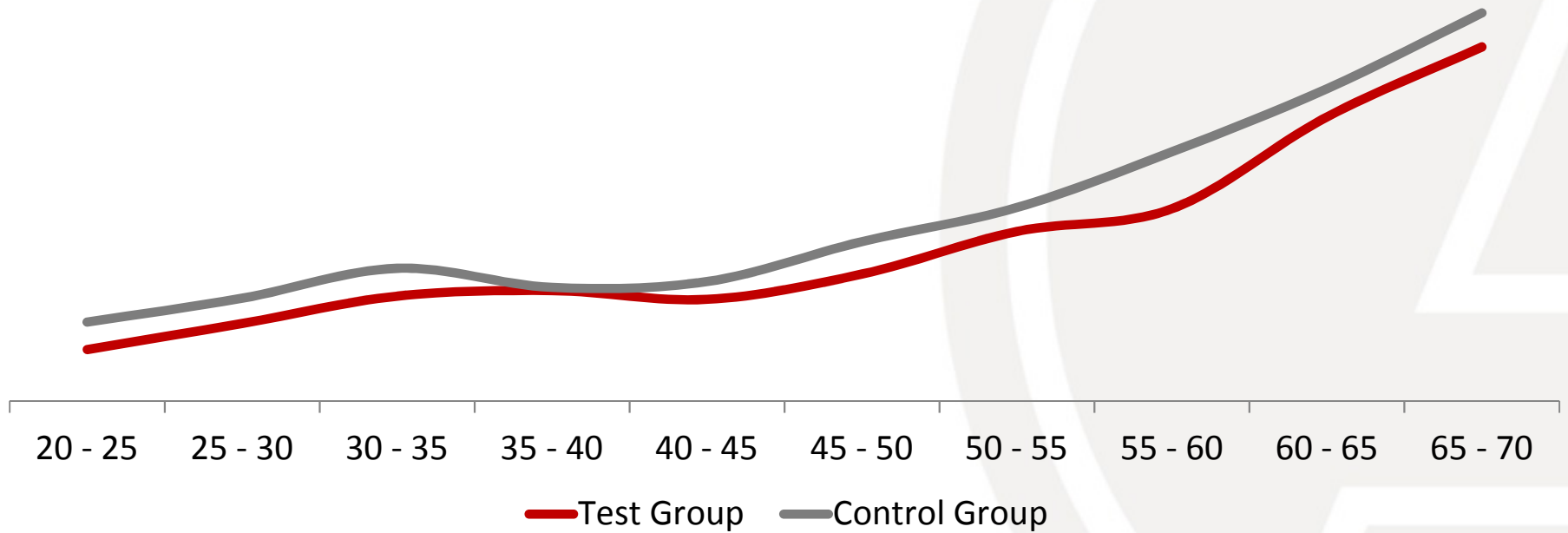
Results

Average Claims

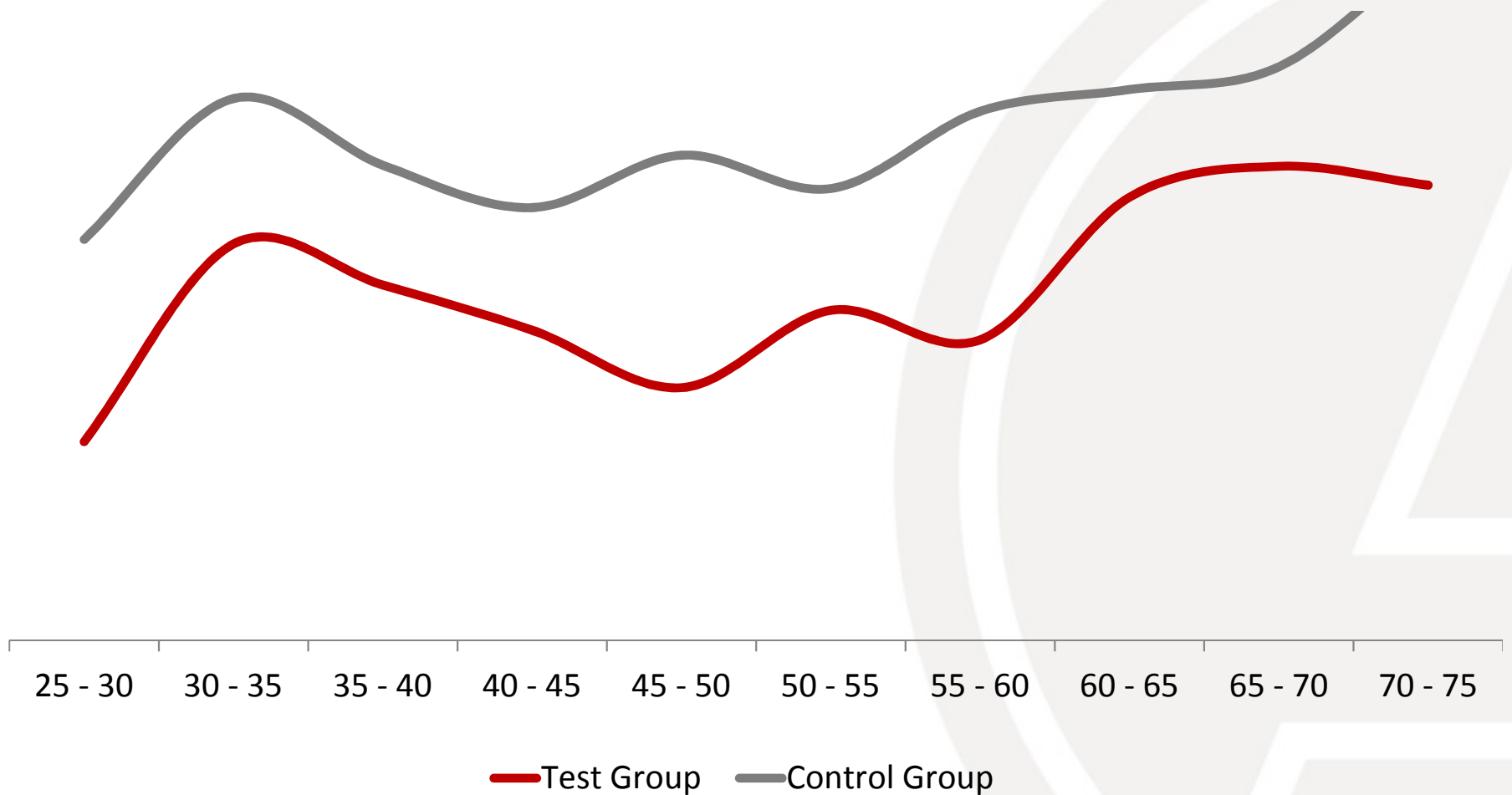


■ Test Group ■ Control Group

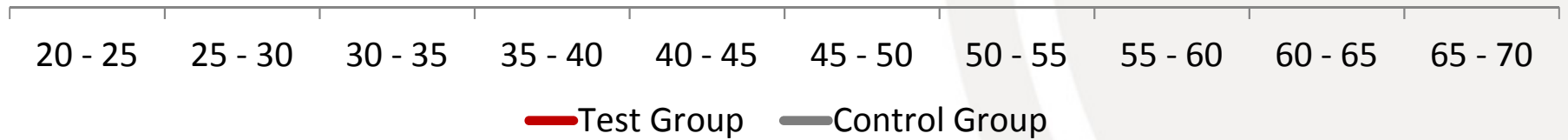
Results | Age



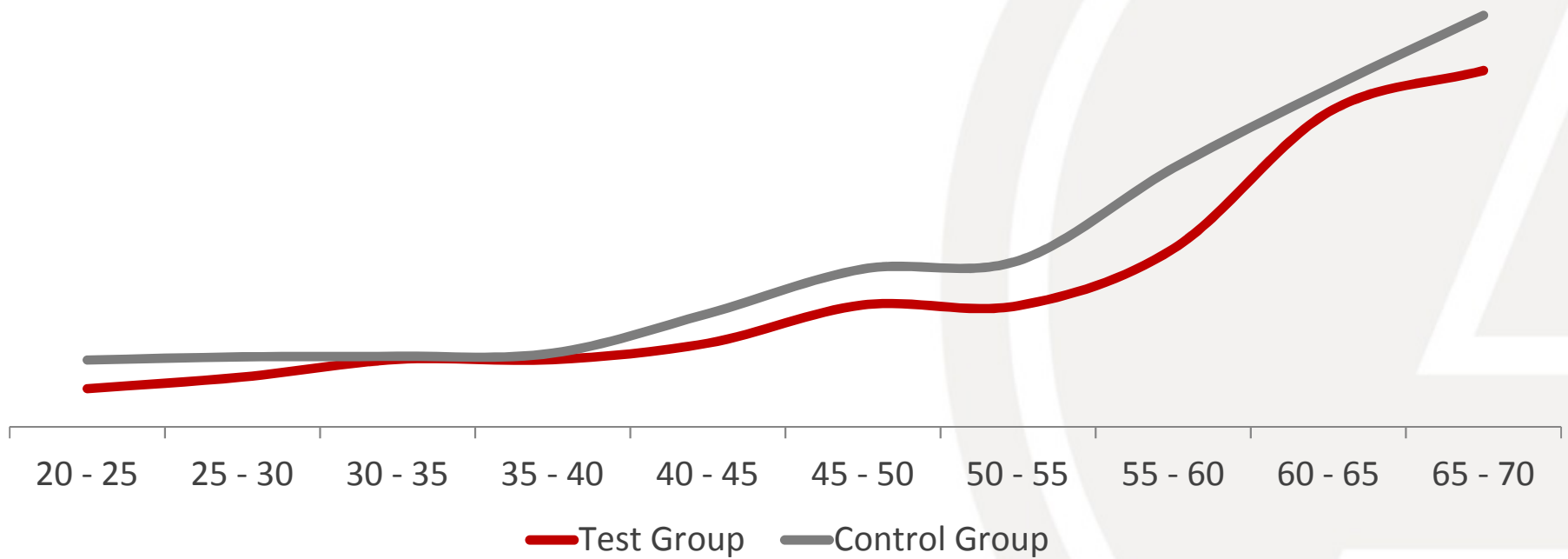
Results | Chronic



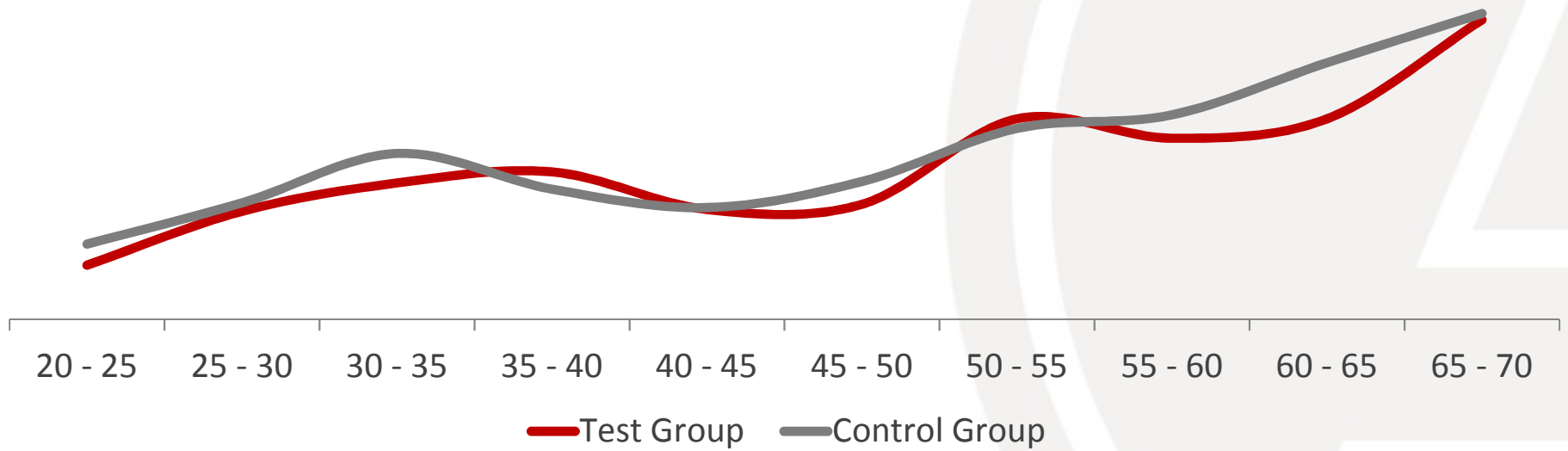
Results | Non Chronic



Results | Male



Results | Female



Results | Changes in Definition of Activity

Credibility of Results

Sample size reduces if more 'aggressive' definition of activity is used

- **76%** remain in test group if either requirement changes
- **60%** remain in test group if both requirements change

Accurate Identification

Many different ways to measure activity

- Increasing the activity level
 - From 7 or more active dayz™ to 10 or more active dayz™
- Increasing the number of months required to be active
 - From 4 or more months to 6 or more months

Results | Changes in Definition of Activity

Credibility of Results

Sample size reduces if more 'aggressive' definition of activity is used

- **76%** remain in test group if either requirement changes
- **60%** remain in test group if both requirements change

Accurate Identification

Many different ways to measure activity

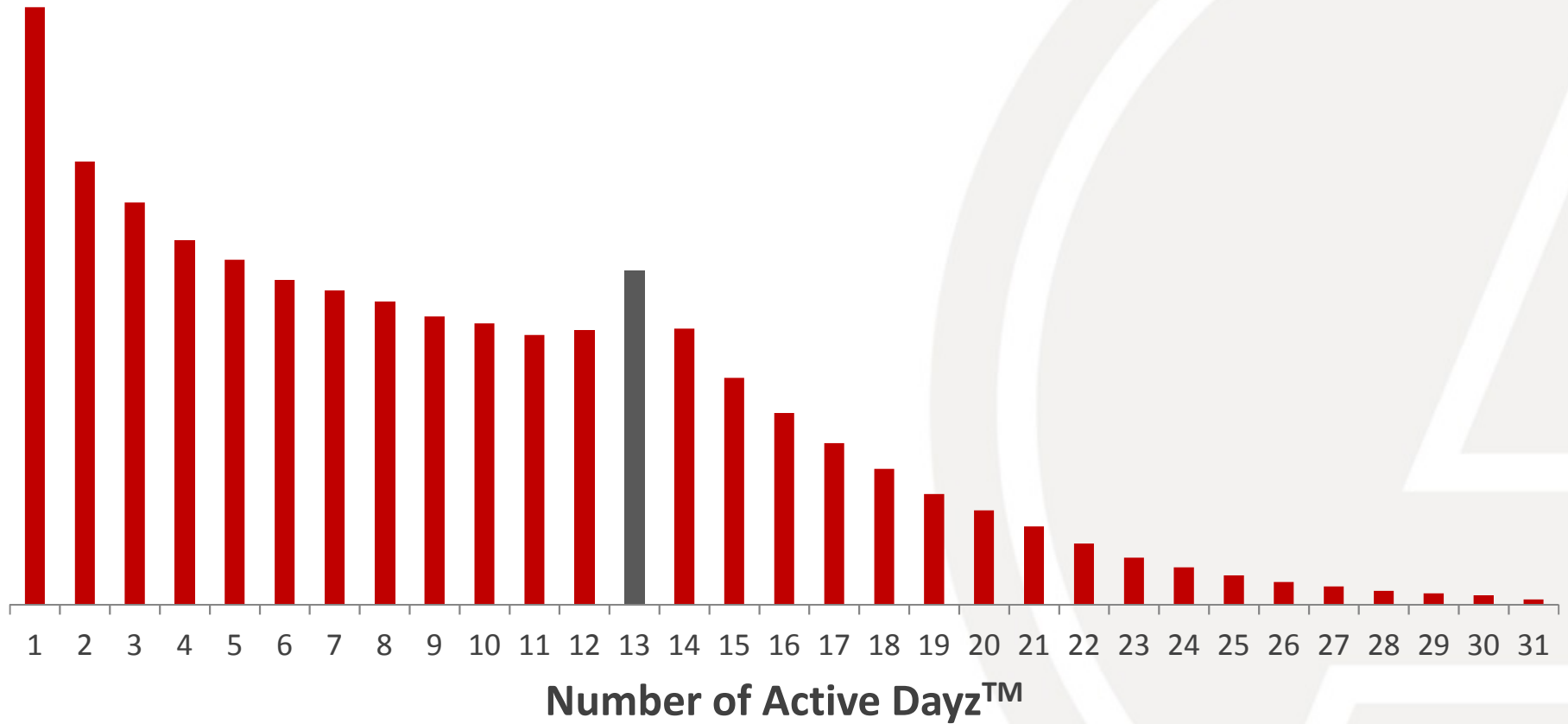
- Increasing the activity level
 - From 7 or more active dayz™ to 10 or more active dayz™
- Increasing the number of months required to be active
 - From 4 or more months to 6 or more months

▶ Intensity is a stronger indicator than duration

▶ Could not produce meaningful difference, but consistent

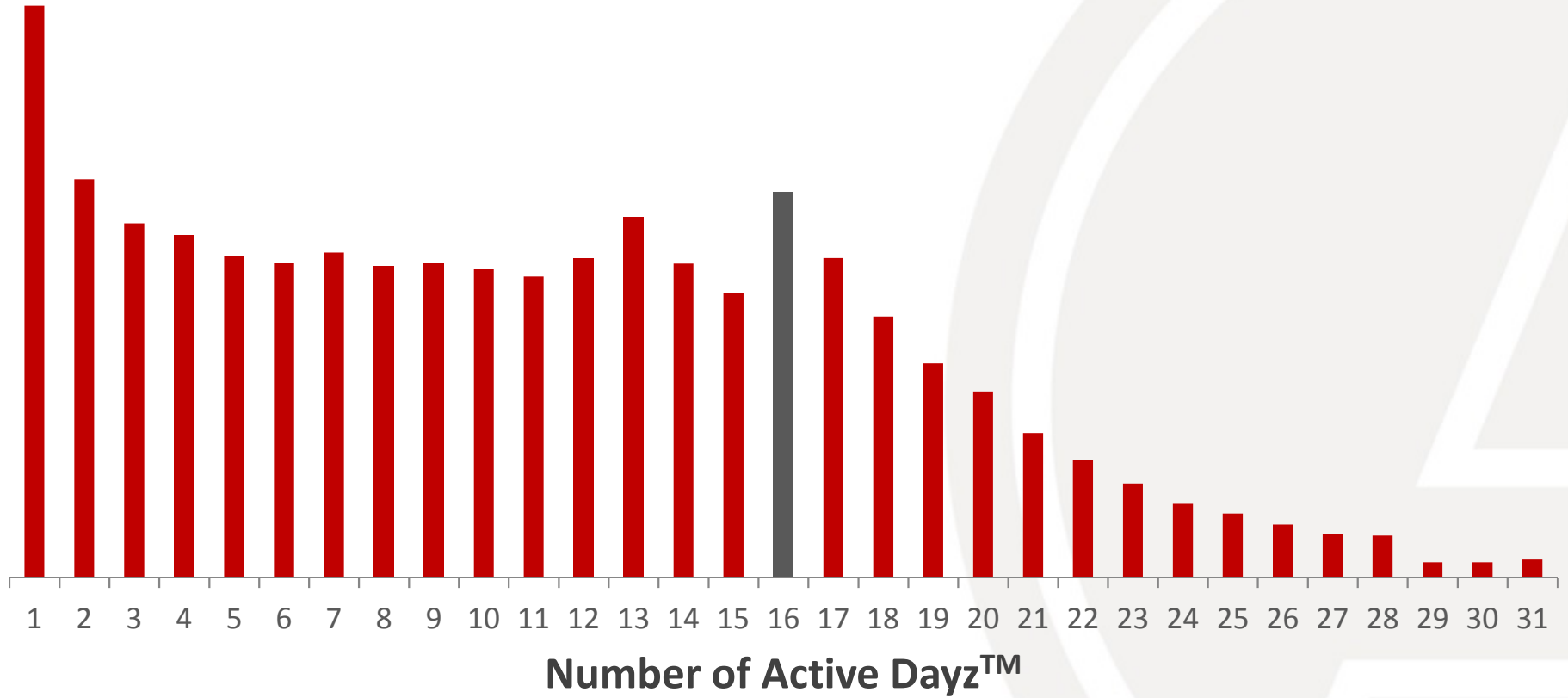
Results | Changes to Incentives

2016



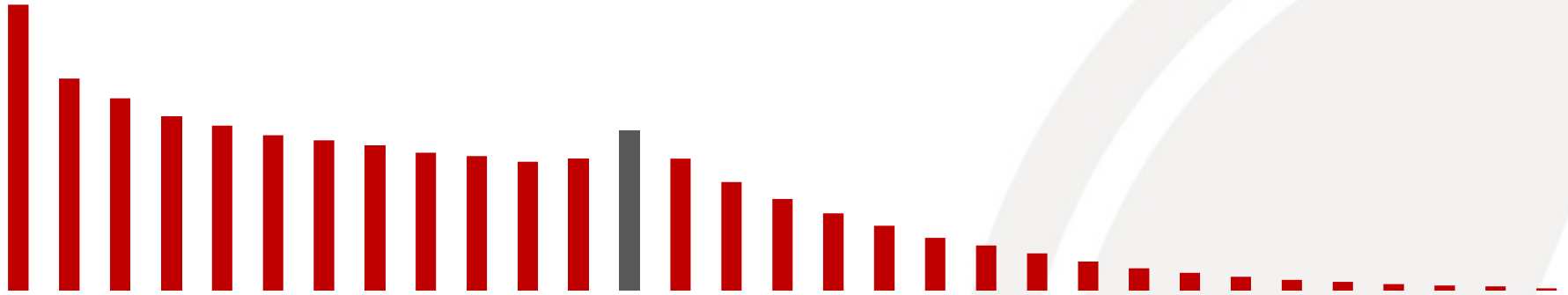
Results | Changes to Incentives

2017

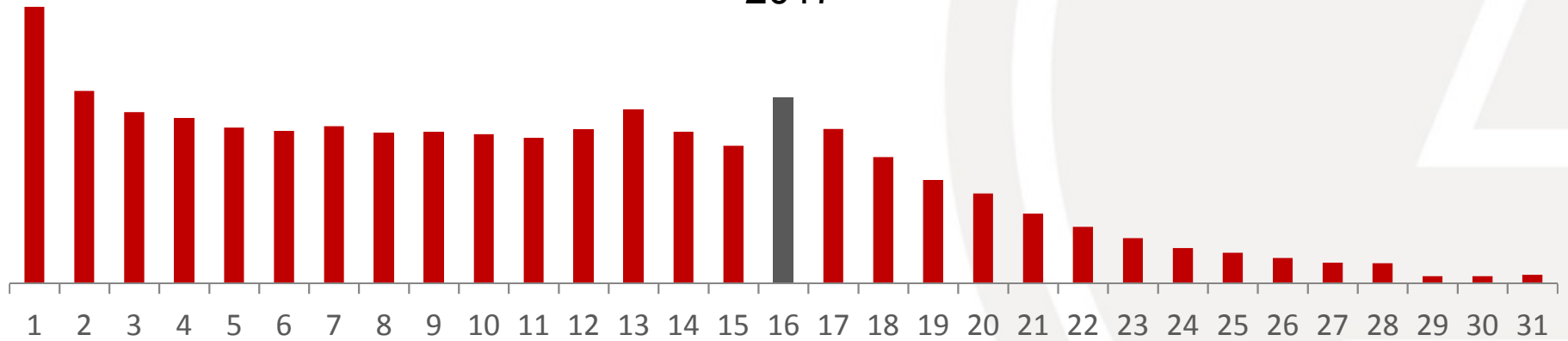


Results | Changes to Incentives

2016



2017



Number of Active Dayz™

Content

Purpose

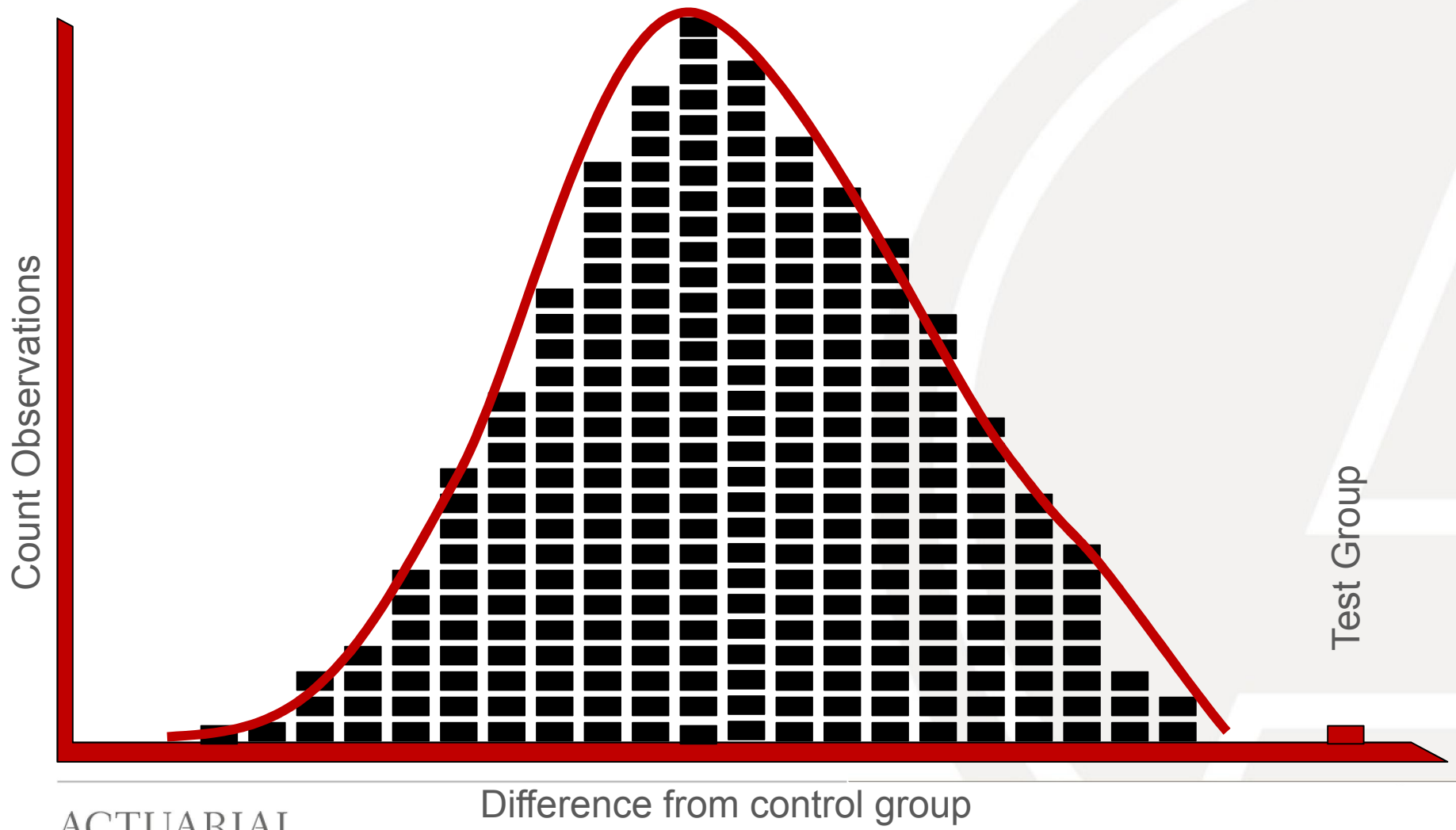
Methodology

Results

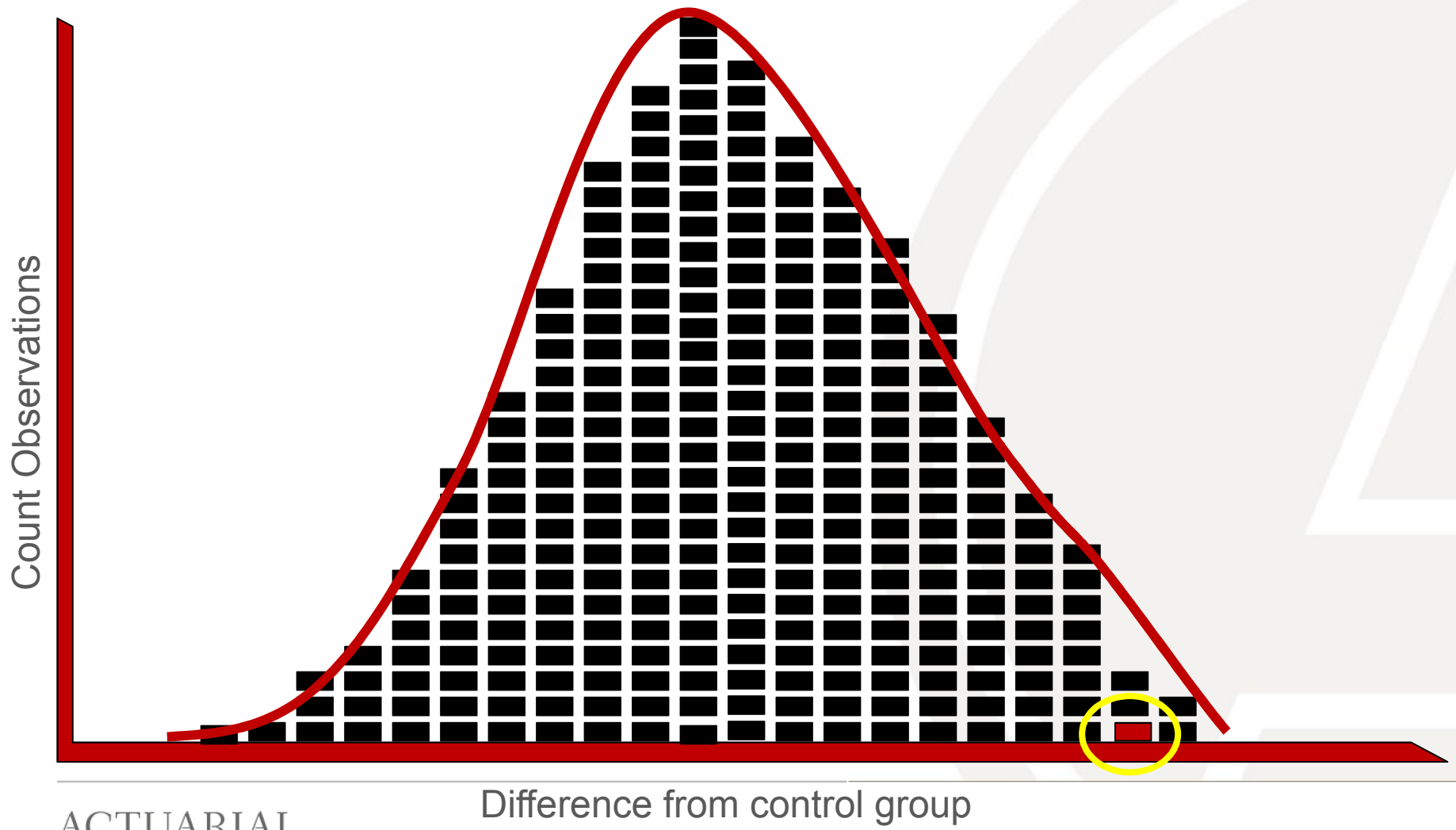
Significance

Points to ponder

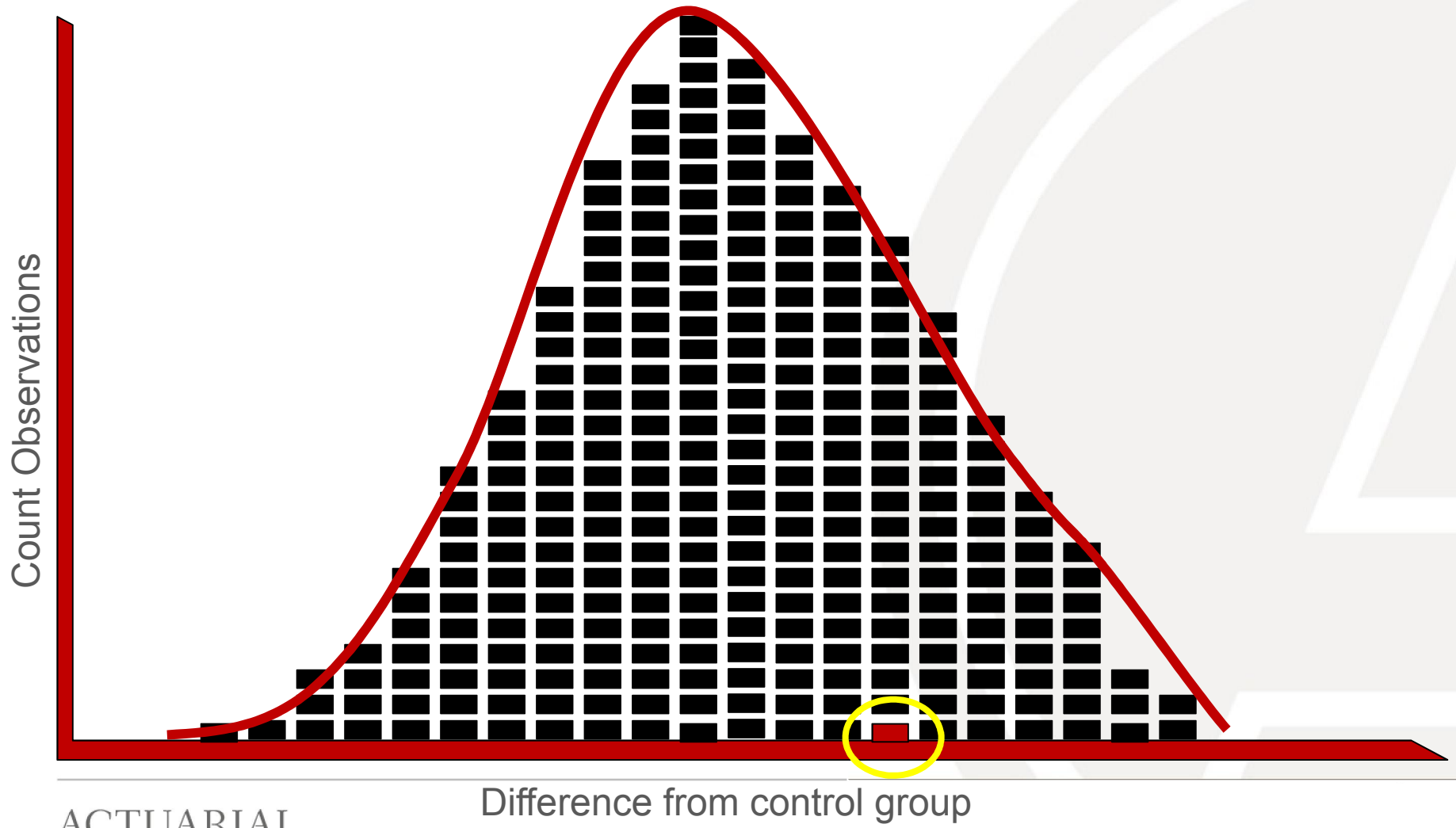
Methodology



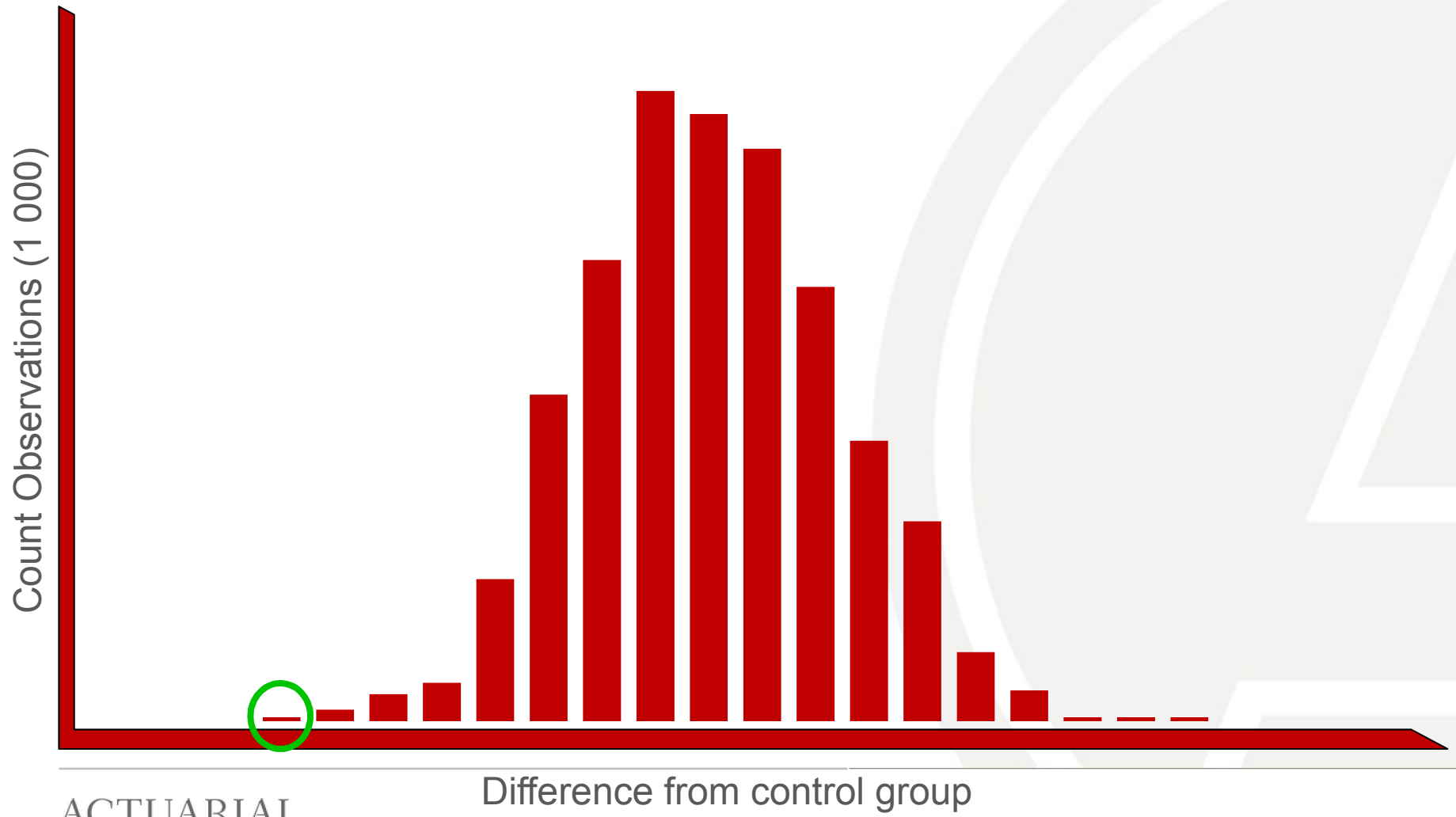
Methodology



Methodology



Results - Significance



Content

Purpose

Methodology

Results

Significance

Points to ponder

Points to Ponder | Moral Boundary

- High risk of crossing moral boundary
- High cost, low/no value
- Potential to attract people that may also exhibit other 'fraudulent' behaviour



- High selection effect – new and retained
- Consistent sustained change
- This is where the value is created
- But... existing members who did not change and exhibit such behaviour also win



- No change
- Some start-stops



- May change by own willpower or other stimulus
- In line with rest of market
- May lose them to competitors



Points to Ponder

Further interesting (perhaps not commercially) points to think through...

- Saturation point
- You get what you measure
- Strong correlation with other behaviours
- When is being active too much
- On and off-balance sheet



QUANTIFYING RISK, ENABLING OPPORTUNITY

Subject:
**Value of influencing member behaviour
in medical schemes**

Author: Hannes Boshoff
and Joanita Dambisya
Date: May 2017