



2024 LIFE
INSURANCE
& ANNUITY
CONFERENCE

**Powering
Growth**

A Behavior Economics Approach to Life Insurance





Part I: Behavioral Science in Life Insurance & Application Redesign





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SCOR

Collaborators Acknowledgment

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These results are not finalized and should be considered a draft.

I'd also like to acknowledge our amazing project team at SCOR:

- Aisling Bradfield
- Tiernan Caulfield
- Denis Charles
- Jenny McDonnell
- Katherine McLaughlin
- Davy Moore
- Caitlyn Parsons
- Robyn Wallner



Agenda

1 Study Overview

2 Industry Survey

3 Experiment Design

4 The Concept: Social Norms

5 Assume the Behavior Exists: Tobacco

6 Anchoring with Slider Bars:
Height/Weight

7 Anchoring with Closed-Ended Options:
Weight Change

1. Study Overview



Study Overview

Investigating the use and potential of behavioral science in two parts

Industry Survey

- Understand how behavioral science is currently viewed and used across the insurance industry

Experiment

- Quantify the effect of using behavioral science principles to improve life insurance application forms

2. Industry Survey



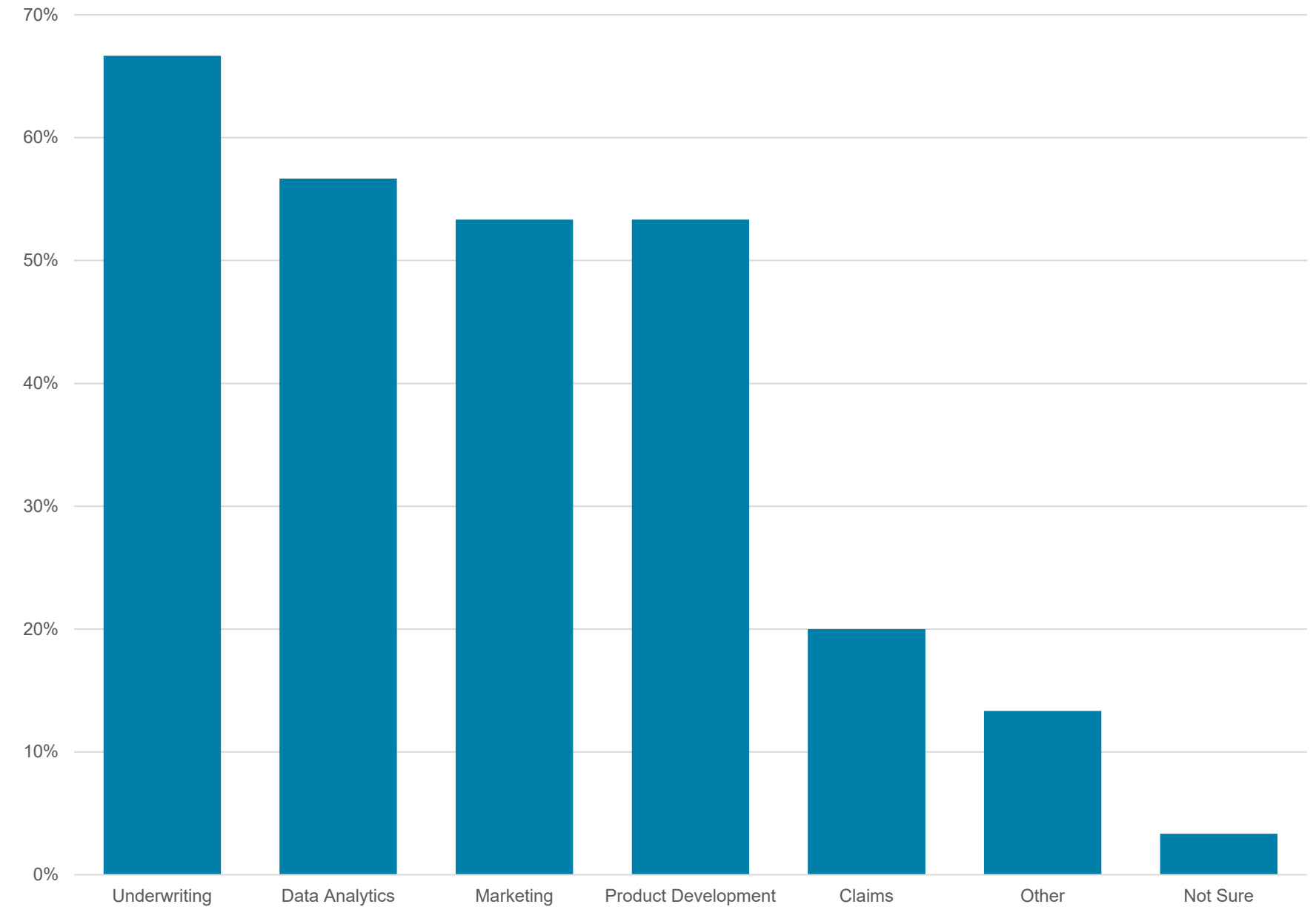
Industry Survey Results

Usage of Behavioral Science

34.5% Organizations using behavioral science in life insurance

83% Of those, use it on at least 1/3 of their projects and processes

Departments Using Behavioral Science



Industry Survey Results

Engagement with Behavioral Science in Reviewing Wording on Underwriting Forms

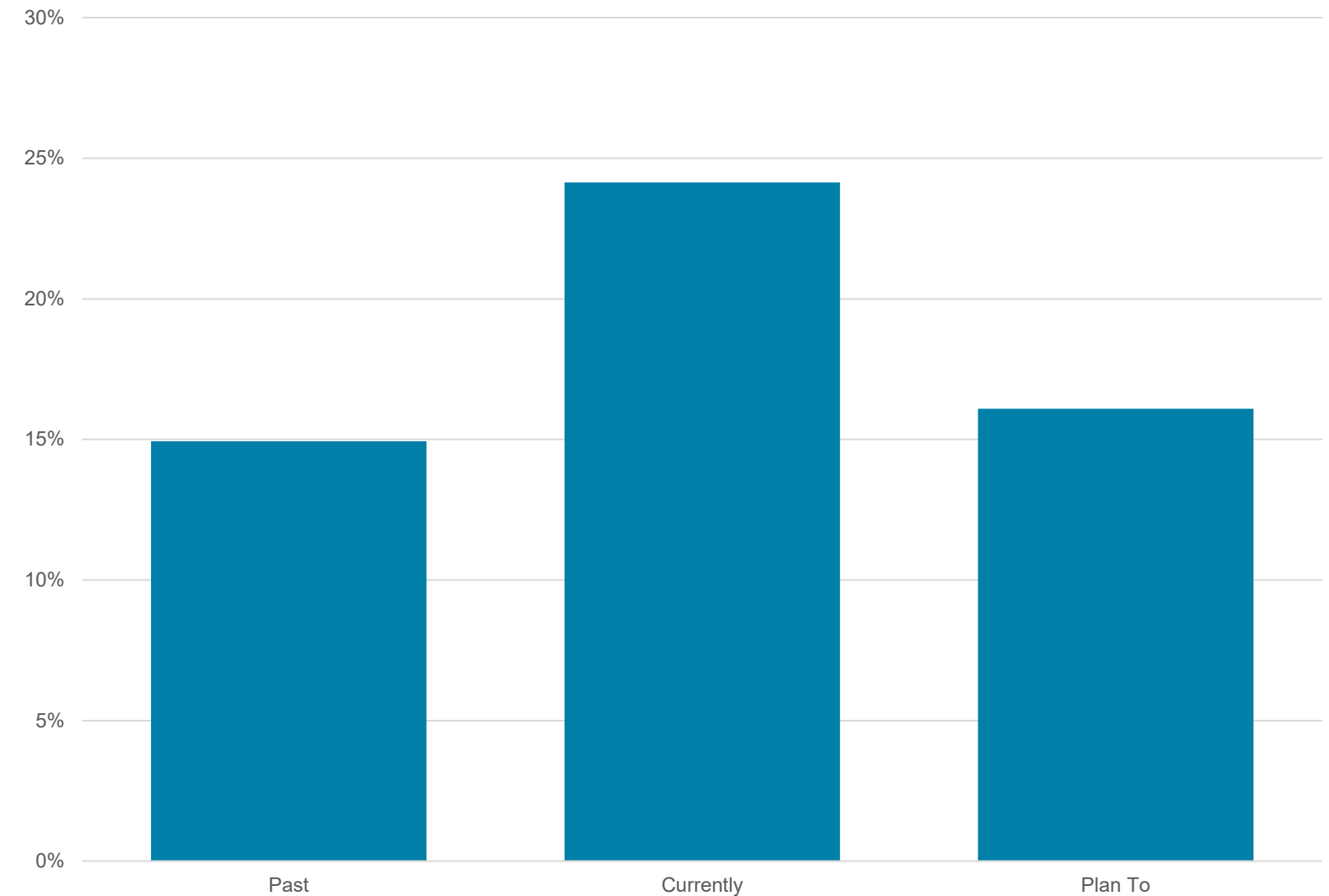
13 Organizations have engaged with behavioral science in the past

21 Organizations are currently engaged with behavioral science

14 Organizations plan to engage with behavioral science in the next 12 months

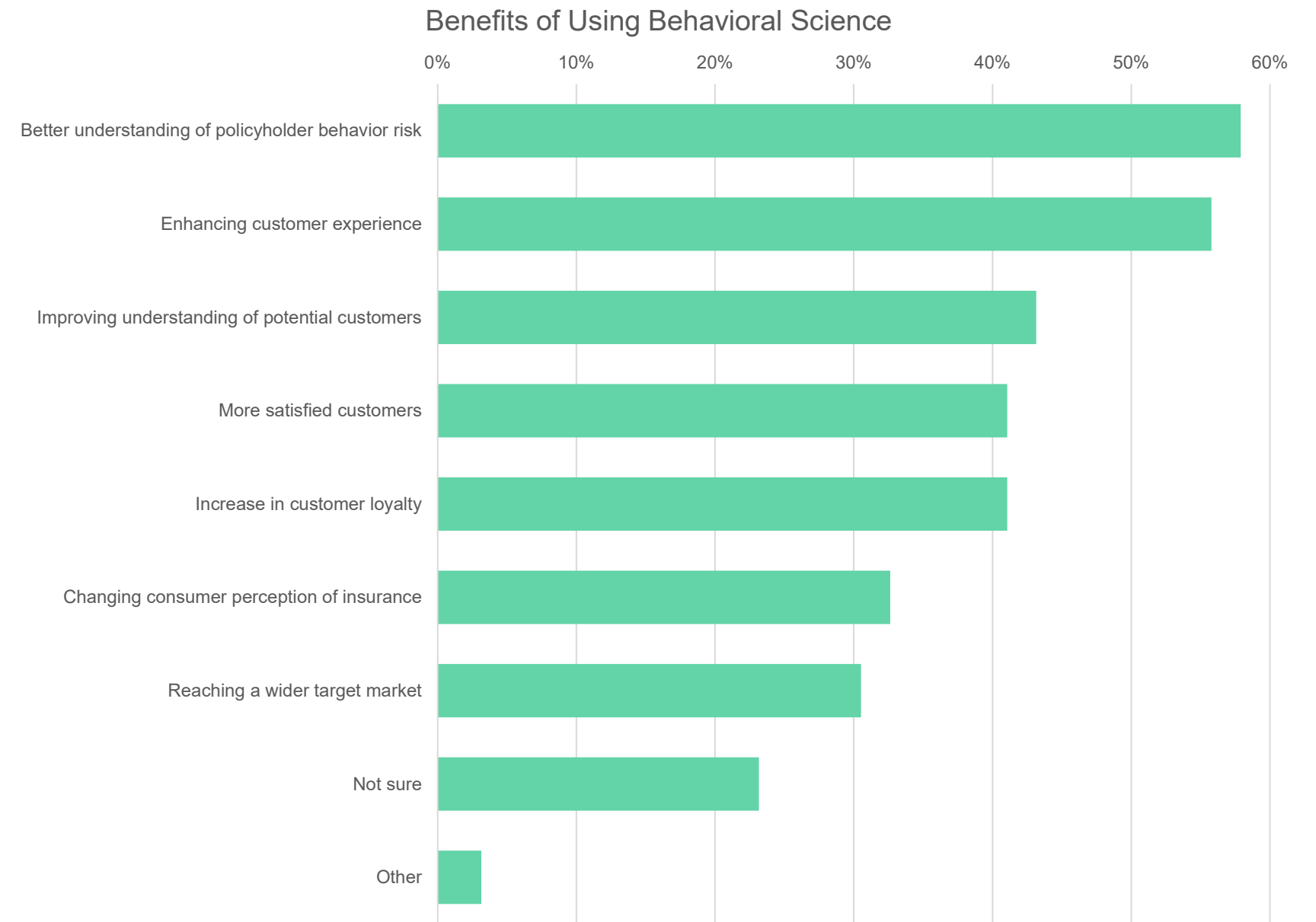
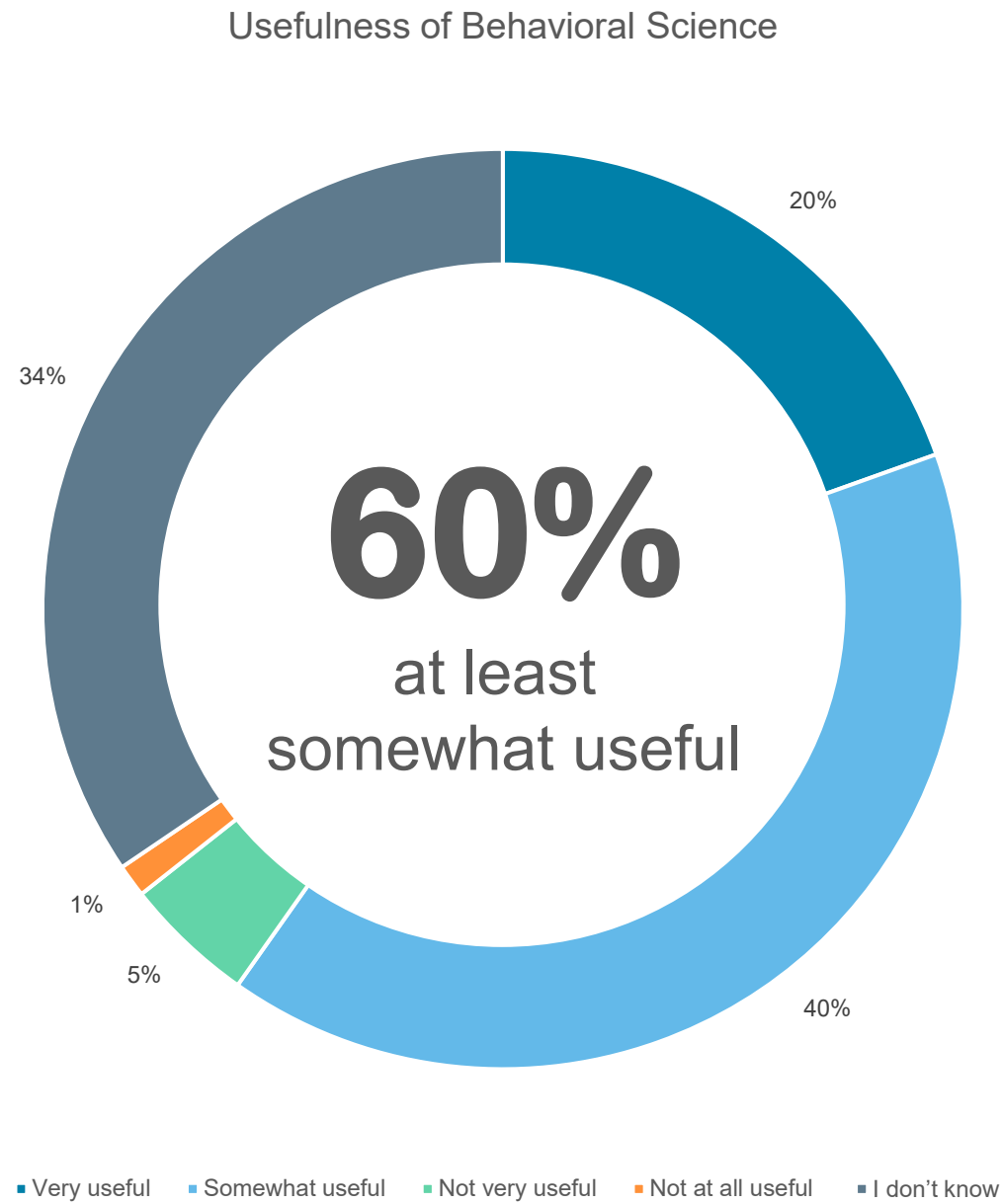
35% Want to learn more about behavioral science in reviewing wording on underwriting forms

Engagement with Behavioral Science in Reviewing Wording on Underwriting Forms



Industry Survey Results

Organization's Opinions on Usefulness of Behavioral Science

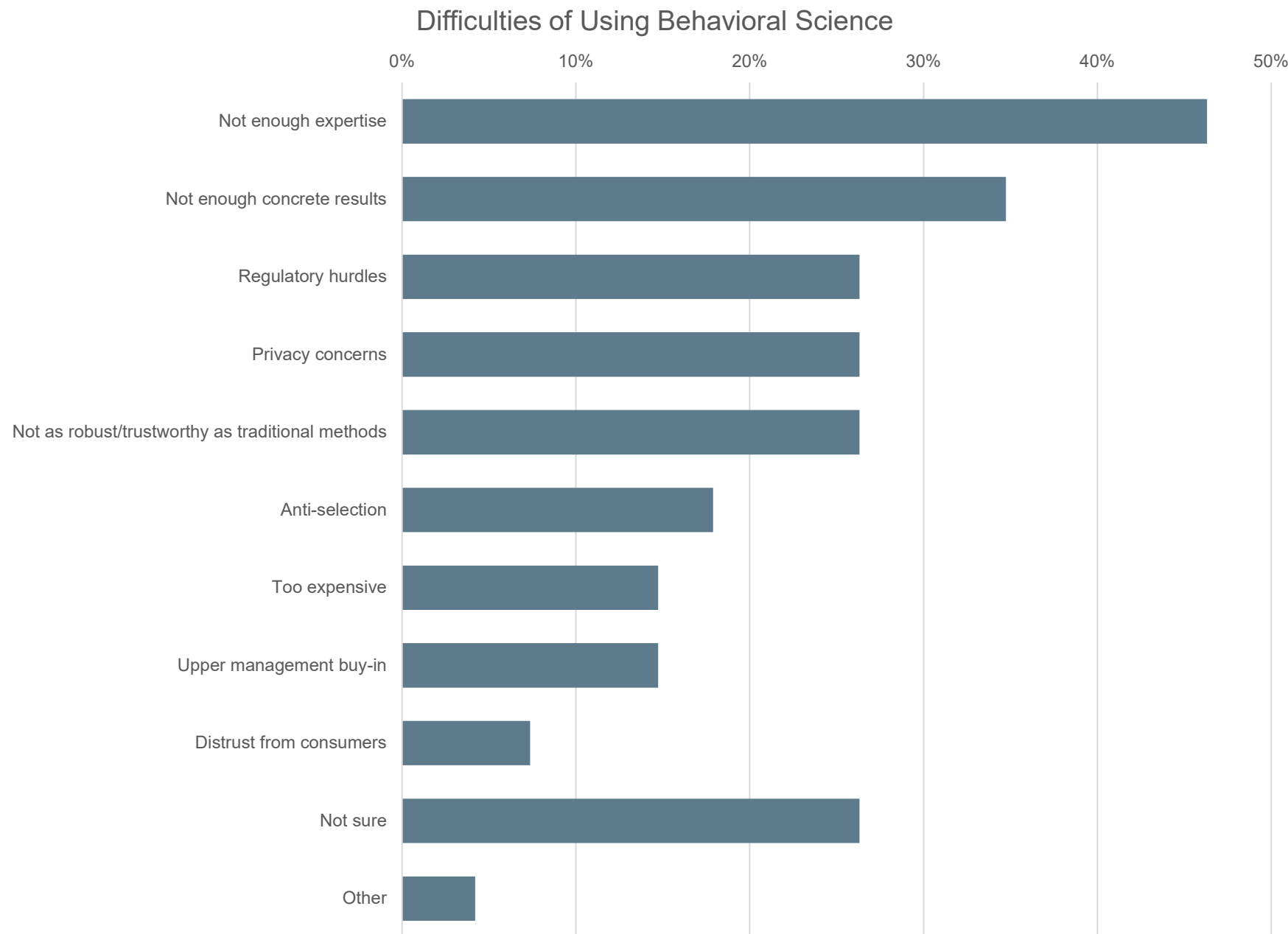


Industry Survey Results

Challenges

Aims for this project:

- **Better equip organizations** in applying behavioral science to redesign underwriting questions
- **Provide concrete results** in terms of impact on non-disclosure



3. Experiment Design

Life Insurance Application Form



Underwriter

- Needs specific information to properly assess application
- Likes information organized by ease of retrieval
- Often dictates design of application

Whose perspective do we have in mind when designing the form?



Applicant

- Has limited cognitive capacity, memory, time, willpower
- Wants to be honest but needs help from an easy application process
- Often confused and frustrated by design of application

Introduction

The Idea:

- Test the impact of behaviorally-redesigned UW questions on disclosures.

The Experiment:

- Present participants with either a traditional or a behaviorally-redesigned insurance application form. Measure and compare their disclosure rates.

The Big Question:

- Will behaviorally-redesigned UW questions increase disclosures?

Design of the Groups

Five Groups – 4200 Total Participants

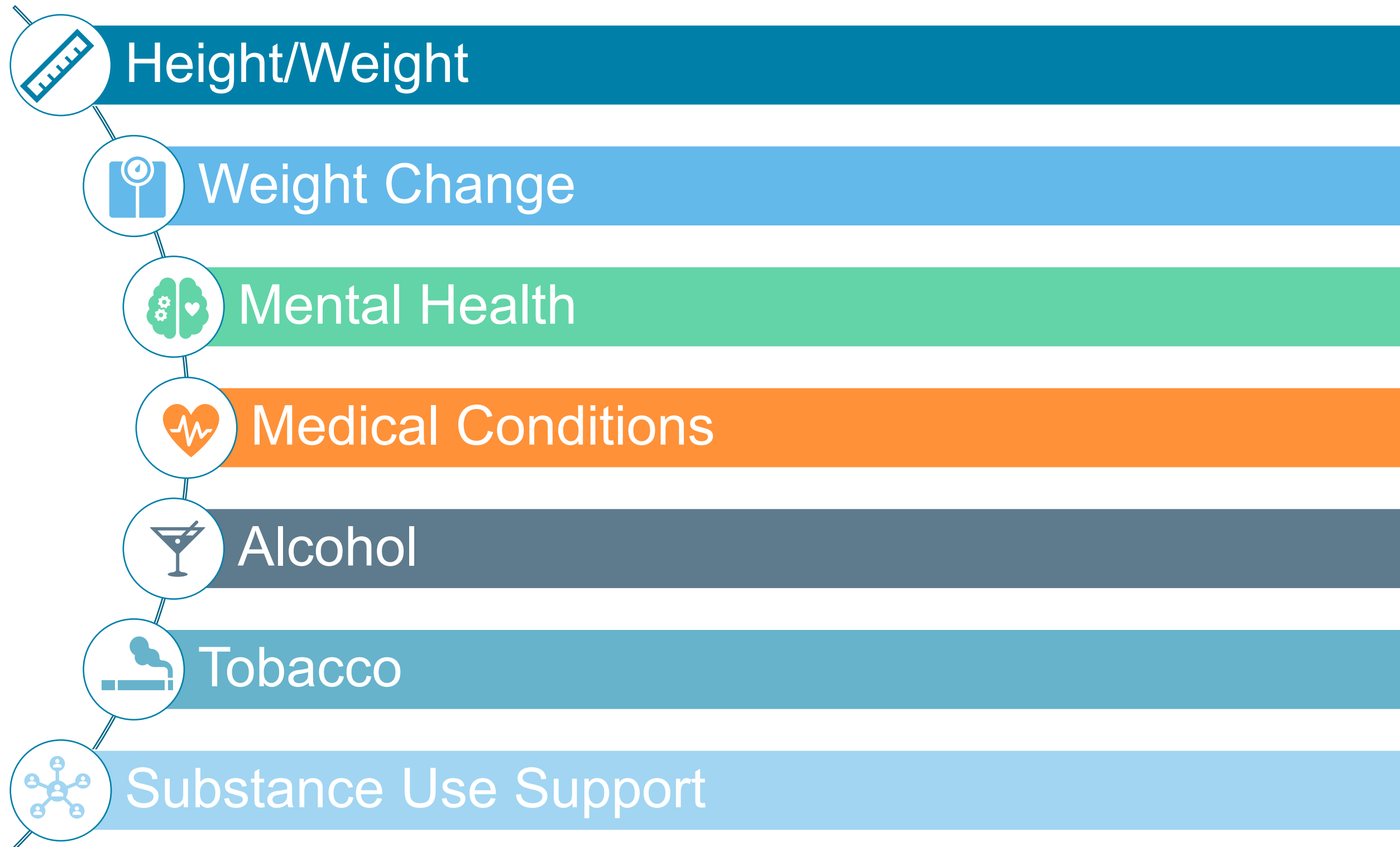
CONTROL QUESTIONNAIRE	QUESTIONNAIRE A	QUESTIONNAIRE B	QUESTIONNAIRE B with HONESTY PLEDGE at START	QUESTIONNAIRE B with HONESTY PLEDGE at END
<ul style="list-style-type: none">• 1,050 participants• Traditional UW questions• No honesty pledge	<ul style="list-style-type: none">• 1,050 participants• Behaviorally-redesigned UW questions - Version A• No honesty pledge	<ul style="list-style-type: none">• 1,052 participants• Behaviorally-redesigned UW questions - Version B• No honesty pledge	<ul style="list-style-type: none">• 526 participants• Behaviorally-redesigned UW questions - Version B• Behaviorally-designed honesty pledge - Beginning of application	<ul style="list-style-type: none">• 525 participants• Behaviorally-redesigned UW questions - Version B• Behaviorally-designed honesty pledge - End of application

Design of the Groups

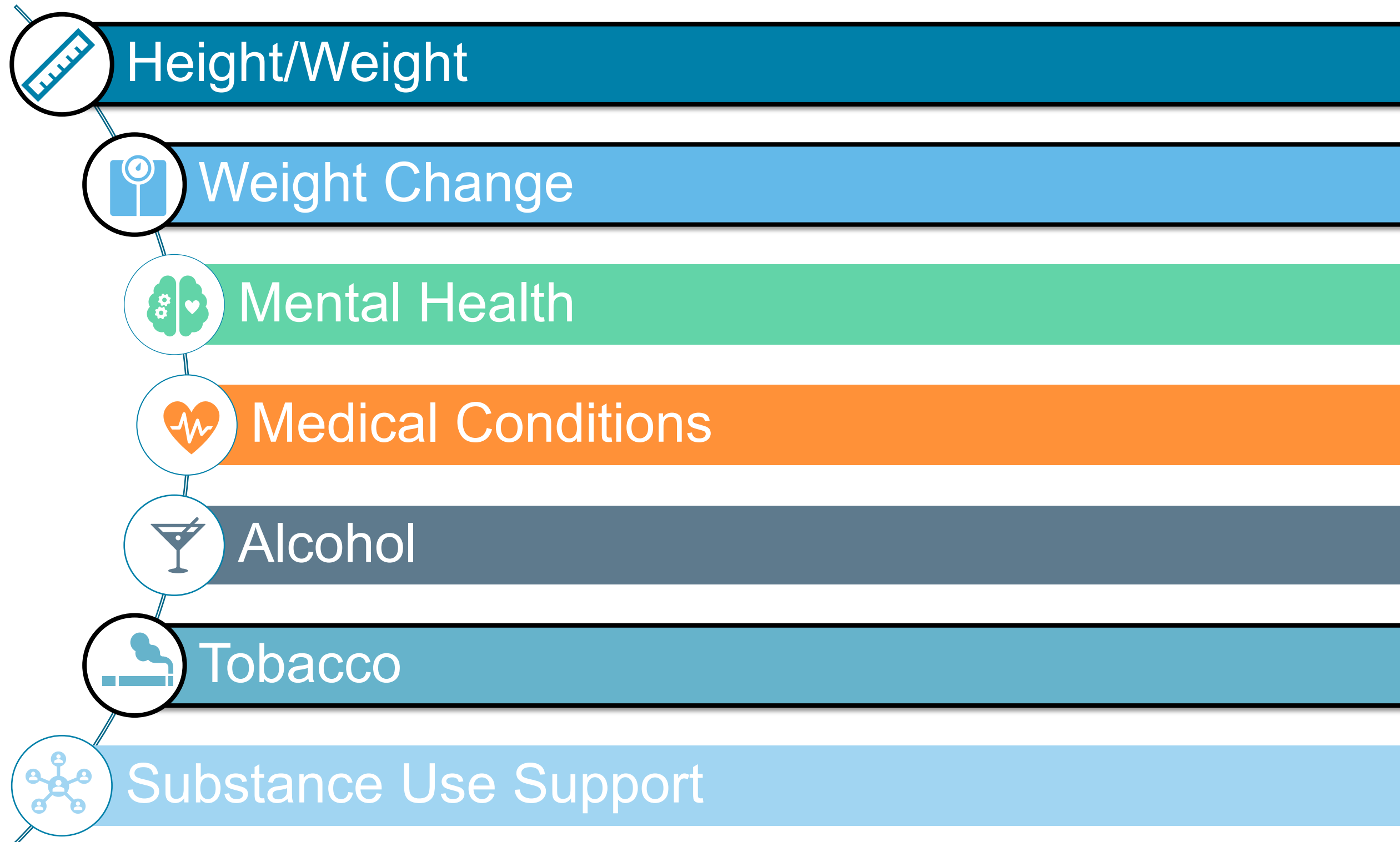
Five Groups – 4200 Total Participants

CONTROL QUESTIONNAIRE	QUESTIONNAIRE A	QUESTIONNAIRE B	QUESTIONNAIRE B with HONESTY PLEDGE at START	QUESTIONNAIRE B with HONESTY PLEDGE at END
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Questions Explored



Questions for Focus



4. The Concept: Social Norms



Social Norms

Humans are social creatures.

Social norm

Whatever behavior/circumstance is considered normal and accepted in our society

Humans want to adhere to the social norm.
Violating it makes us feel threatened or stigmatized.

If disclosing something makes an applicant **worry** they are violating a social norm, they will be more likely to non-disclose to avoid violating this norm.

We can design the application form to show that the behavior/circumstance which needs to be disclosed is within the social norm.

5. Assume the Behavior Exists: Tobacco

Tobacco: Control Questionnaire

Standard Question Wording

Have you ever used tobacco or products containing nicotine (including, but not limited to, cigarettes, cigars, electronic cigarettes, chewing tobacco, snuff, pipes, nicotine gum and/or patches)?

Please select the best answer.

Yes

No

- Provides **no clear social norm**
- Applicants may assume that the norm is to **not** have used tobacco products.
- Since they want to stay within the norm, they may **fail to disclose** tobacco use.

Tobacco: Questionnaire A

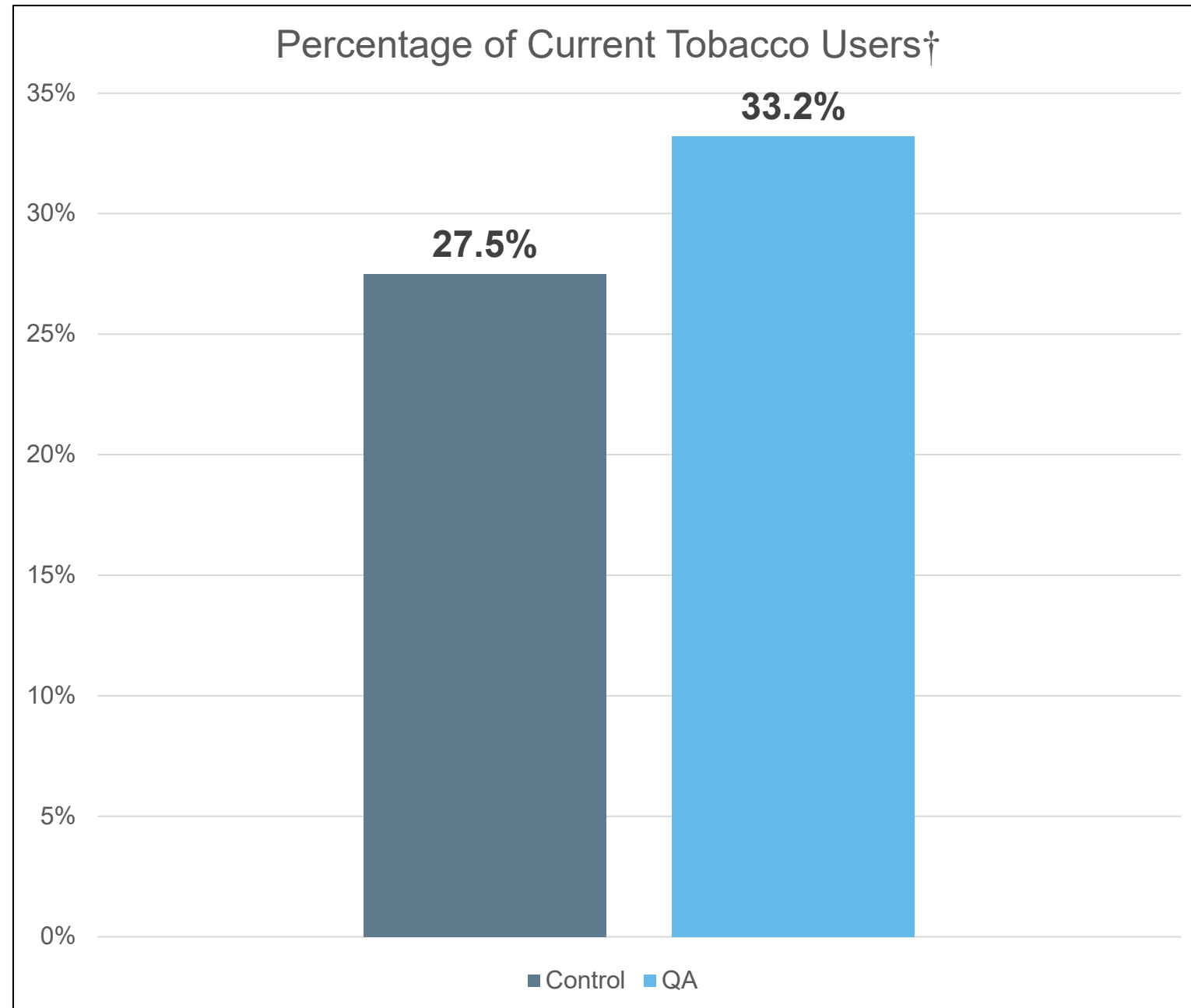
Assume the Behavior Exists

Which of these tobacco products have you ever used?
Please select all that apply.

- Cigarettes
- Cigars
- Electronic cigarettes
- Chewing tobacco
- Snuff
- Pipes
- Nicotine gum/ Nicotine patches
- I have never used these products.

- **Clearly states** social norm – to have used tobacco products
- Puts **applicants at ease** and encourages full disclosure

Tobacco: Results



21% increase in disclosure**

†Those who currently use tobacco products or who gave up using tobacco products less than 12 months previously

**Significant at the 1% level

6. Anchoring with Slider Bars: Height/Weight

Height/Weight: Control Questionnaire

Standard Question Wording

<p>What is your height? <i>Please enter a number into the spaces below.</i></p> <p>Feet: <input type="text"/></p> <p>Inches: <input type="text"/></p>	<p>Weight? <i>Please enter a number into the space below.</i></p> <p>Pounds: <input type="text"/></p>
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- Requires **open-ended** response
- Applicants **may assume** that a normal/desirable weight is quite low.
- Since they want to stay within the norm, they may **round down** their weight.

Height/Weight: Questionnaire A

Anchoring with Slider Bars

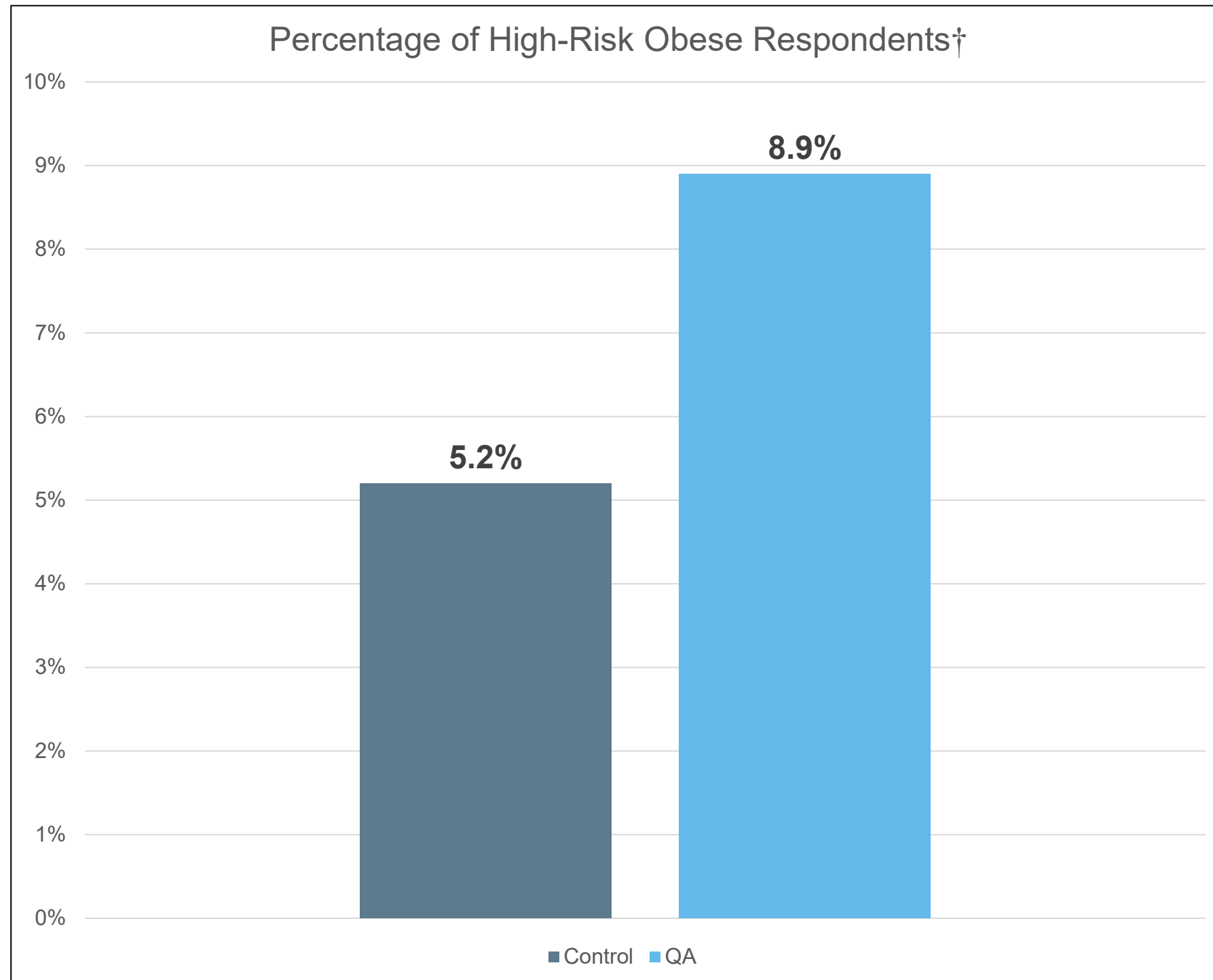
Weight?

Pounds:

325

- Starting number of slider bar **serves as an anchor** – a number that informs applicants' estimates of the social norm and influences their response.
- The high anchor **sets a high social norm**, making applicants more comfortable disclosing high weights.

Height/Weight: Results

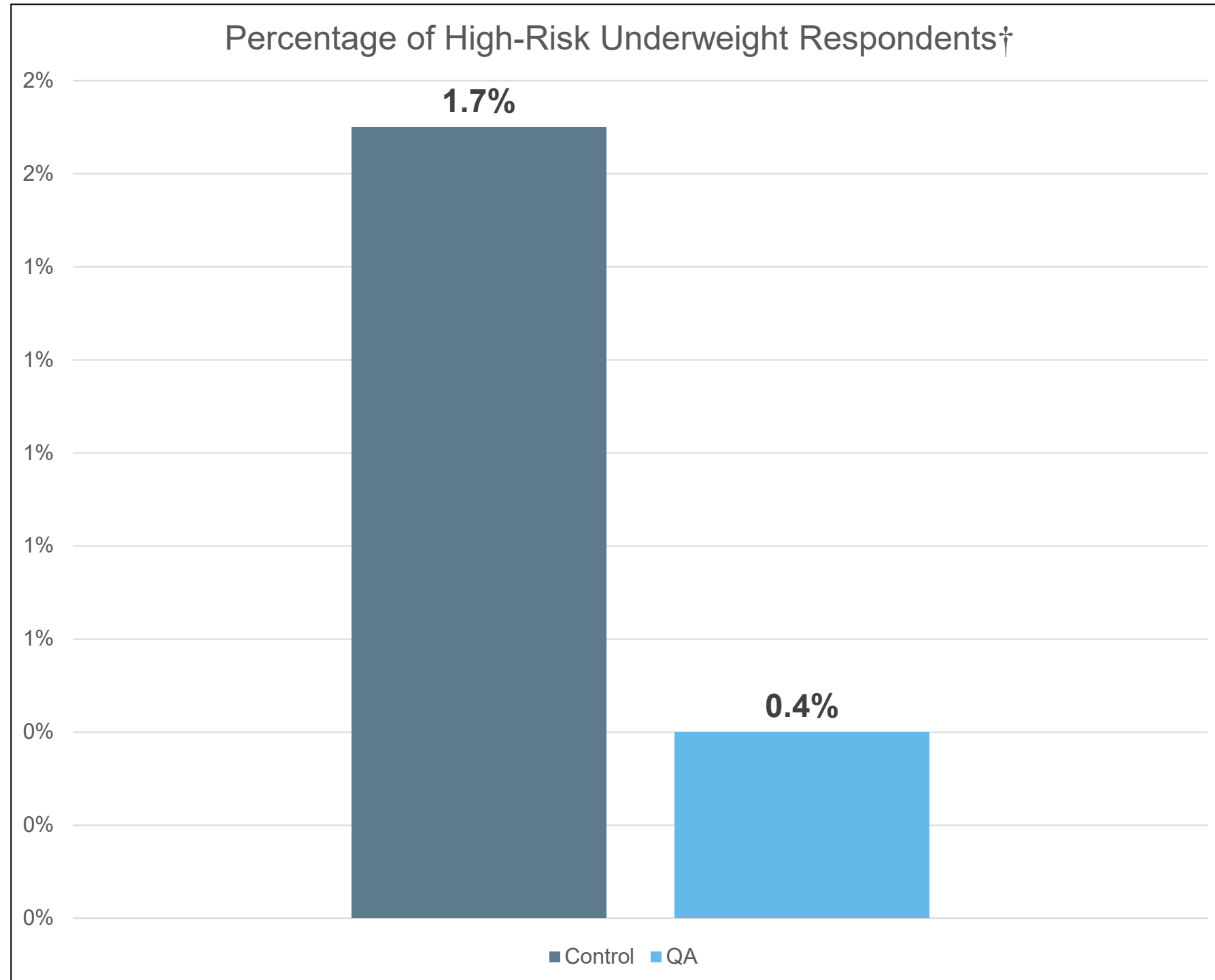


71% increase in disclosure**

†Those with a BMI of 40 or more

**Significant at the 1% level

Height/Weight: Results



76% decrease in disclosure**

†Those with a BMI of 17 or less

**Significant at the 1% level

6. Anchoring with Closed-Ended Options: Weight Change

Weight Change: Control Questionnaire

Standard Question Wording

<p>Has there been a weight change of 10 pounds or more in the past 12 months? <i>Please select the best answer.</i></p> <p><input type="radio"/> Yes</p> <p><input type="radio"/> No</p>	<p>How many pounds? <i>Please enter a number into the space below</i></p> <p>Pounds: <input type="text"/></p>
--	---

- Requires **open-ended response**
- Signals that **10 pounds is the cutoff** for weight changes that “matter”
- Applicants **may round down** their weight change to stay under this amount and justify not disclosing.

Weight Change: Questionnaire B

Anchoring with Closed-Ended Options

How has your weight changed in the past 12 months?

Please select the best answer.

- I gained weight.
- I lost weight.
- My weight went up and down.
- My weight did not change.

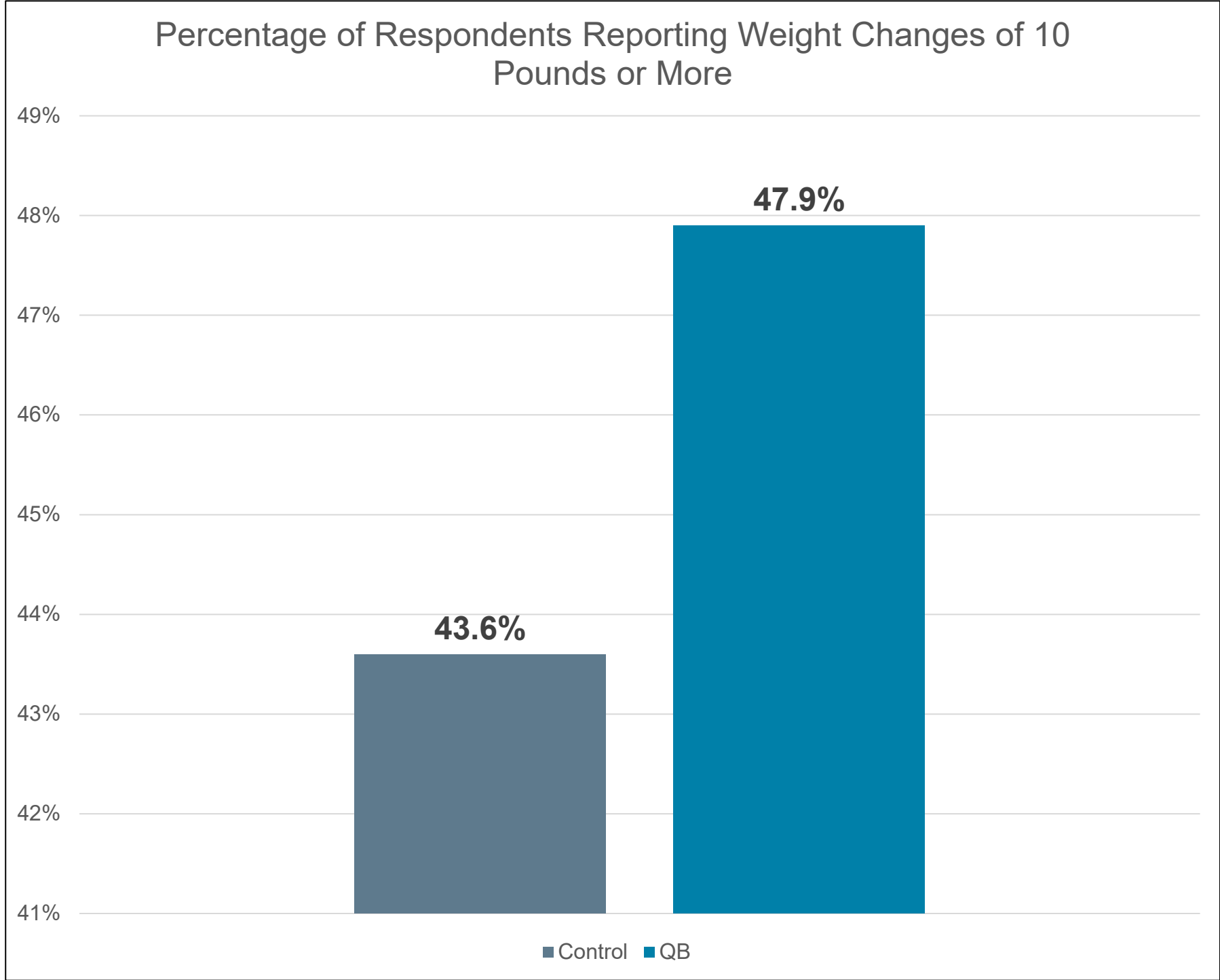
Please describe your weight gain:

Please select the best answer.

- I gained 30 or more pounds.
- I gained 20 - 29 pounds.
- I gained 15 - 19 pounds.
- I gained 10 - 14 pounds.
- I gained 5 - 9 pounds.
- I gained less than 5 pounds.

- Removes **unhelpful anchor** of 10 pounds or more
- Includes **extreme closed-ended options** to signal that high weight change amounts are normal

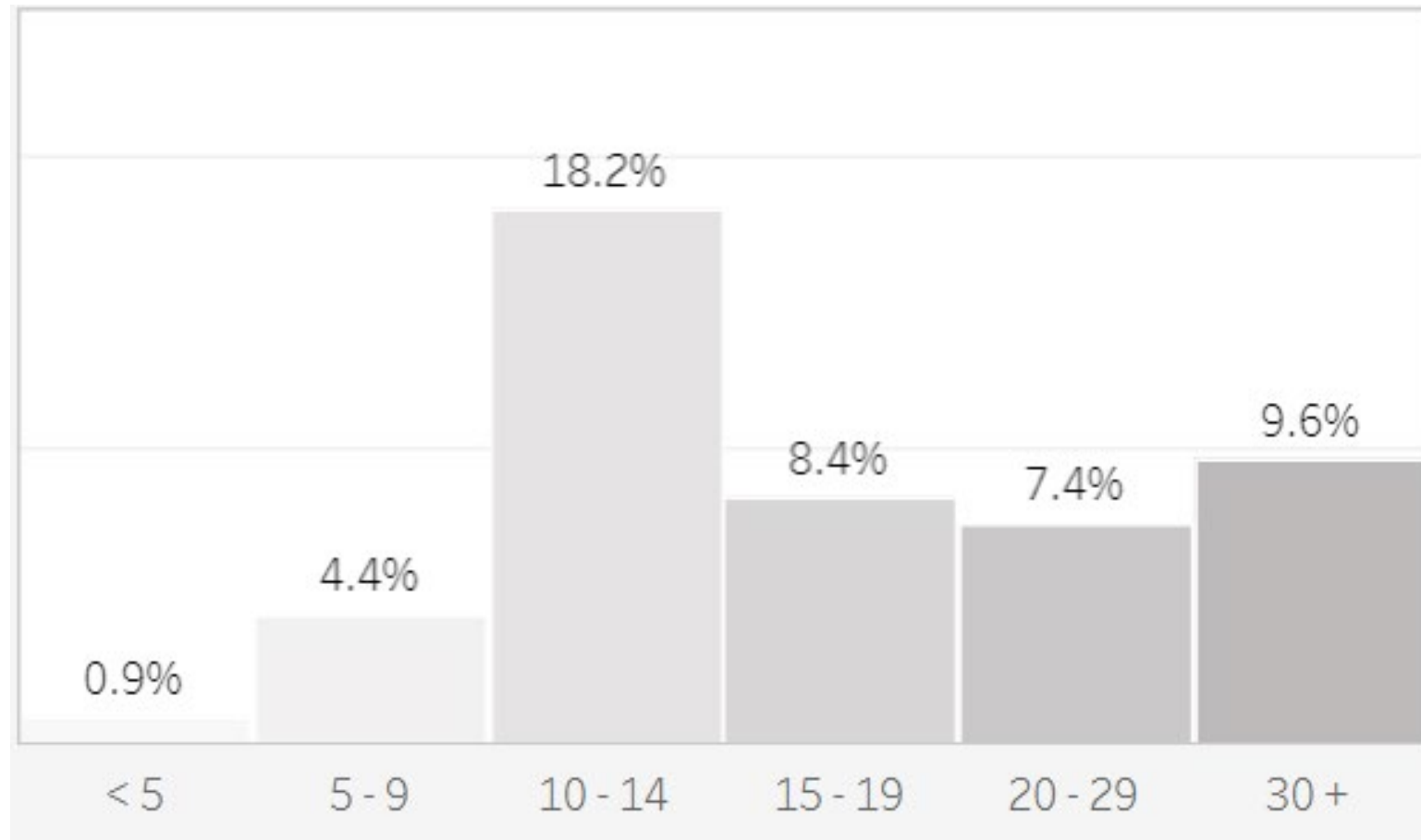
Weight Change: Questionnaire B



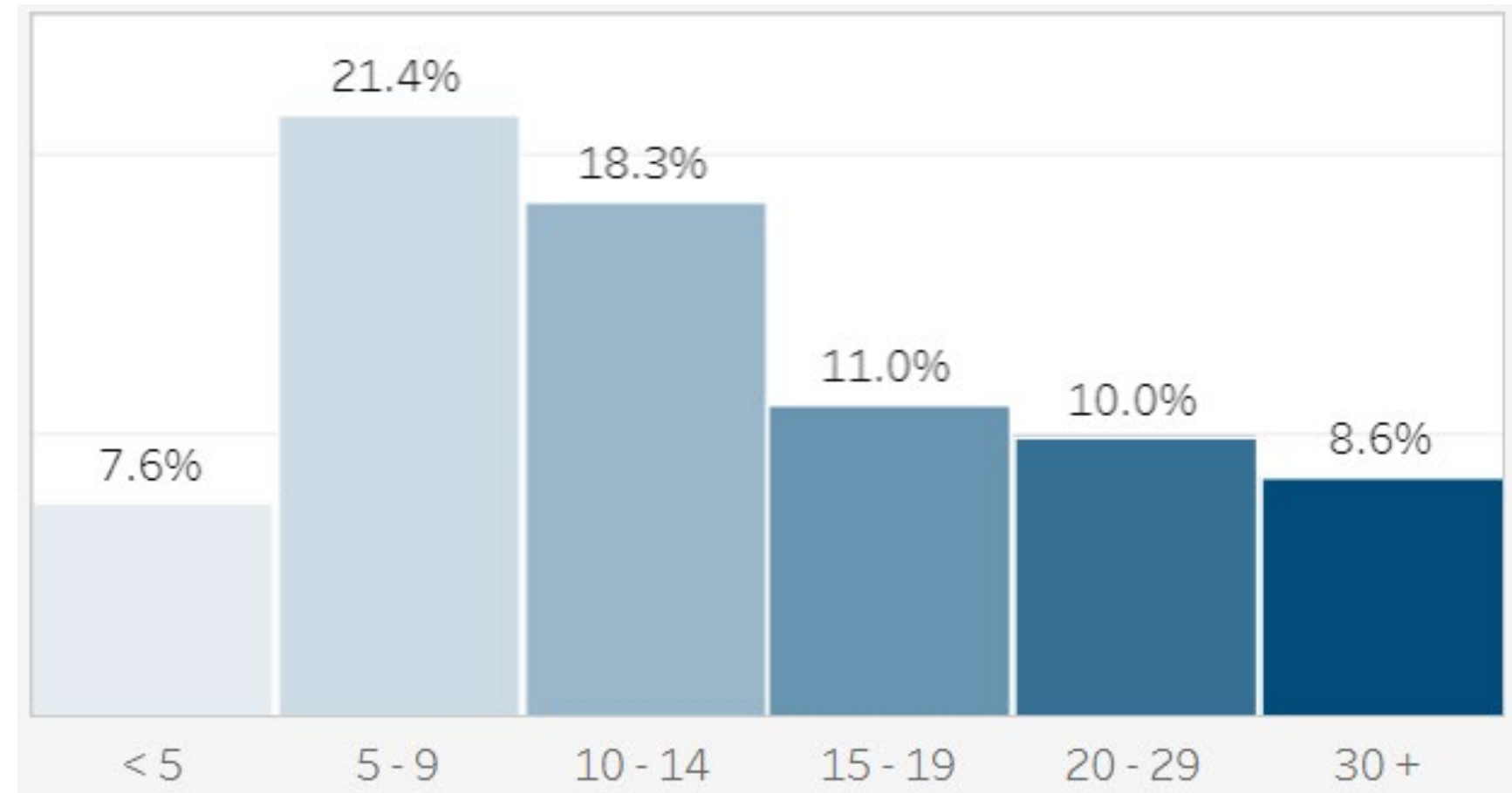
10% increase in disclosure –
But NOT statistically significant

Weight Change: Distribution of Weight Change Amounts (lbs)

Control



Questionnaire B



Lower disclosure of highest weight change amounts –
Applicants **do not want** to choose the highest categories

Full Results Coming Soon

Final results planned to be published in May

- Full **report** on industry survey and experiment
- Interactive **dashboard**

Reach out to the SCOR Behavioral Science team with any questions!

- abradfield@scor.com
- cparsons@scor.com



Thank You



Part II: Searching for Simplicity





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Executive Director, Behavioral Data Science, Global Data and Analytics
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Collaborators Acknowledgment

The research presented was conducted by RGA and funded by the Society of Actuaries.

We would like to thank the SOA for the guidance and expertise provided which helped shape the experiments presented.

The views and opinions shared by the presenter does not reflect those of the Society of Actuaries.

The results shared are not finalized and should be considered a draft.



Agenda

- Motivation
- Design
- Results
- What's Next?





Motivation



Designing for humans requires understanding how individuals think and behave



Chinese construction workers accused of plowing a hole through the Great Wall

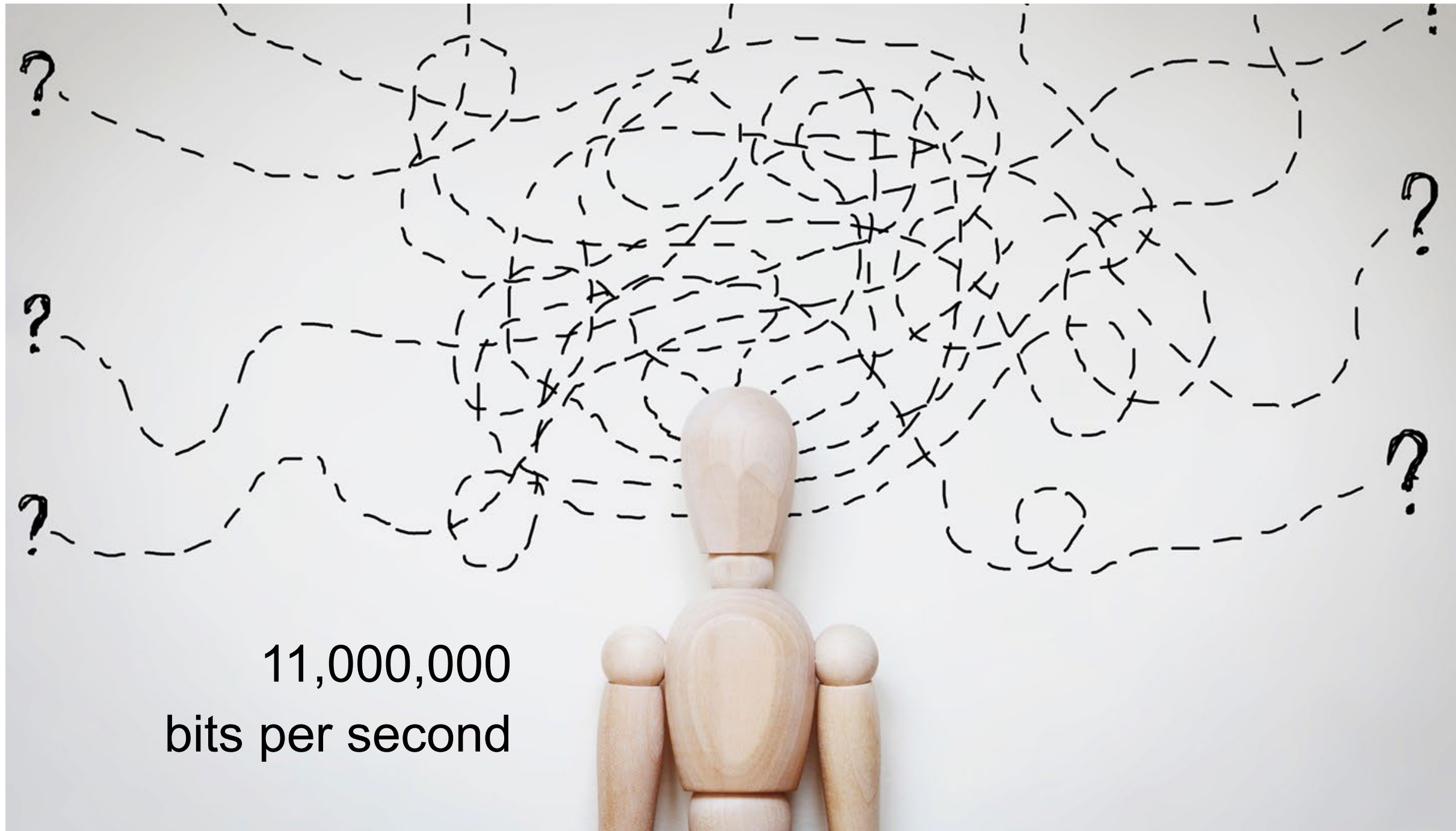
September 5, 2023 · 11:00 AM ET

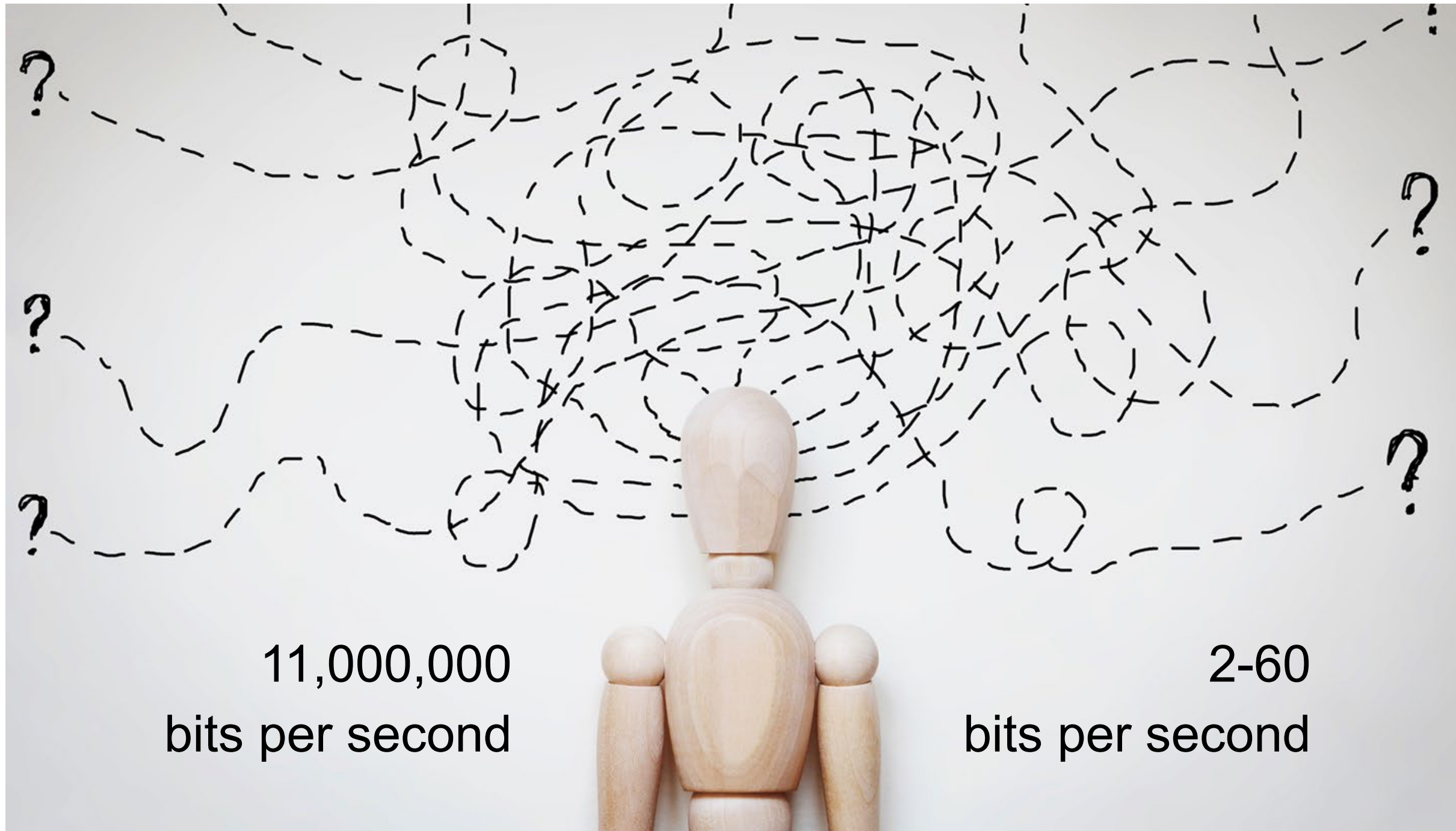
By Joe Hernandez



Chinese authorities released this image of damage done to the Great Wall in Shanxi province.

Youyu County Public Security Bureau







$$17 \times 24 = ?$$



“True simplicity is derived from so much more than just the absence of clutter. It’s about bringing order to complexity”

-Jony Ive – Chief designer of the iMac, iPod, iPhone and iPad



The average consumer understands 28% of life insurance material

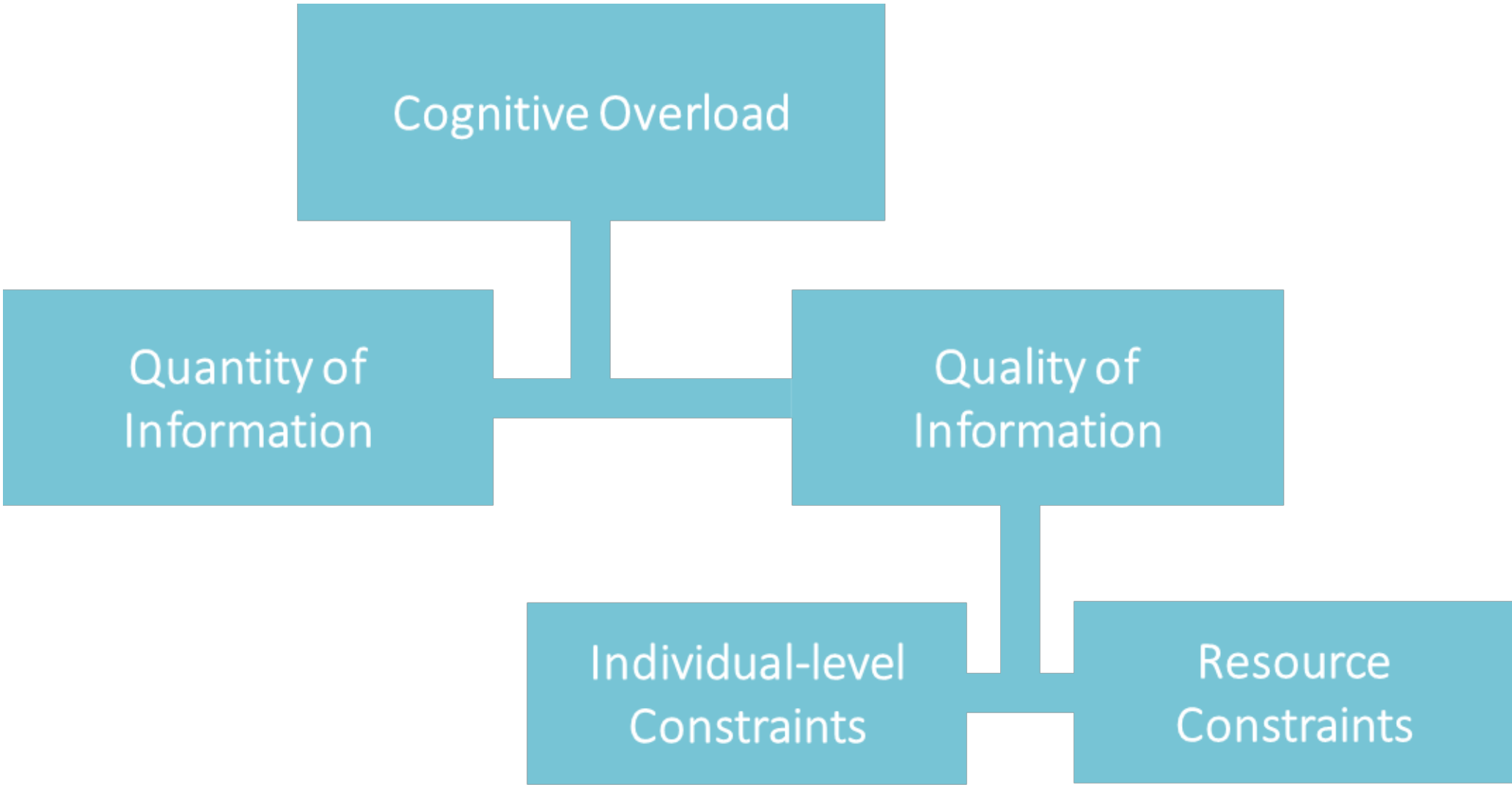
- In the U.S., the life insurance needs gap comprises 106 million adults. The need is highest among the following segments¹:
 - Households earning under \$35,000 per year
 - Hispanic or Black Americans
 - Millennials and Gen Z (aged 18 to 41)
 - Women
- Not understanding term and perm policy types is a common knowledge barrier for the uninsured and underinsured²

Poorly designed content can cause financially literate customers to struggle to understand information presented

- Financial literacy (FL): “a combination of awareness, knowledge, skill, attitude, and behavior necessary to make sound financial decisions and ultimately achieve individual financial well-being”.³
- FL is positively associated with increased demand for life insurance⁴. Studies in this area include field experiments⁵ and observational studies (e.g., surveys)⁶
- Improved financial decision-making resulting from FL gains can be stymied by cognitive biases and system 1 processes⁷, especially when given low quality information⁸



Trying to process complex information induces cognitive overload more swiftly than if the information was easier to comprehend, all else equal⁹



Visual Depiction of Roetzel's Definition of Cognitive Overload¹⁰





Design



We used desk-based research and online lab testing to find out what techniques increase customer understanding of term life insurance

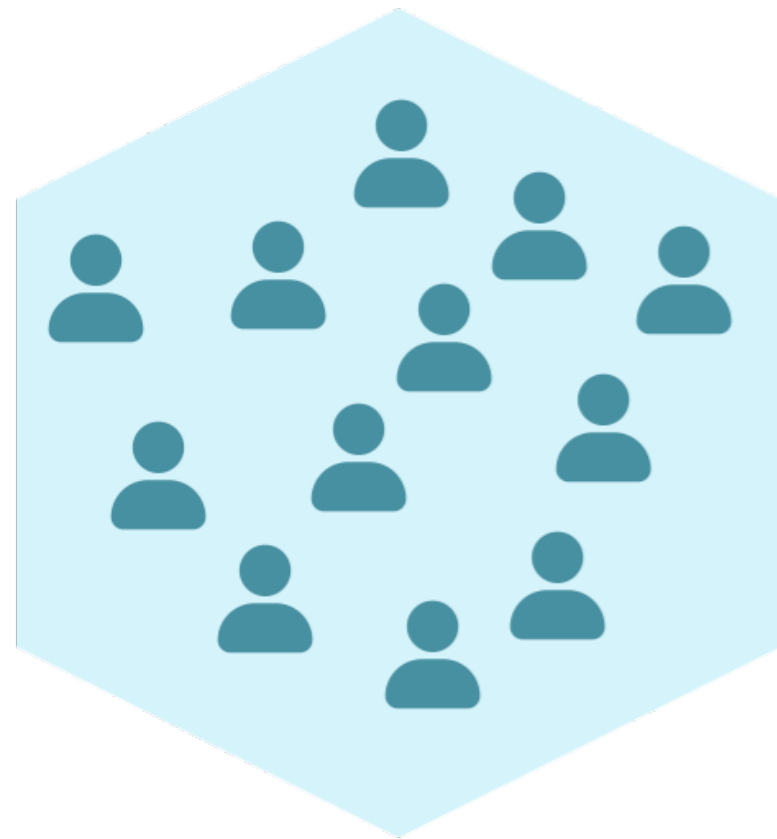
Literature Review

- We started by reviewing existing evidence on what works to improve customer understanding of life insurance products and terms.
- We consolidated research from peer-reviewed sources, market research, working papers and government reports.
- We used the findings from this evidence review to help design the ideas we tested.



We used desk-based research and online lab testing to find out what techniques increase customer understanding of term life insurance

Online lab testing



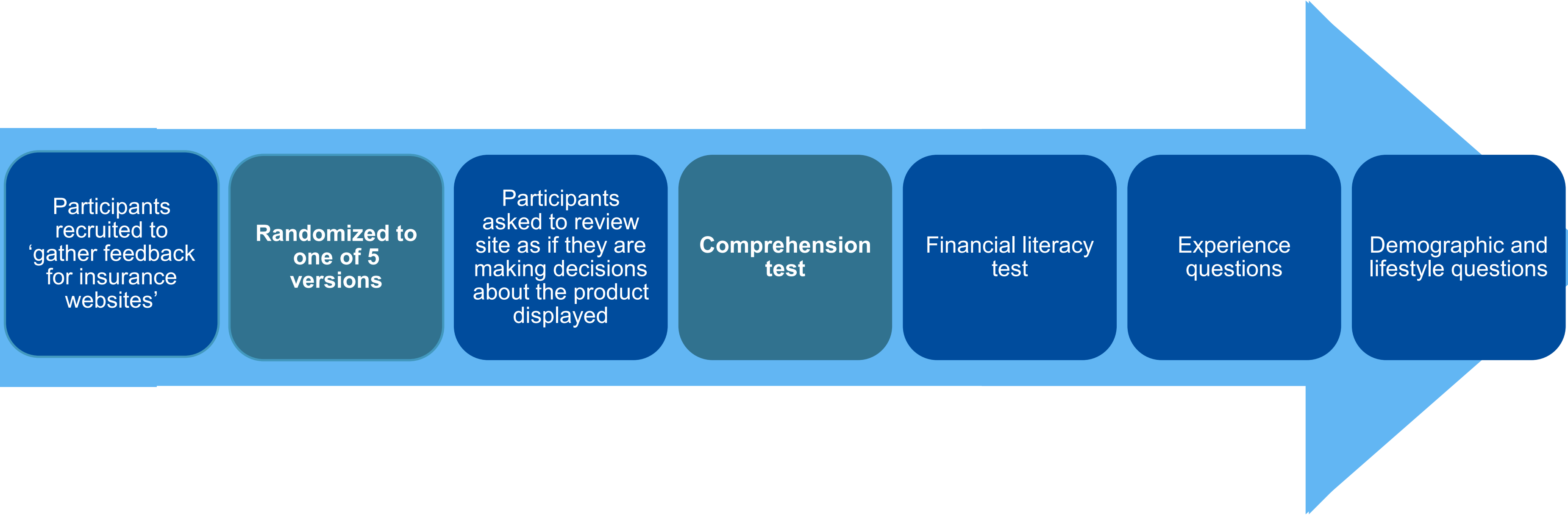
N = 2,000



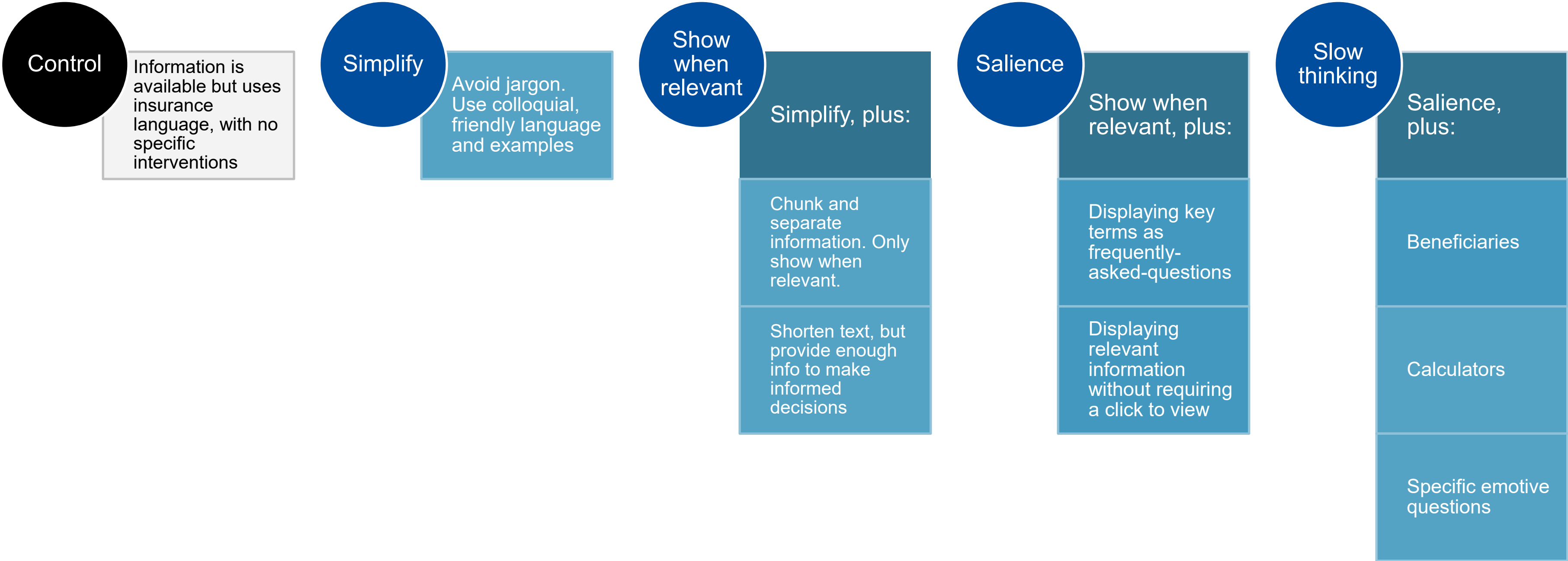
Comprehension Questions

- Participants answer questions about the content on a life insurance website
- Participants answer the same set of questions regardless of which version of the website they saw

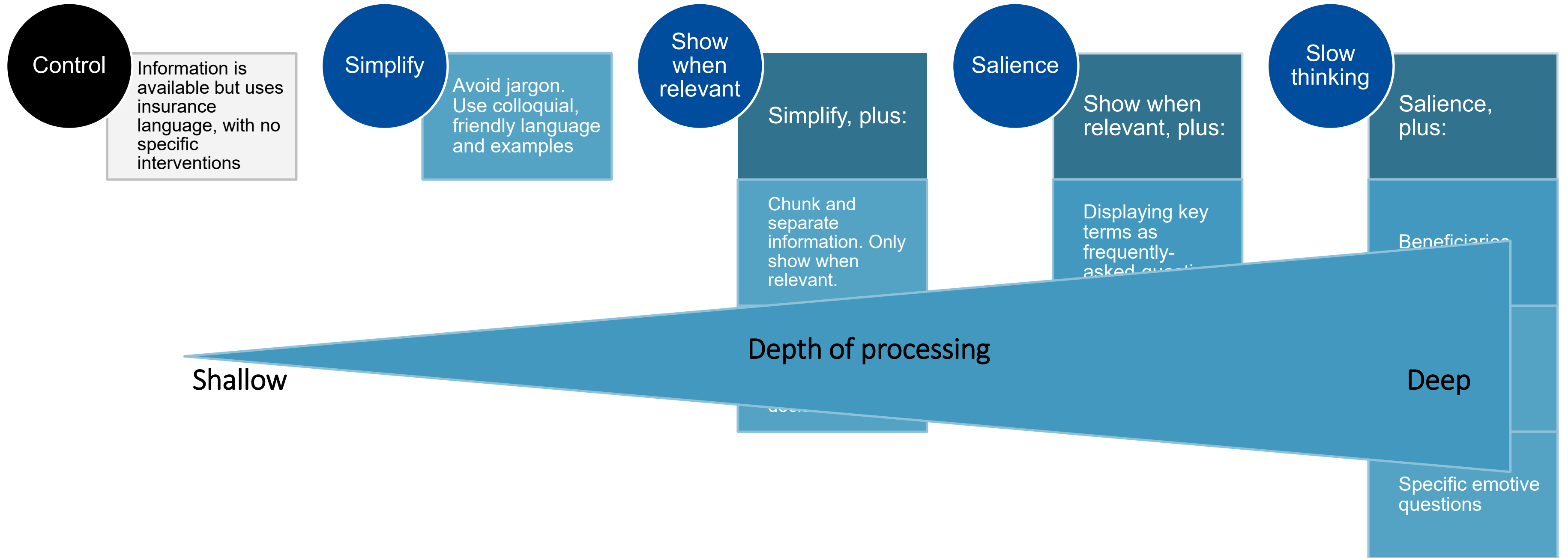
Survey participants answer questions related to comprehension, financial literacy, experience, and lifestyle



Five life insurance websites were created to measure the impact of various behavioral science techniques on comprehension



The additive experimental design allows for testing various techniques more efficiently

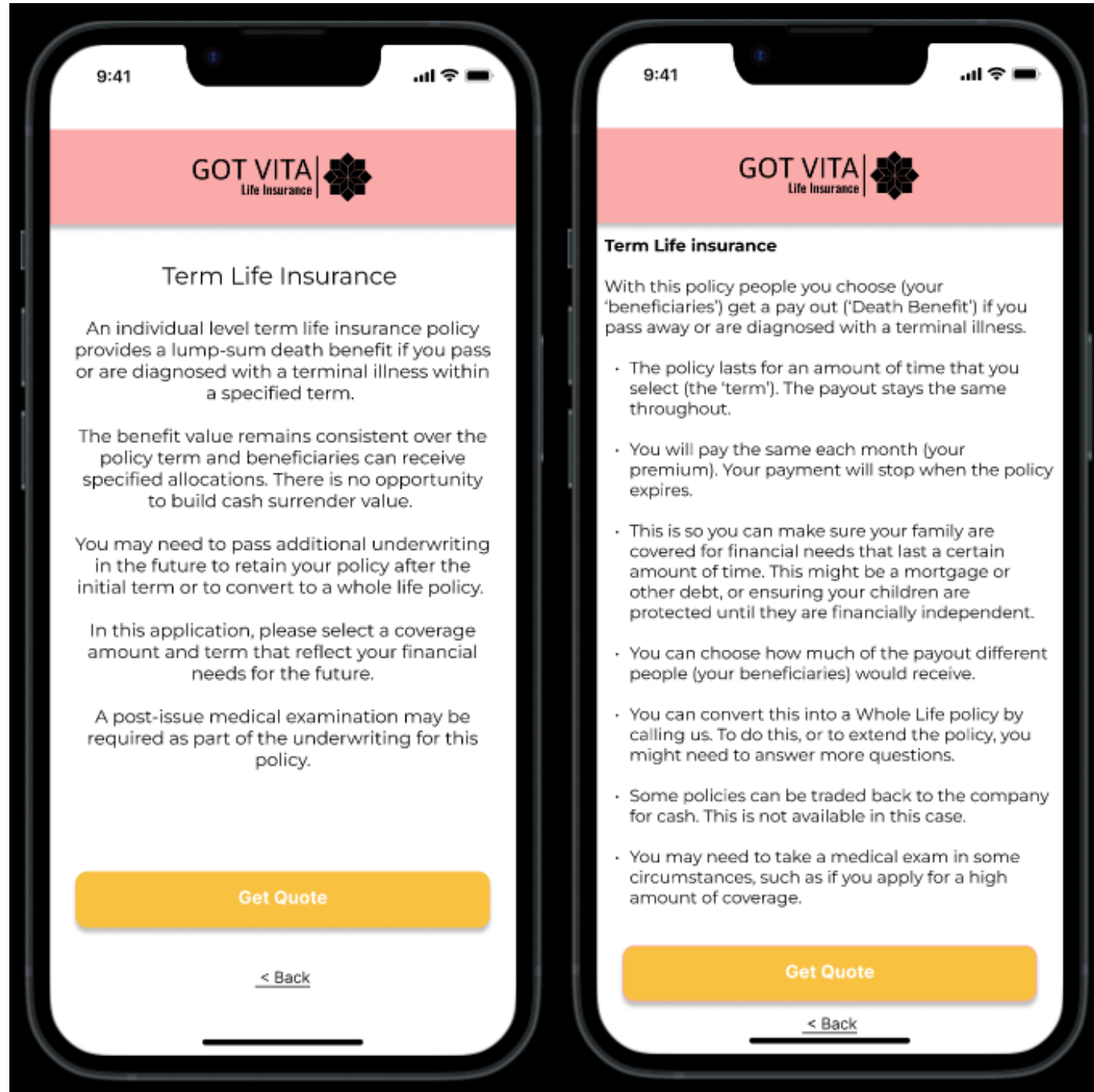




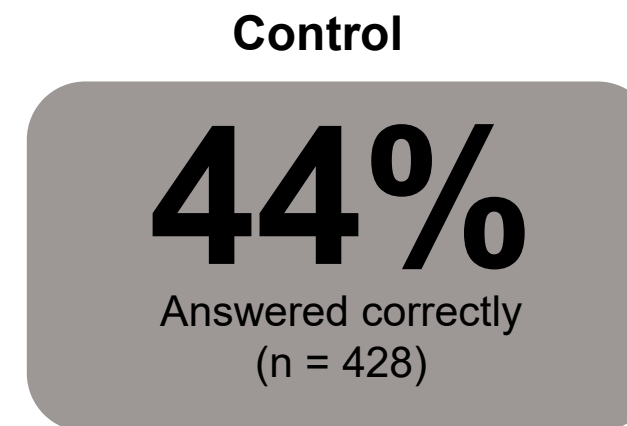
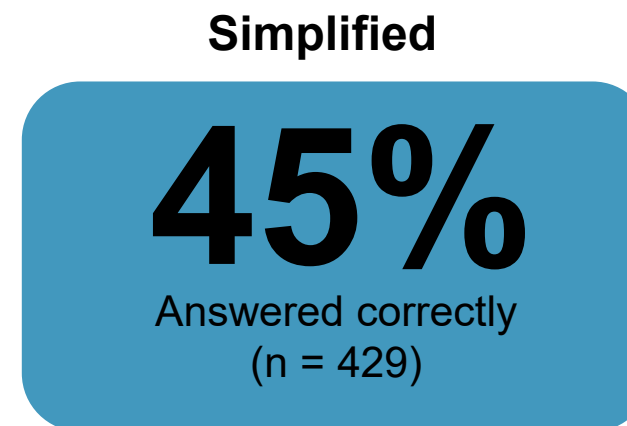
Results



Simplifying information alone is not enough to improve comprehension

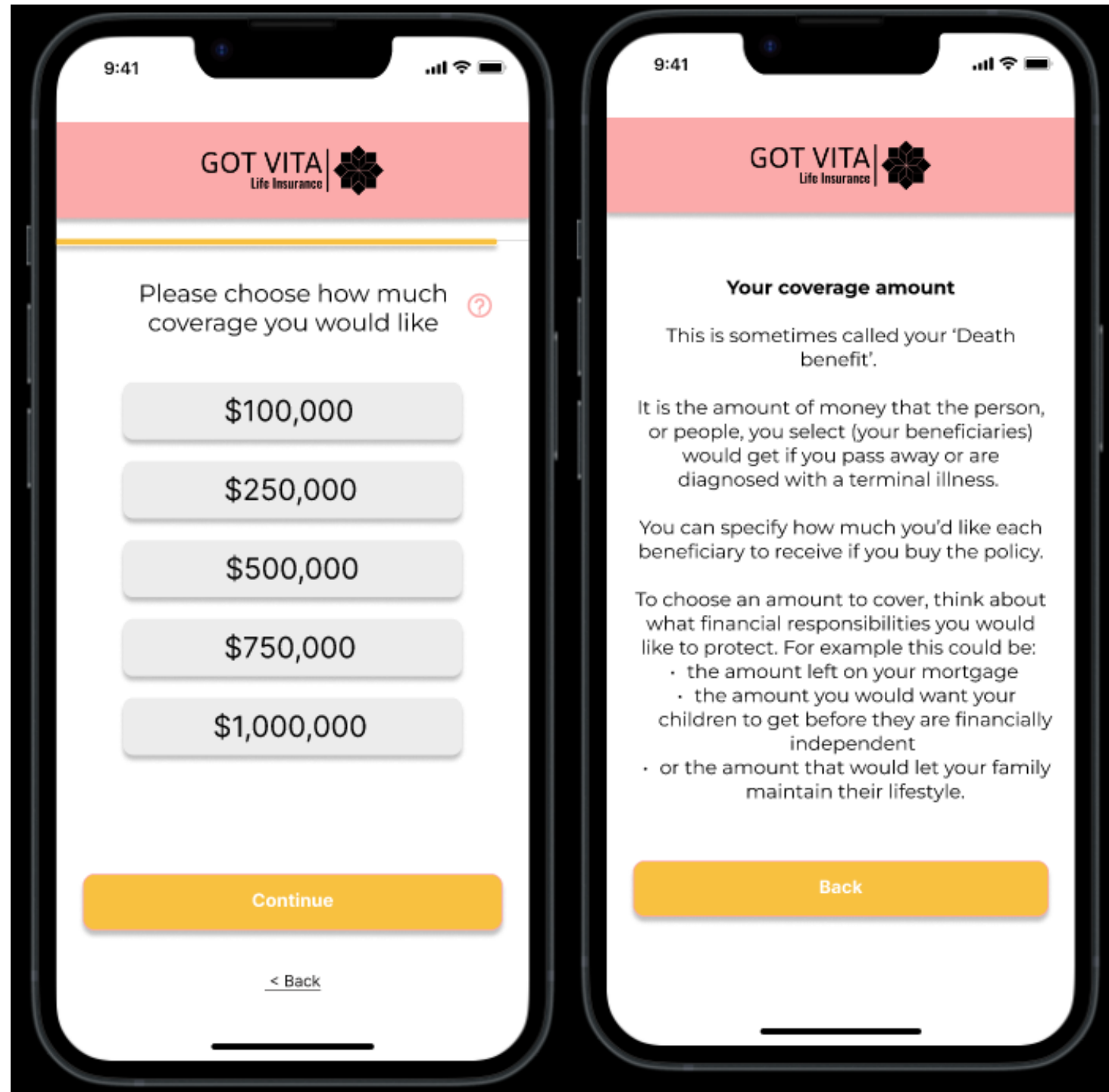


- **Simplified LI concepts by shortening long sentences, using simpler words, and removing jargon**
 - Created a customer journey for purchasing term life insurance
 - This version included simplifying explanations of LI terminology
 - This change did not significantly improve customers' understanding of LI terminology



+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$

Providing information at the right time is not sufficient for improving comprehension



- Provided information about LI terminology when it is most relevant via help button
 - Created a customer journey for purchasing term life insurance
 - This version included 'just in time' explanations of LI terminology
 - This change did not significantly improve customers' understanding of LI terminology

Show when relevant

44%

Answered correctly
(n = 432)

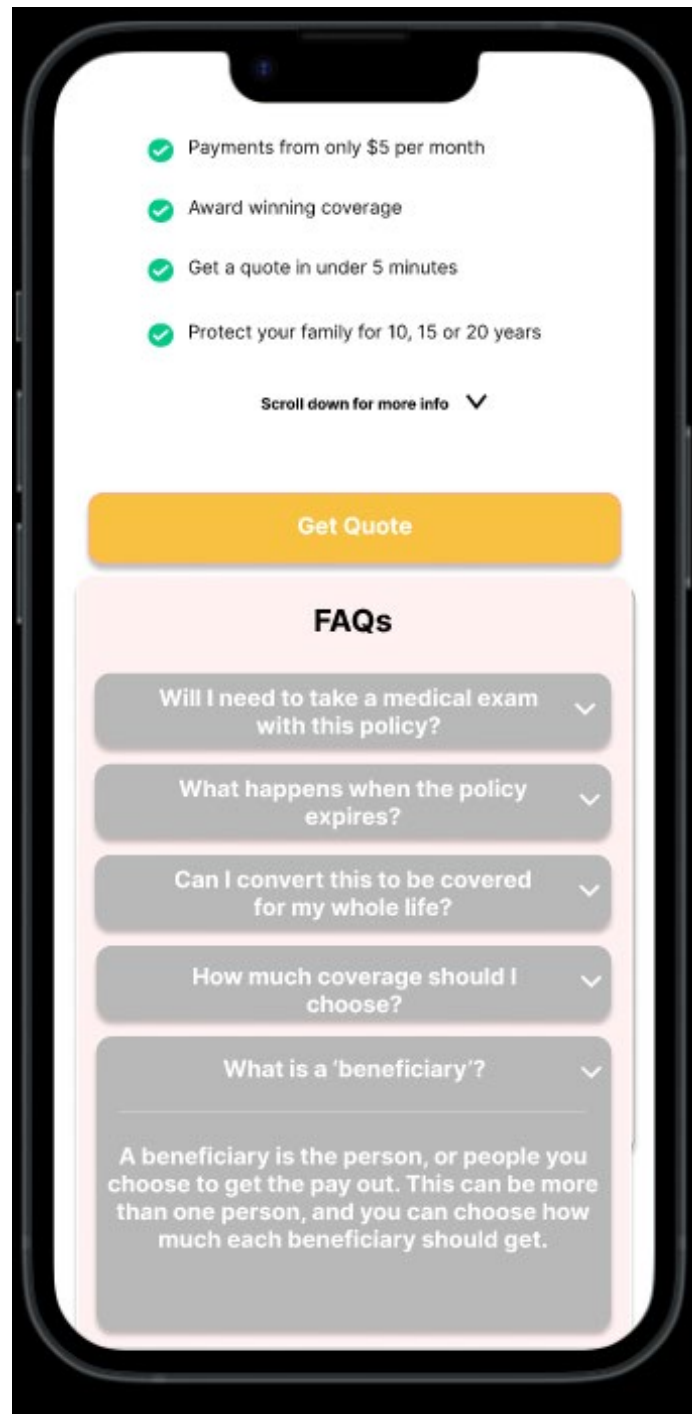
Control

44%

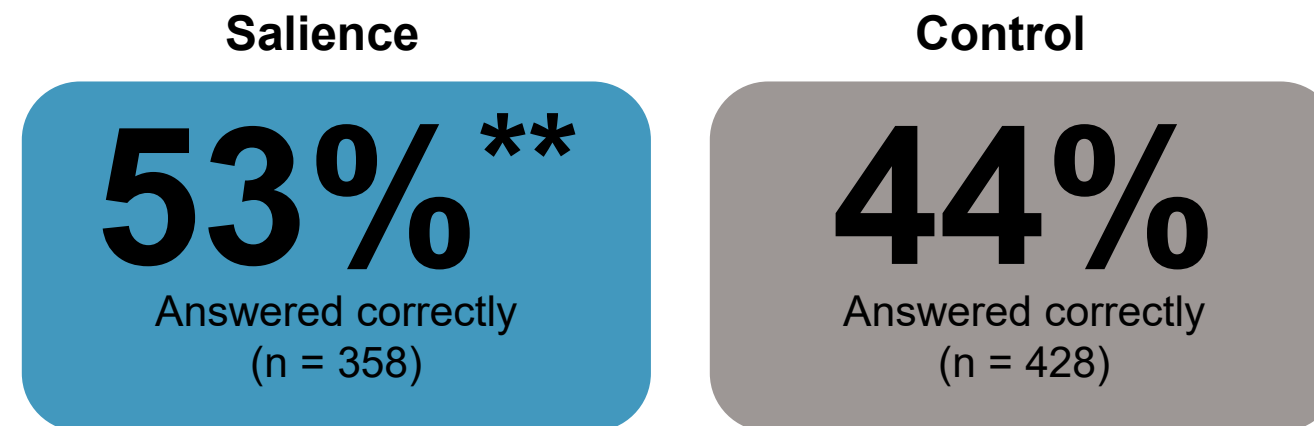
Answered correctly
(n = 428)

+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$

Displaying key terms as frequently asked significantly improves comprehension



- Used a question-and-answer format to present what you consider to be key terms and concepts
 - Created a customer journey for purchasing term life insurance
 - This version included frequently asked questions of LI terminology and concepts
 - This change significantly improved customers' understanding of LI terminology



+ p<0.1, * p<0.05, ** p<0.01

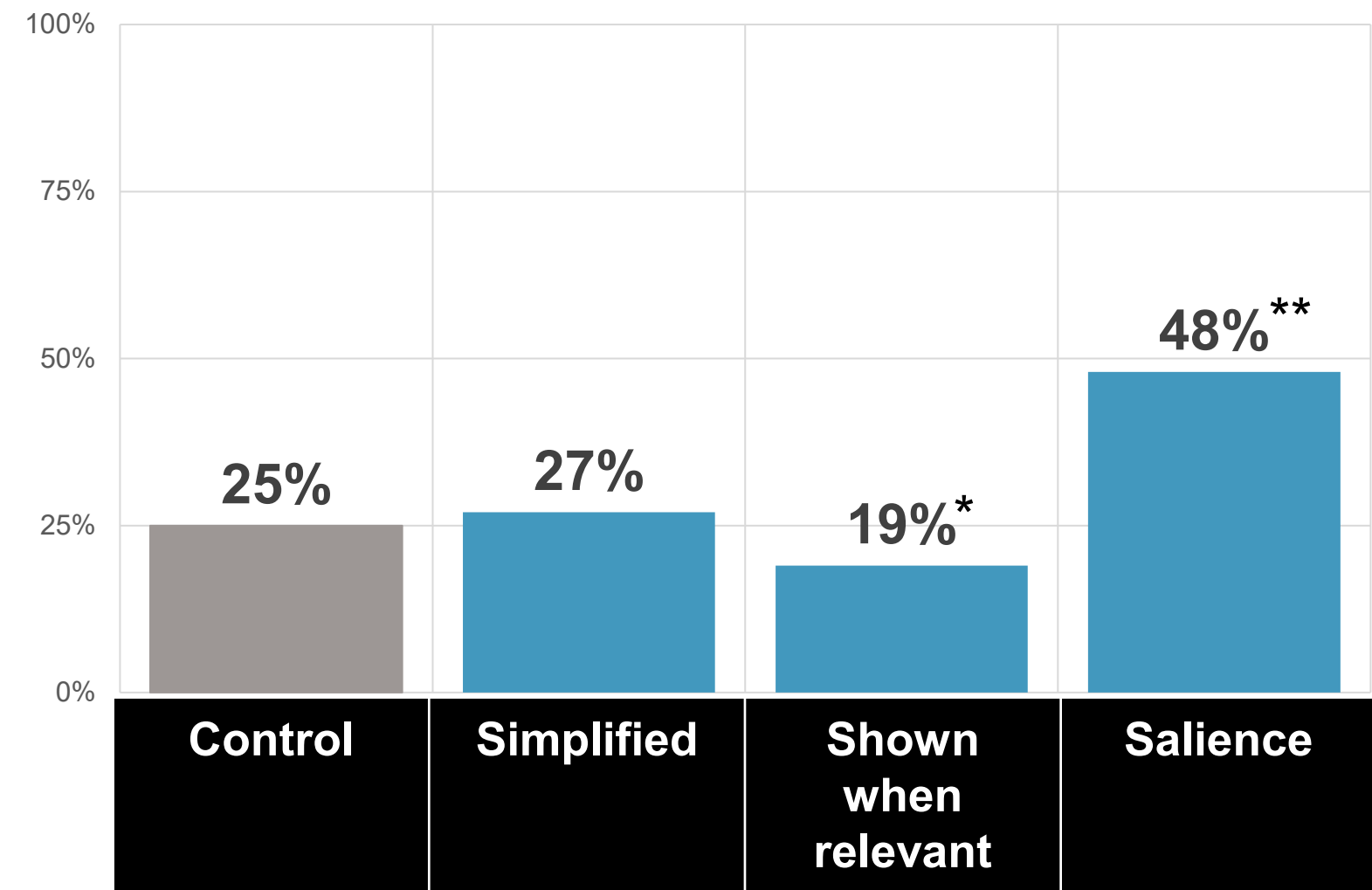


Medical exam comprehension significantly increased by 92% when presented in plain view

If you were to buy this policy, would you need to take a medical examination?

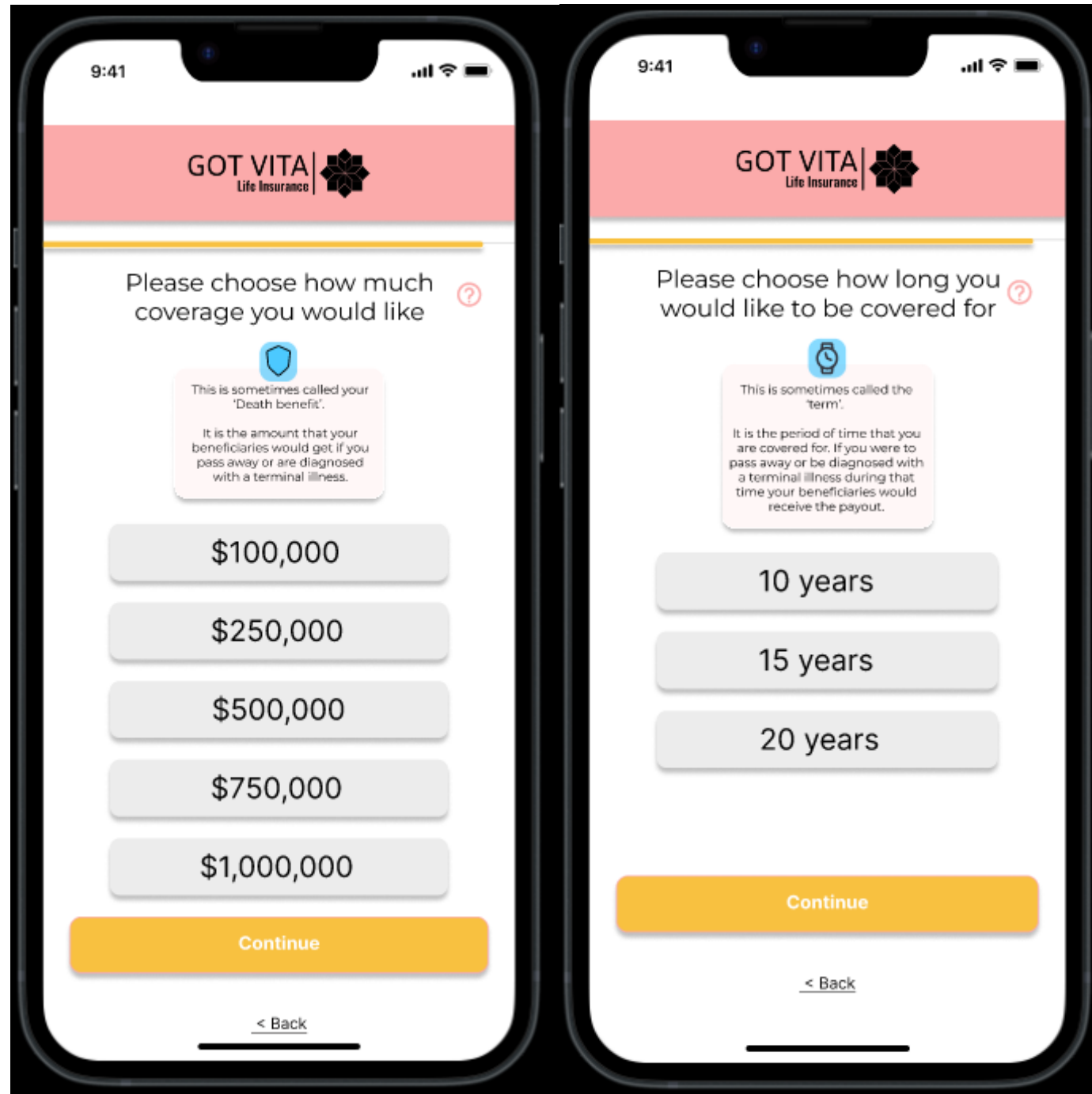
- a) Yes, every customer is required to have an examination
- b) No, no customers are ever required to have an examination
- c) Yes, in some circumstances an examination may be required
- d) The information is not given

Percent of respondents answering medical exam question correctly



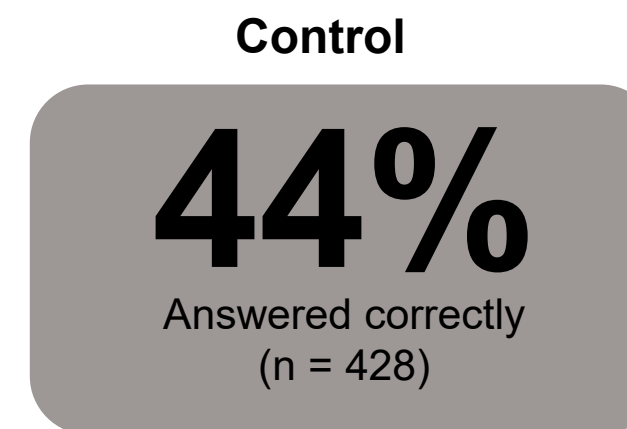
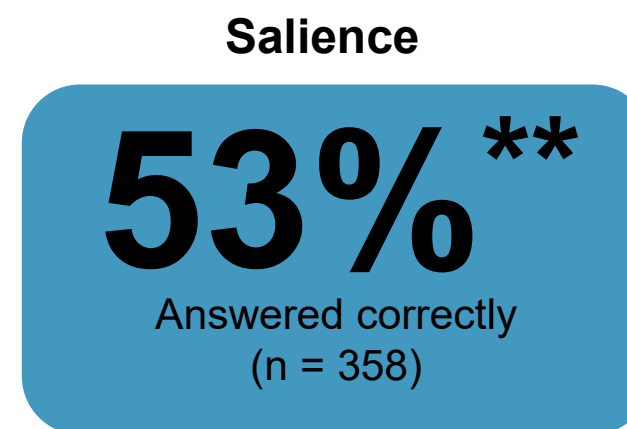
+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$

Showing customers relevant information without requiring a click to view it significantly increases comprehension



- Used icons to draw attention to important information

- Created a customer journey for purchasing term life insurance
- One of the new versions tested included explanations of LI terminology without requiring clicking the help button link
- This version significantly improved customers' understanding of LI terminology
- This version significantly improved customers' understanding of the conditions under which a payout is given

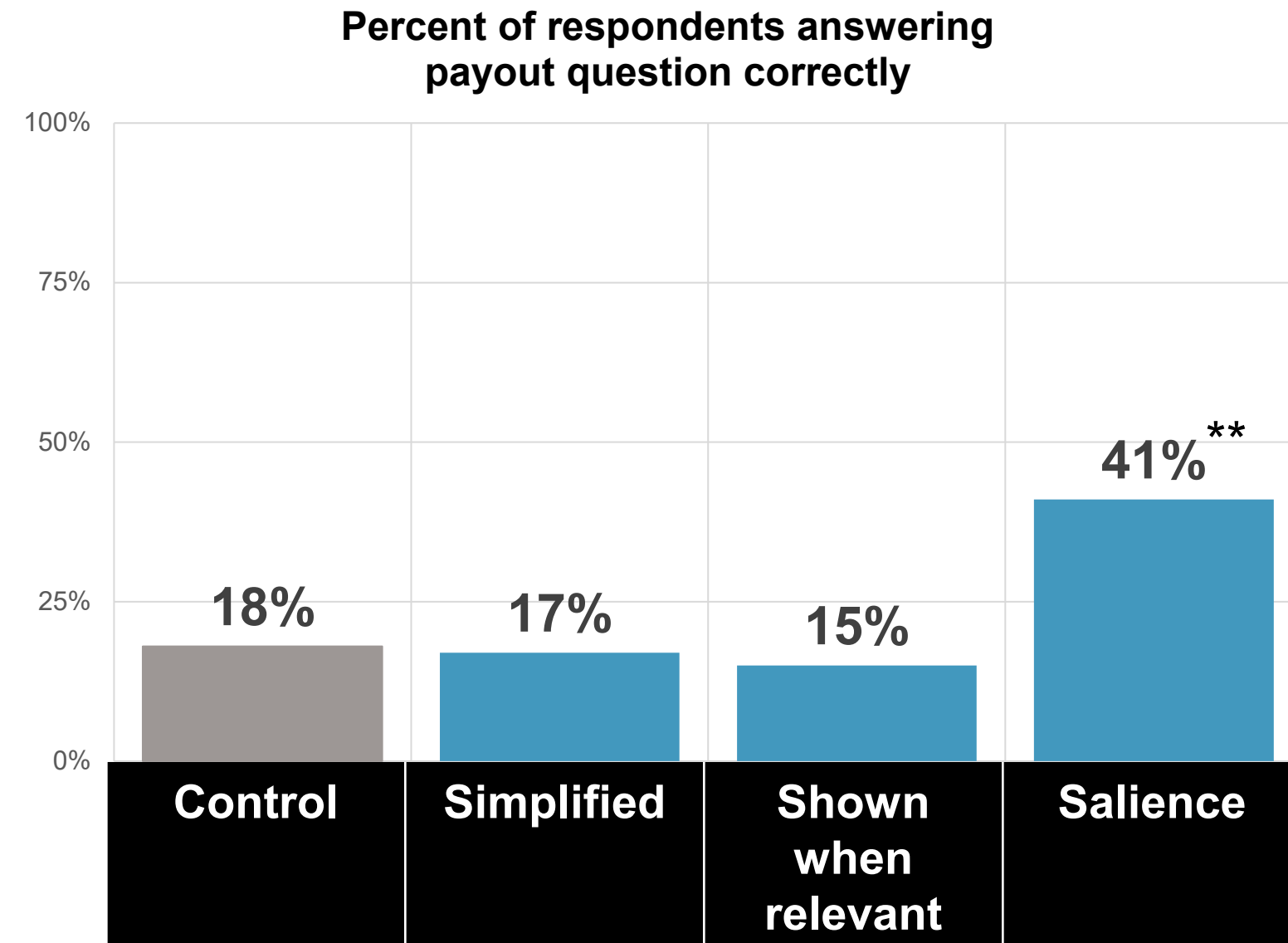


+ p<0.1, * p<0.05, ** p<0.01

Payout comprehension significantly increased by 128% when presented in plain view

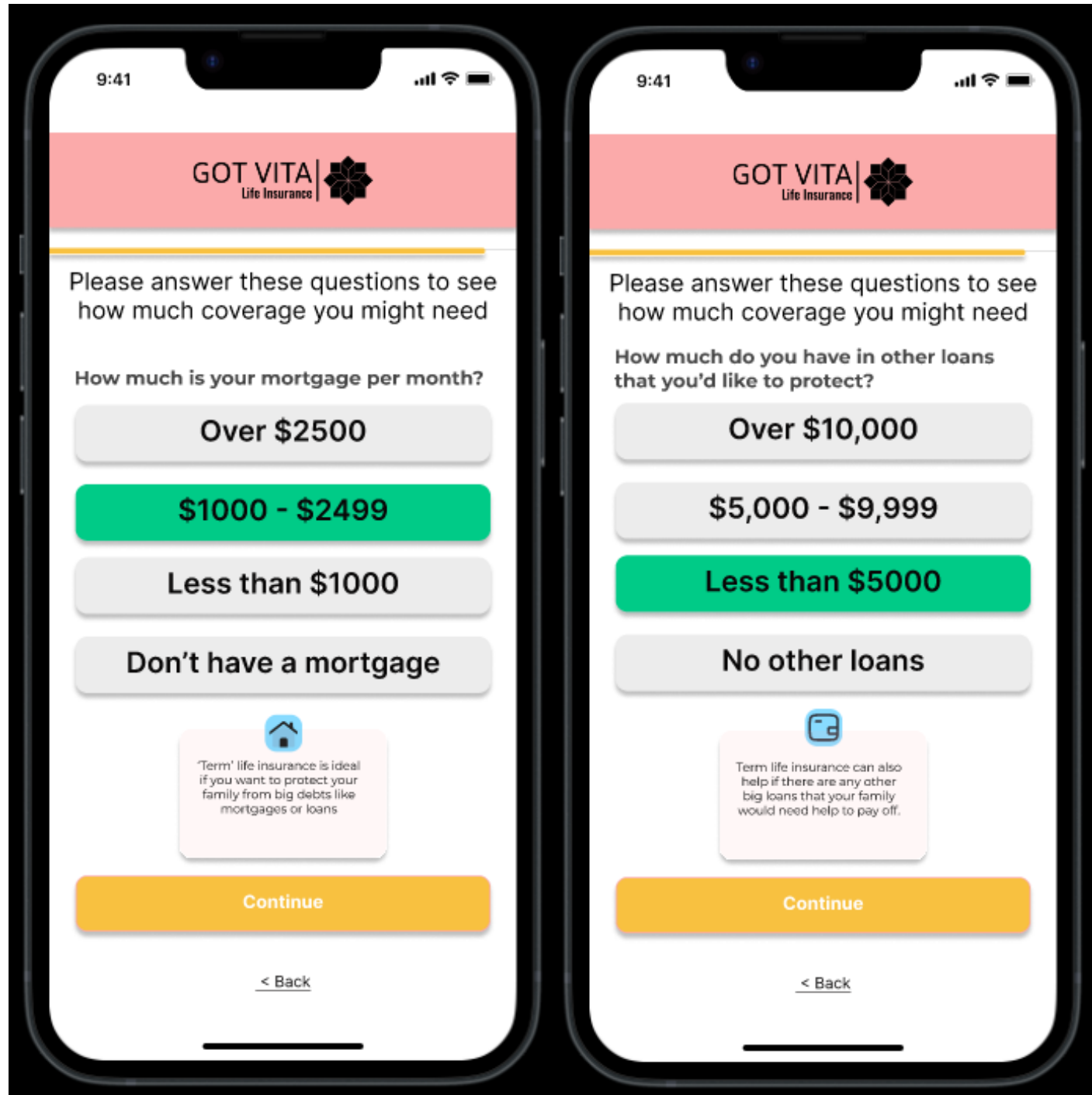
In which of the following situations would a payout be given?

- a) Only if the insured person dies
- b) If the insured person dies or is diagnosed with a terminal illness
- c) If the insured person dies, is diagnosed with a terminal illness, or is diagnosed with a specified serious illness
- d) None of the above



+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$

Helping customers meaningfully engage with critical information significantly improves comprehension



- **Used questions to personalize the customer journey**

- Created a customer journey for purchasing term life insurance
- This version included explanations of LI terminology without requiring clicking the help button link
- This version significantly improved customers' understanding of LI terminology
- This version significantly improved customers' understanding of the conditions under which a payout is given

Slow-thinking

56%**

Answered correctly
(n = 354)

Control

44%

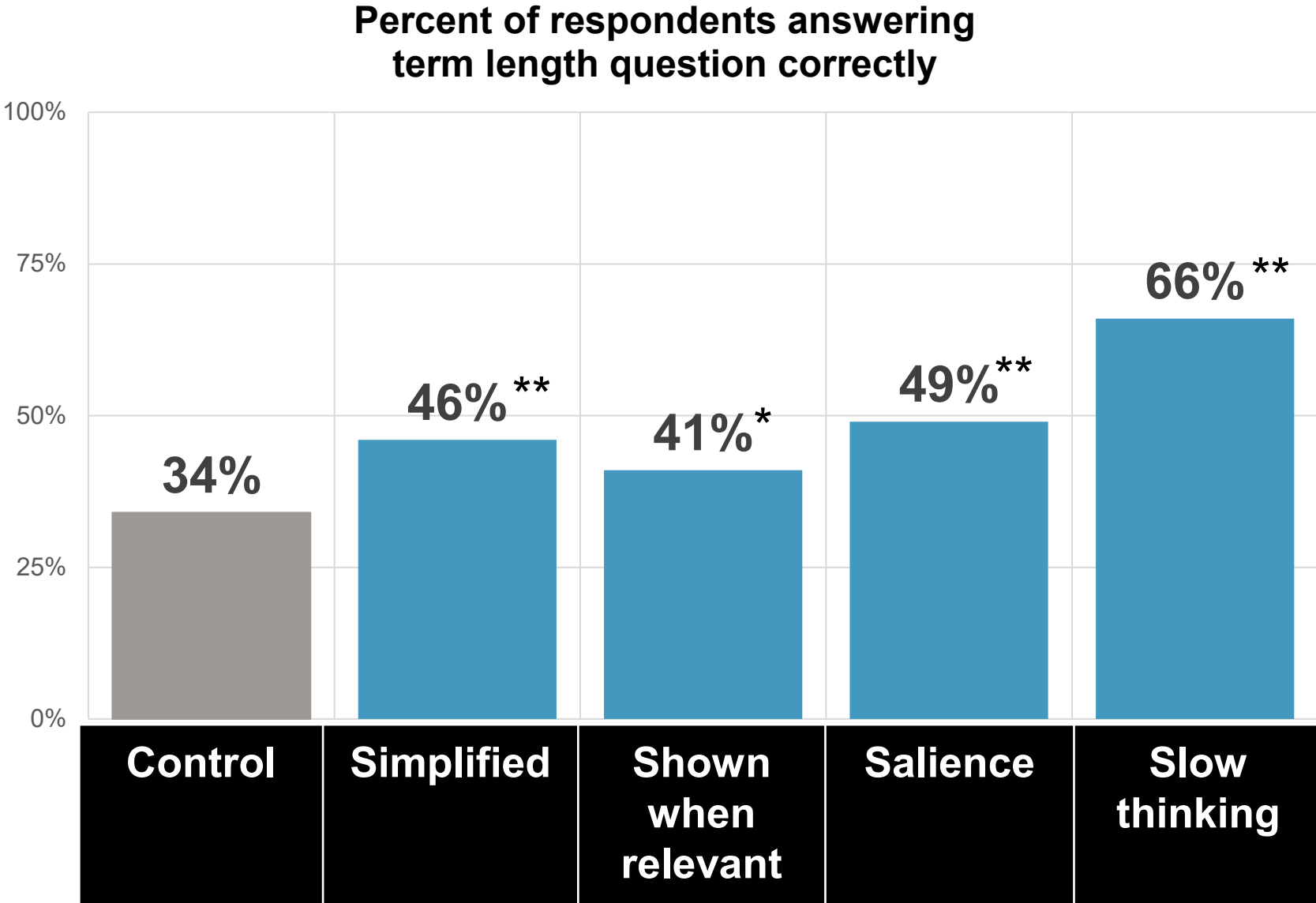
Answered correctly
(n = 428)

+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$

Term-length comprehension significantly increased by 94% when presented in an interactive format

What is the most important way for people to decide how long to be covered for with this type of policy?

- a) Plan to coincide closely with their retirement date
- b) Decide when it would be nice for their family to receive a payout based on their retirement ages
- c) Figure out how long their longest or most pressing financial commitment will last and choose a period close to that
- d) Plan around when their investments will mature
- e) None of the above



+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$



Implications for life insurance digital journeys

- Improving comprehension requires designing for how customers think and behave
- Simplifying information is necessary, but not sufficient for improving comprehension of LI
- Hiding information behind help buttons and links means customers may be less likely to view key information. Display information in plain view where possible
- Helping customers engage meaningfully with content aids comprehension





What's Next



Upcoming research utilizes AI and videos to improve comprehension of life insurance terms



References

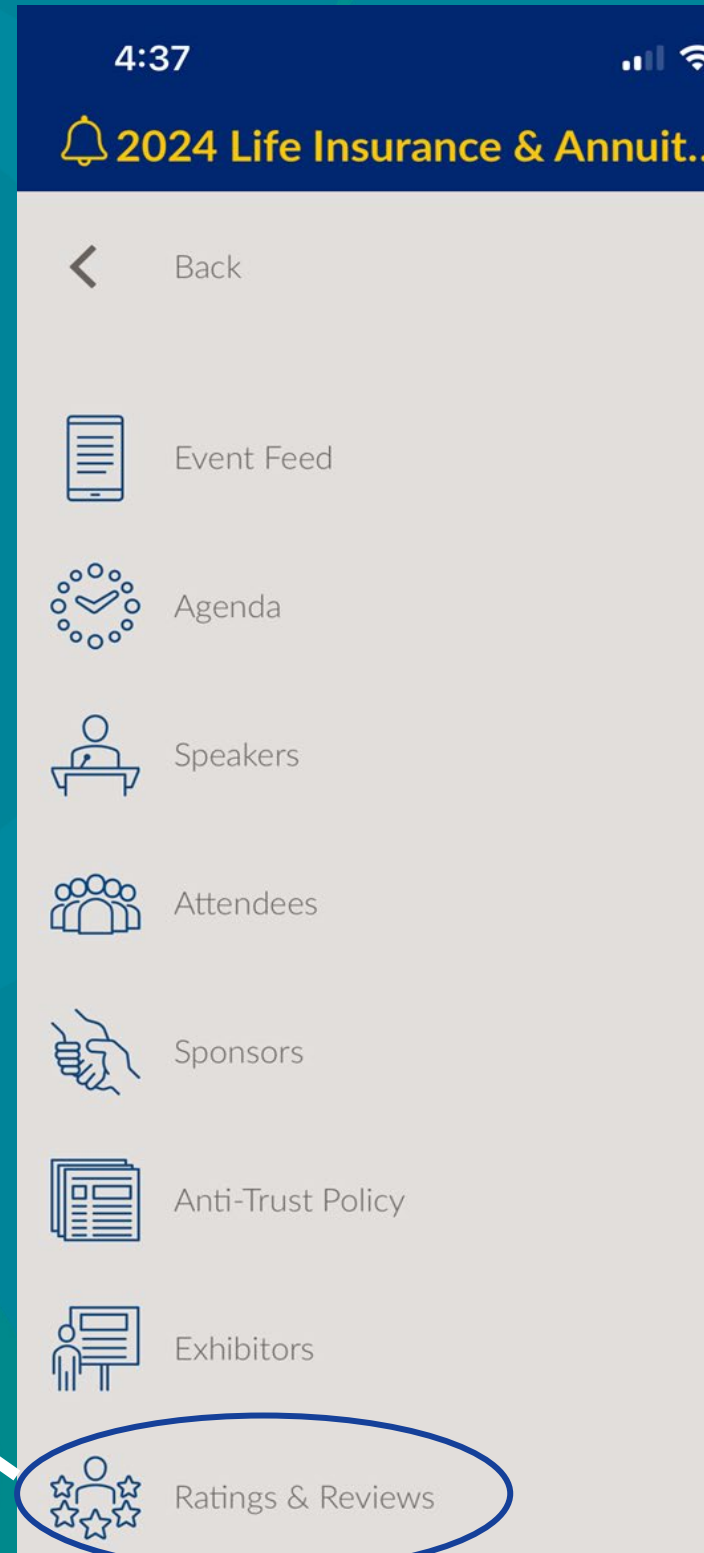


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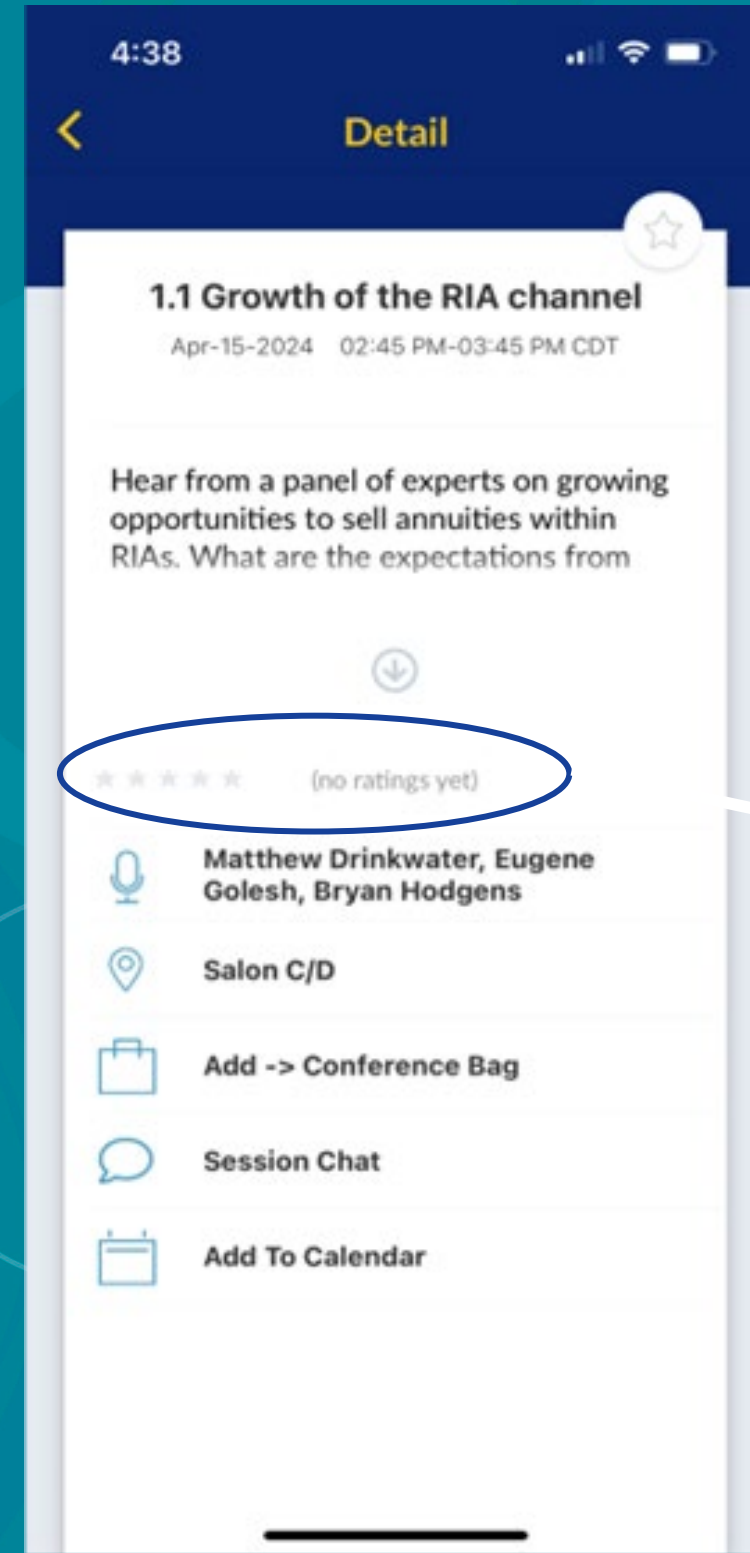
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Please Provide Your Feedback on the Conference App

OPTION 1



OPTION 2



Thank You

