



**HEALTHWAYS**  
CENTER *for* HEALTH RESEARCH

**Can Self-Reported HRAs Identify the  
Highest Risk Patients?  
Understanding the Validity of Self-Reported  
HRA and Productivity Measurements**

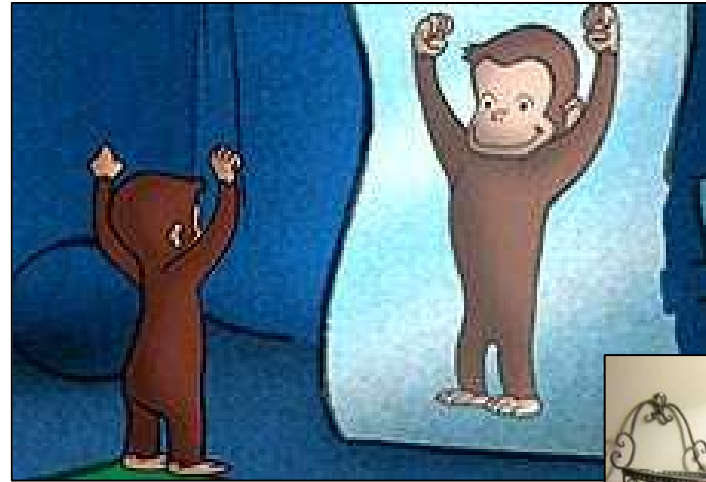
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# Goals of Presentation

- Limitations of Health Risk Assessments
- Implications of these limitations
- Reward for closing the gap

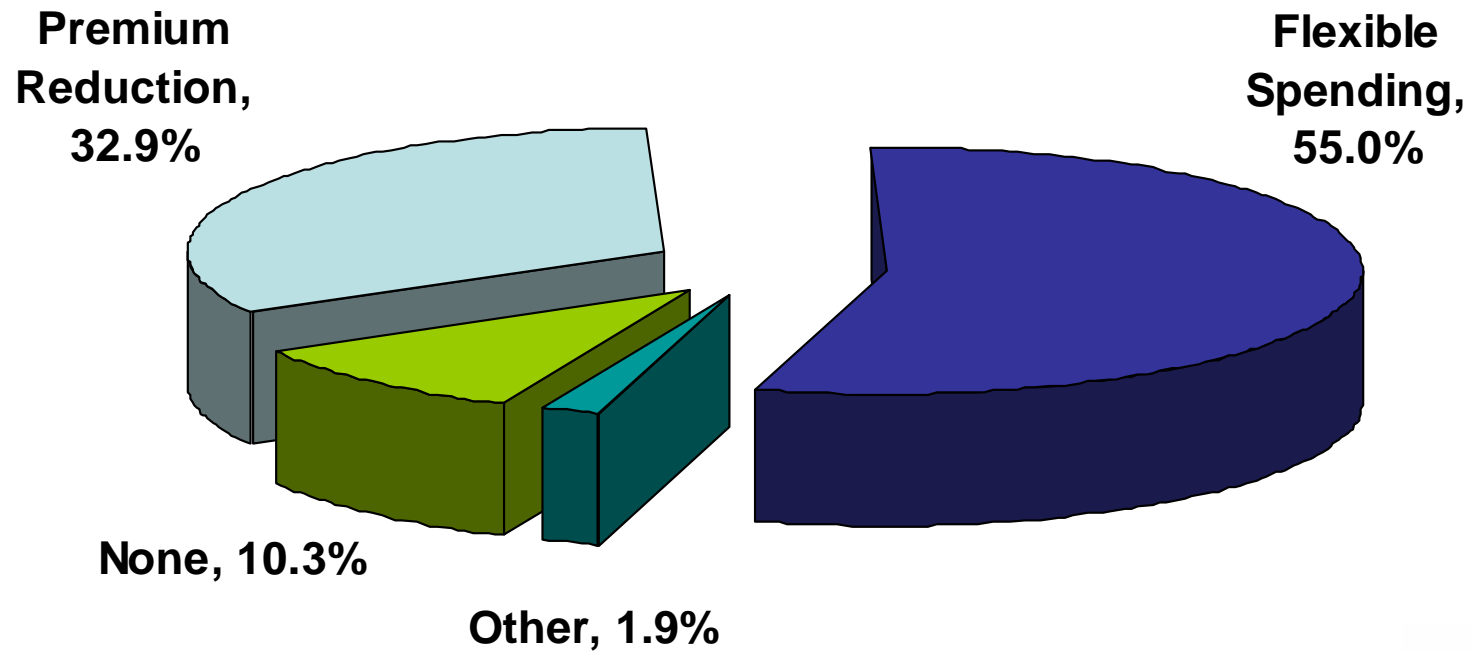
# Approaches to Mirrors



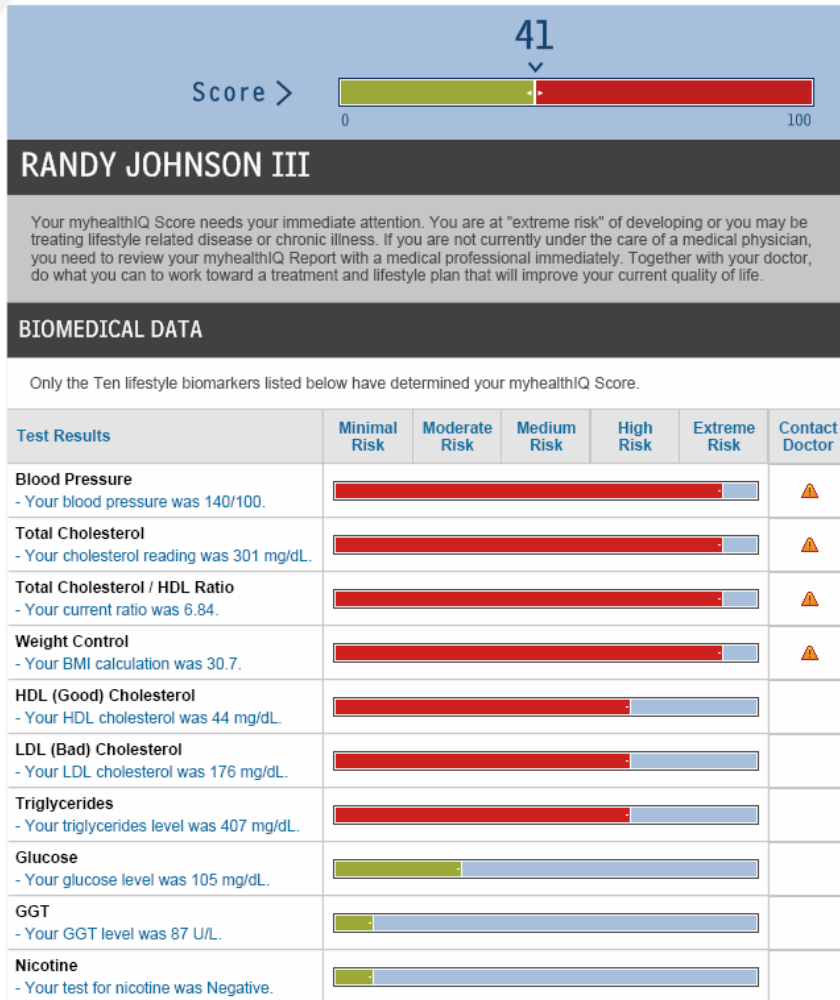
# Program Details

- **Intent**: Identification and Reduction of Health Risk Factors
- **Inputs**: Venipuncture, Screening, and HRA Results
- **Incentives**: Medical Premium Discounts, Improved Health, etc.
  - Year 1: Reward for *Participation*
  - Year 2 +: Reward for *Health Improvement*
    - Maintain desirable health score (71 & higher)
    - Improve health score (by 5+ points)

# Program Details – Incentives



# Program Details – Intervention



## Program Score:

- Personal health score (0 to 100)
- Calculated using objective data only
- Target score 71+

## Personal Health Report:

- 20+ pages
- Explanation of measurements with nationally published healthy targets for each
- Confidential
- Embedded links to educational information

# Analysis Population Details

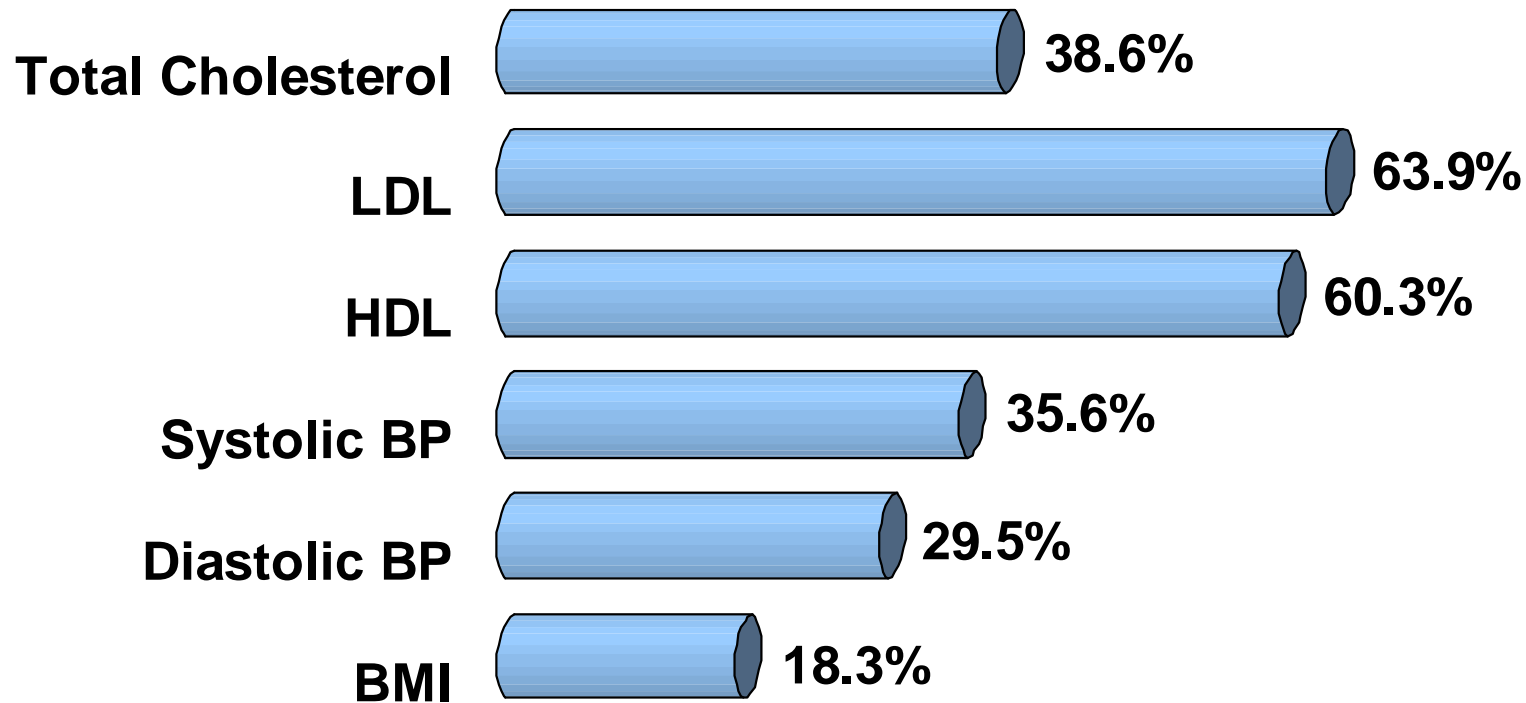
- Participants with T1 and T2 measurements (N=5,403)
- 13 employers
- Participation: 70%-80% (with incentives)
- Biometrics:
  - Total Cholesterol
  - LDL
  - HDL
  - Systolic BP
  - Diastolic BP
  - BMI
- Biometric Risk Levels:
  - Minimal
  - Moderate
  - Medium
  - High
  - Extreme

## Demographic and Baseline Characteristics (N=5,403)

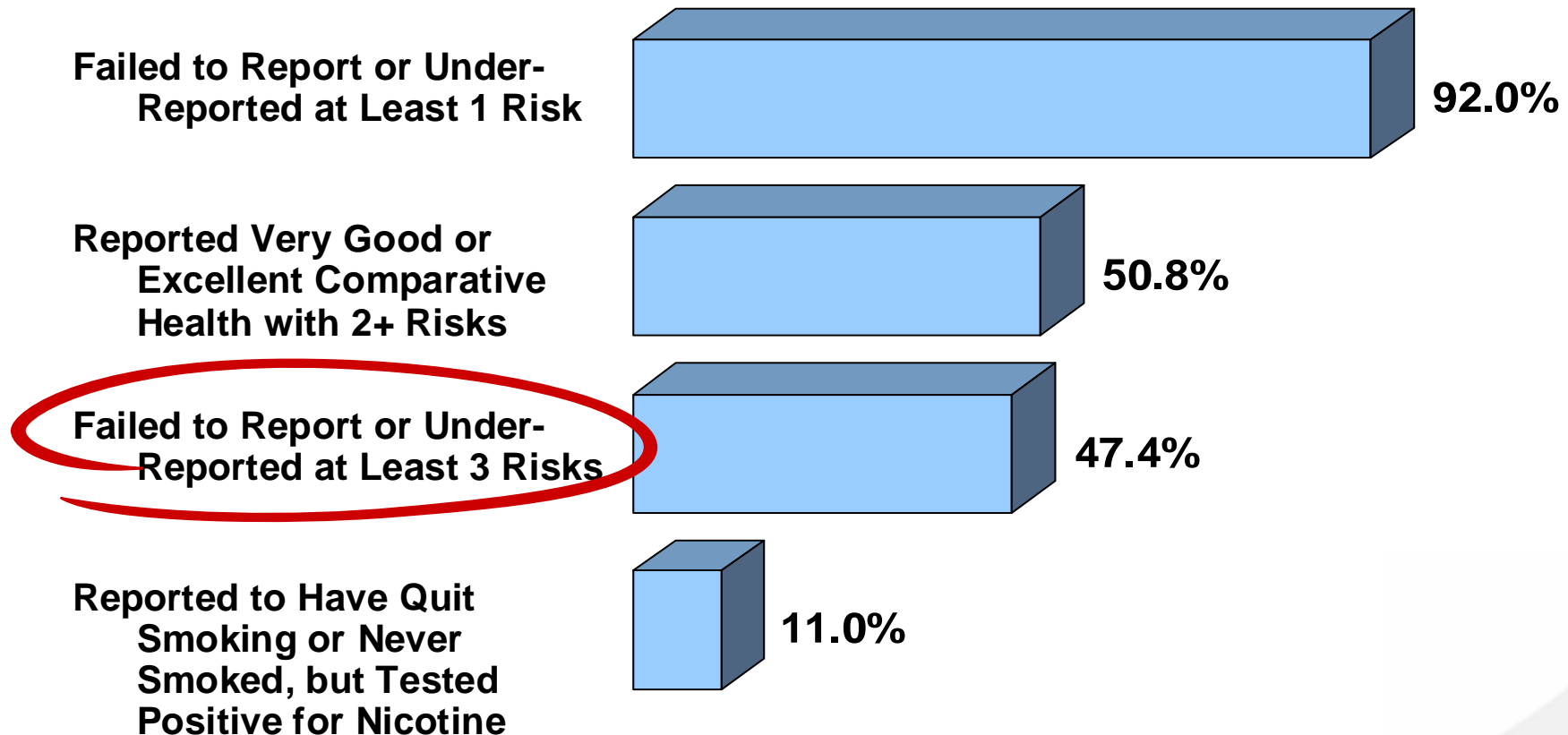
<b>Average Age</b>	44.3 years
<b>Percent Female</b>	66.3%
<b>Average Total Cholesterol</b>	195.4 mg/dL
<b>Average LDL</b>	115.8 mg/dL
<b>Average HDL</b>	56.0 mg/dL
<b>Average Systolic BP*</b>	120.5 mm Hg
<b>Average Diastolic BP*</b>	76.5 mm Hg
<b>Average BMI</b>	29.7
<b>Average Personal Score</b>	71.4



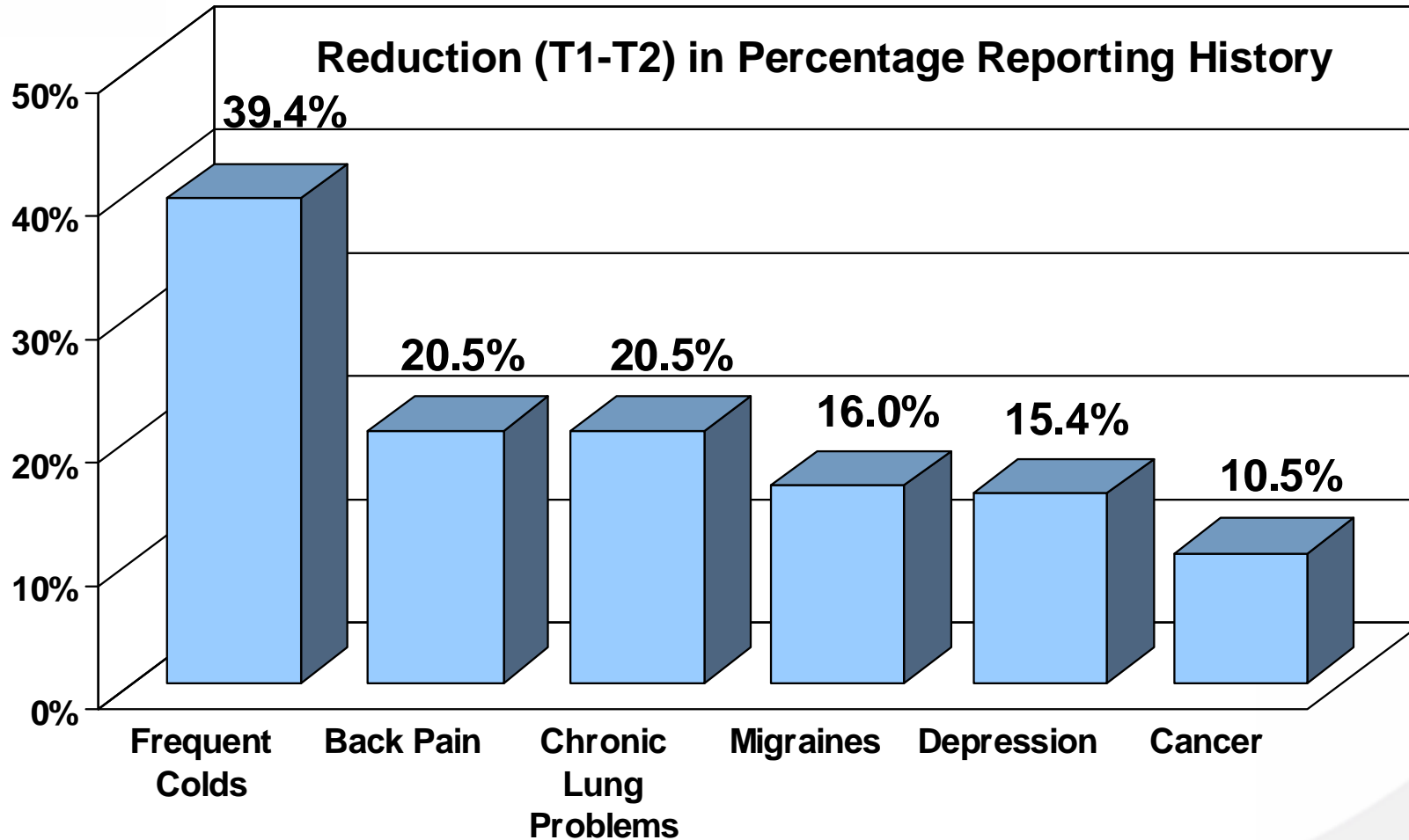
# Members Fail to Report or Under-Report Risks at Baseline



# Members Fail to Report Risks at Baseline (cont.)



# Do Members Accurately Report Medical History?



# Why This Reality?

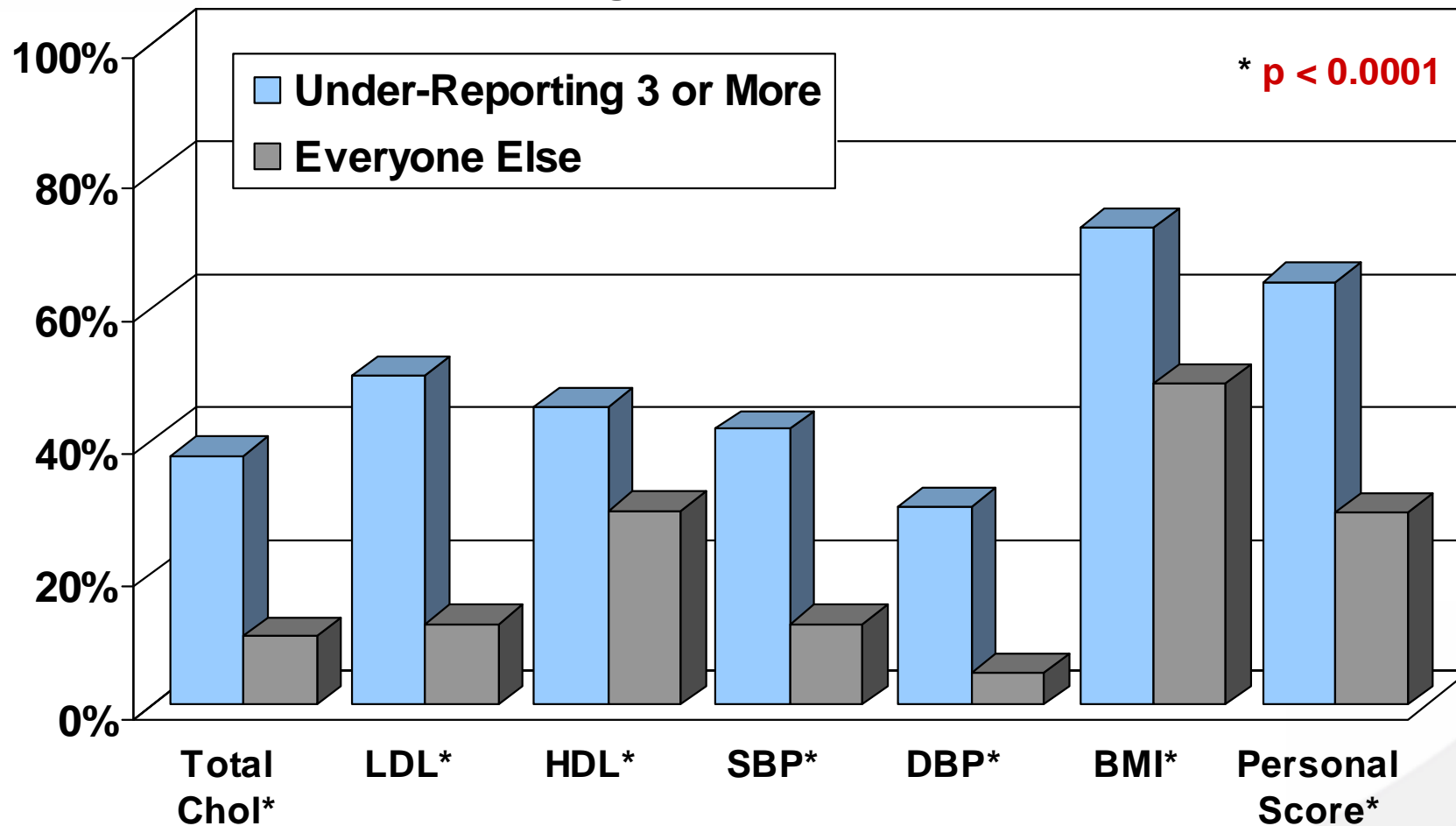
- Lack of Information or Education
  - Never tested
  - No recent test
  - HDL/LDL – which is good?
- Lack of Openness / Dishonesty
  - Do not believe in confidential nature of HRA
  - “It’s not my employer’s concern”
  - Embarrassment
  - Benefit of the doubt

## Demographic and Baseline Characteristics – Under-Reporters (N=2,560)

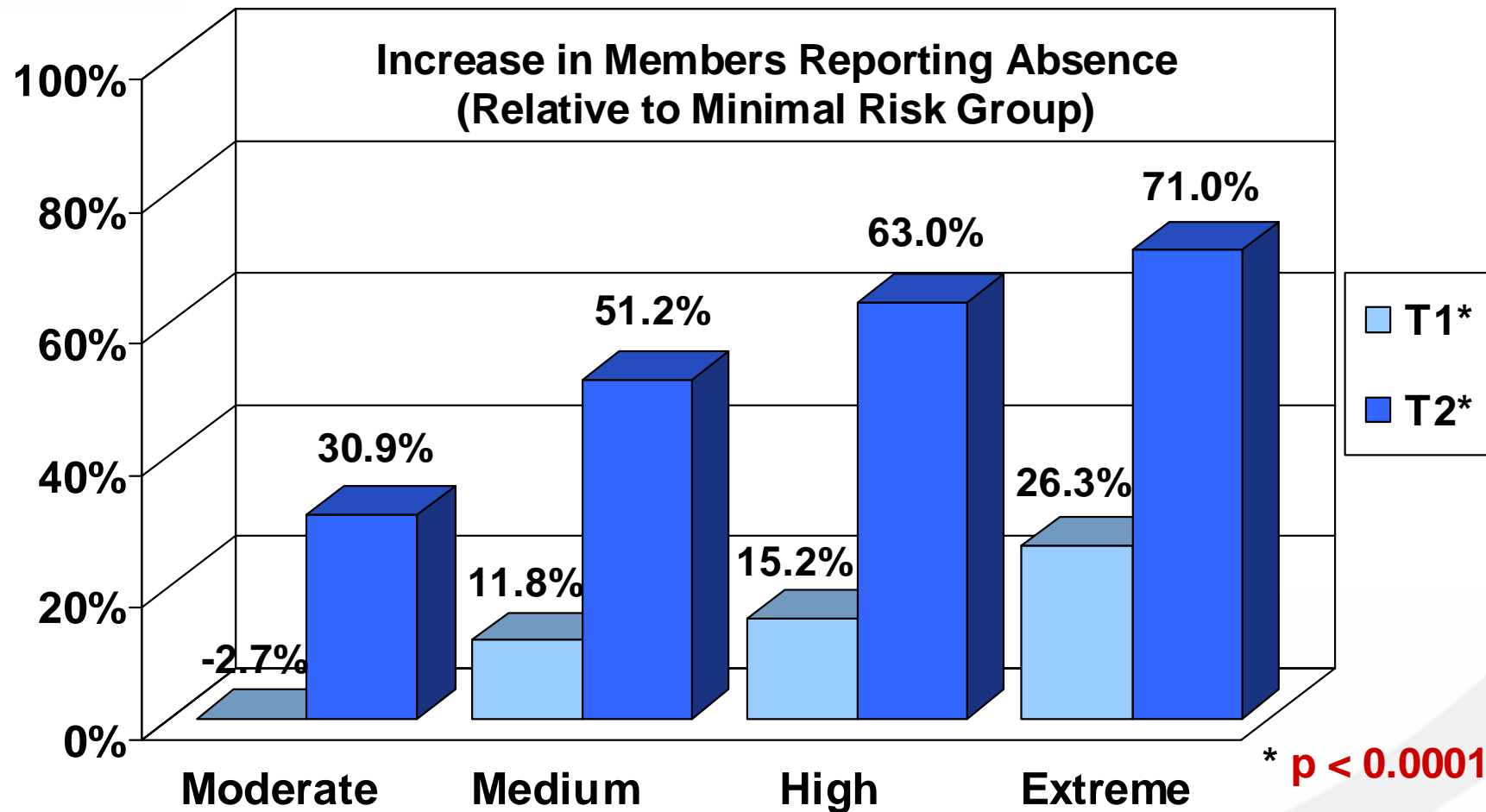
<b>Average Age</b>	45.3 years	44.3
<b>Percent Female</b>	60.1%	66.3%
<b>Average Total Cholesterol</b>	212.1 mg/dL	195.4
<b>Average LDL</b>	132.0 mg/dL	115.8
<b>Average HDL</b>	52.6 mg/dL	56.0
<b>Average Systolic BP*</b>	126.7 mm Hg	120.5
<b>Average Diastolic BP*</b>	80.8 mm Hg	76.5
<b>Average BMI</b>	31.3	29.7
<b>Average Personal Score</b>	65.0	71.4

# Comparing Under-Reporters to the Rest of the Population

Percentage at Medium to Extreme Risk



# Absence Due to Illness/Injury Related to Increased Health Risk

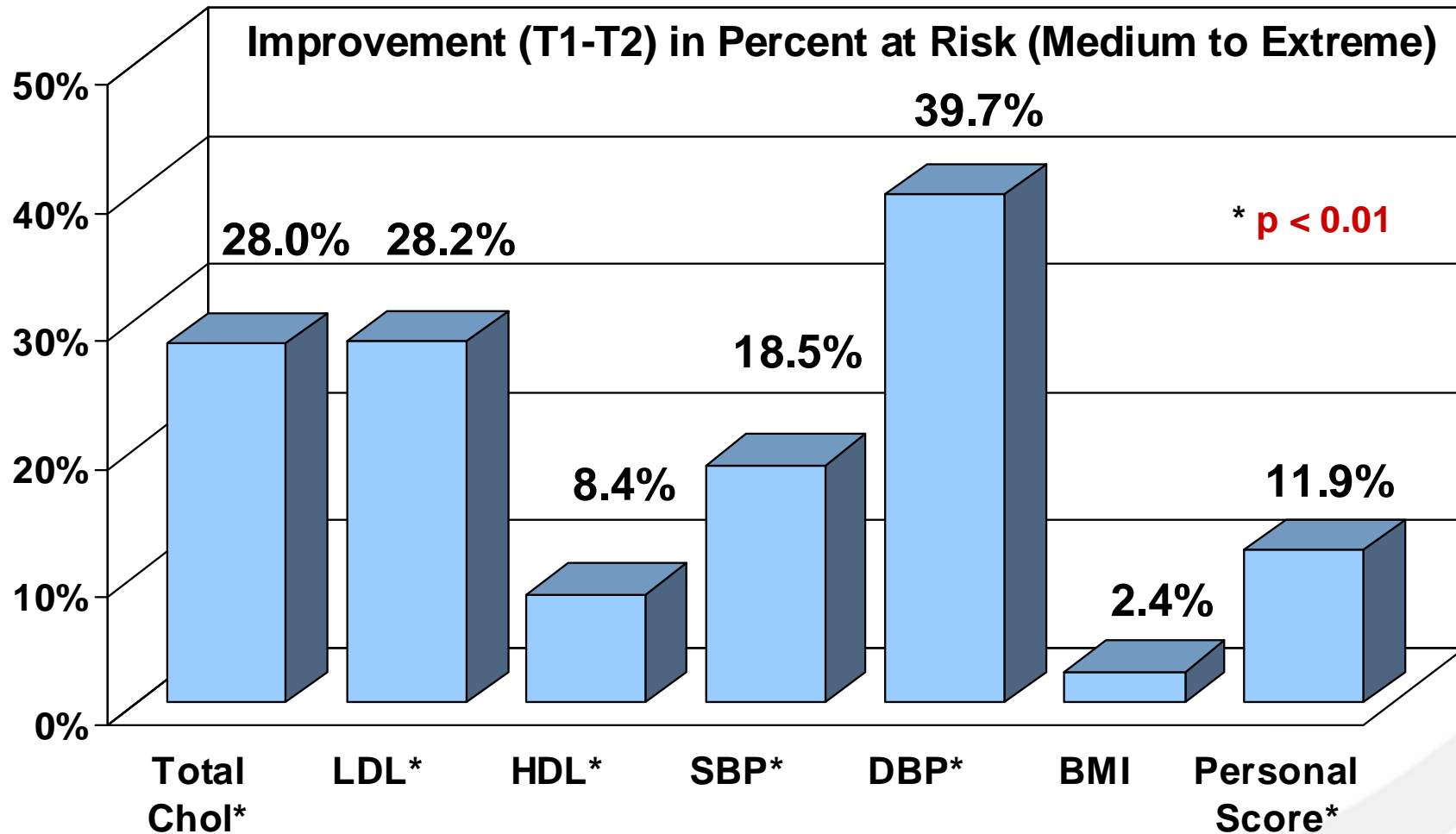


## So Far... and “So What?”

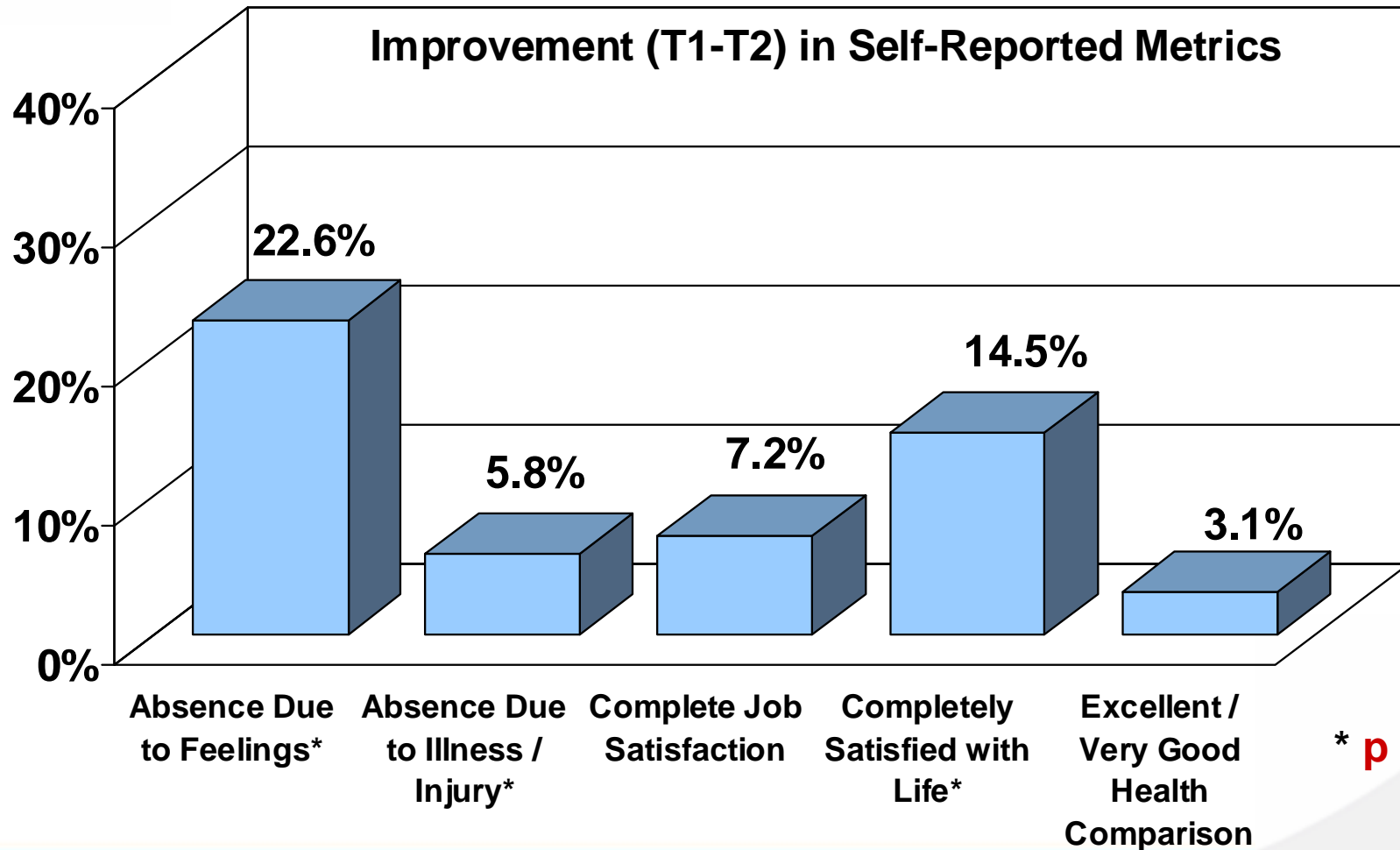
- Many members either cannot or do not accurately report biometric risks.
- Increases in these risks are associated with increases in absenteeism.
- So, what can be done to identify and address these hidden risks?
  - HRA refinement
  - Supplemental questionnaires
  - Physiologic screening
  - Clinical biometric screening



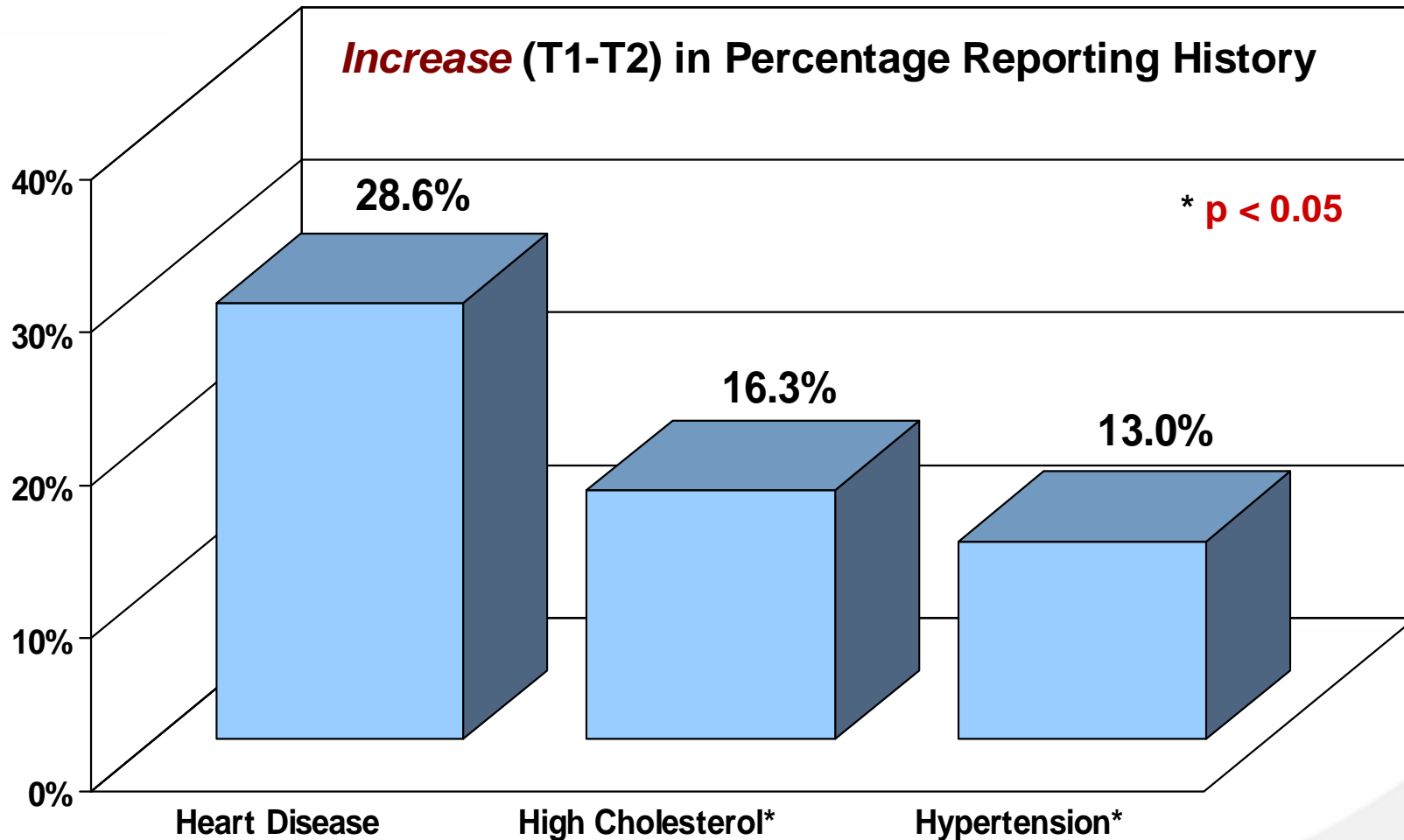
# What Happens to Under-Reporters – Biometrics



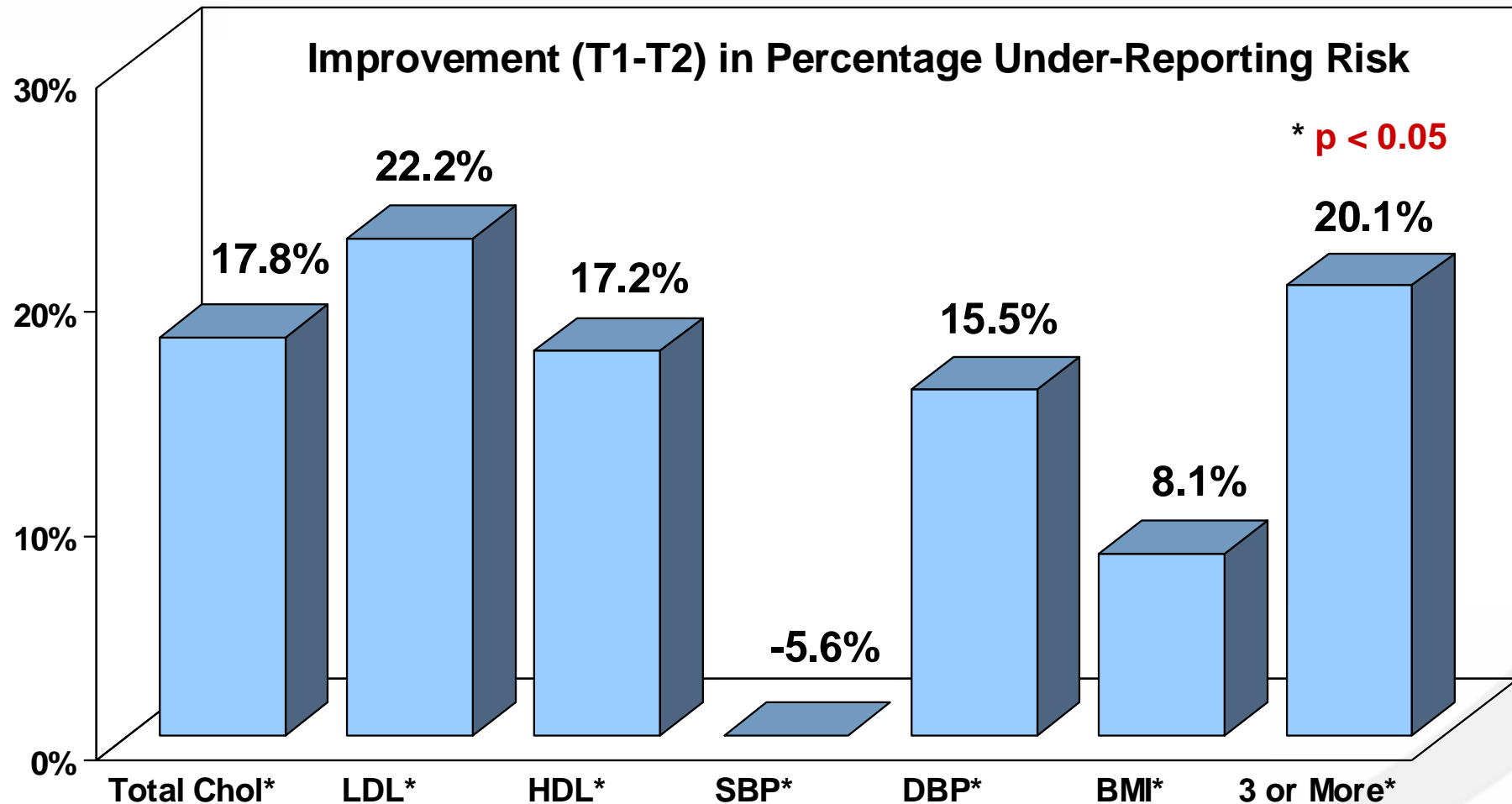
# What Happens to Under-Reporters – Self-Reported Metrics



# What Happens to Medical History for Under-Reporters?



# Do Members Continue to Under-Report?



# Summary

- Half of members under-report 3 of 6 key risks.
- When armed with information and small incentives, these members improve:
  - Risk profiles
  - Biometric self-awareness
  - Absenteeism
  - Outlook on life, health, and work
- *“What is the most important number to a statistician?”*
  - $e$
  - $0.05$
  - $\pi$
  - $162$