U.S. FOOD & DRUG ADMINISTRATION

The Role of Social Science in Prescription Drug Promotion at FDA and Preview of Upcoming Studies

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Office of Prescription Drug Promotion | CDER | FDA

DIA Advertising and Promotion Regulatory Affairs Conference

Marriott Hotel and Conference Center| N. Bethesda, MD

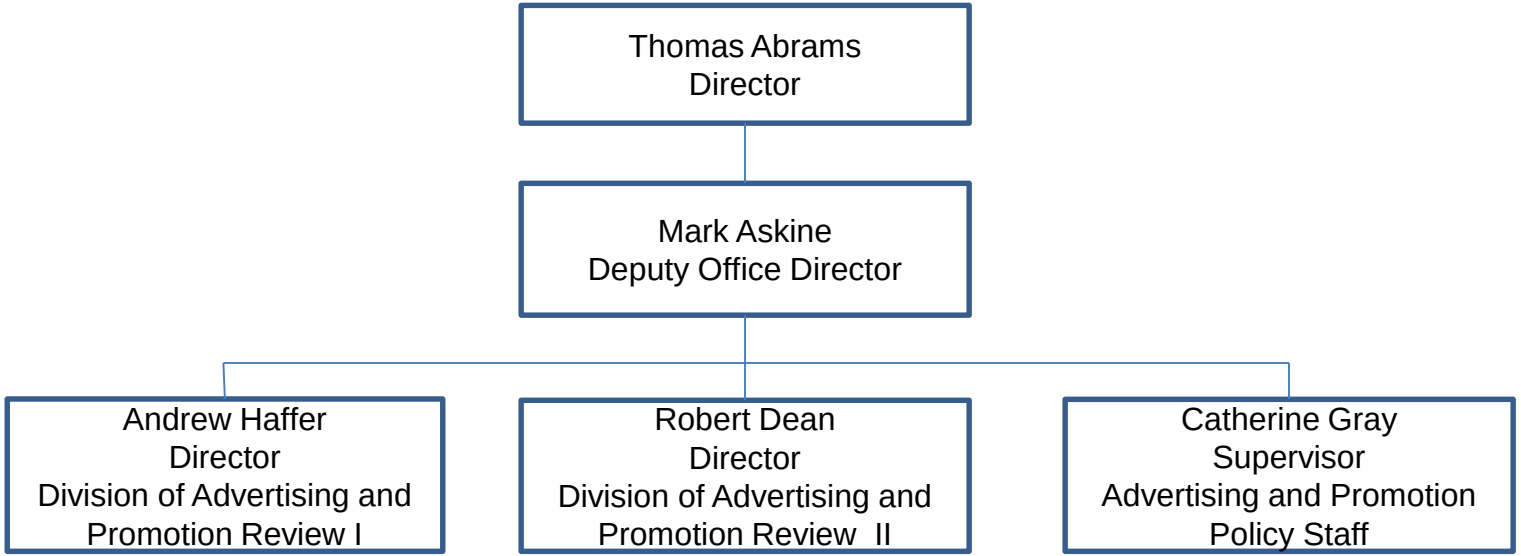
Office of Prescription Drug Promotion's (OPDP) Mission

- Protect the public health by helping to ensure that prescription drug information is truthful, balanced, and accurately communicated
- Guard against false or misleading advertising and promotion through comprehensive surveillance, enforcement, and educational programs
- Foster better communication of information to help patients and healthcare providers make informed decisions about treatment options

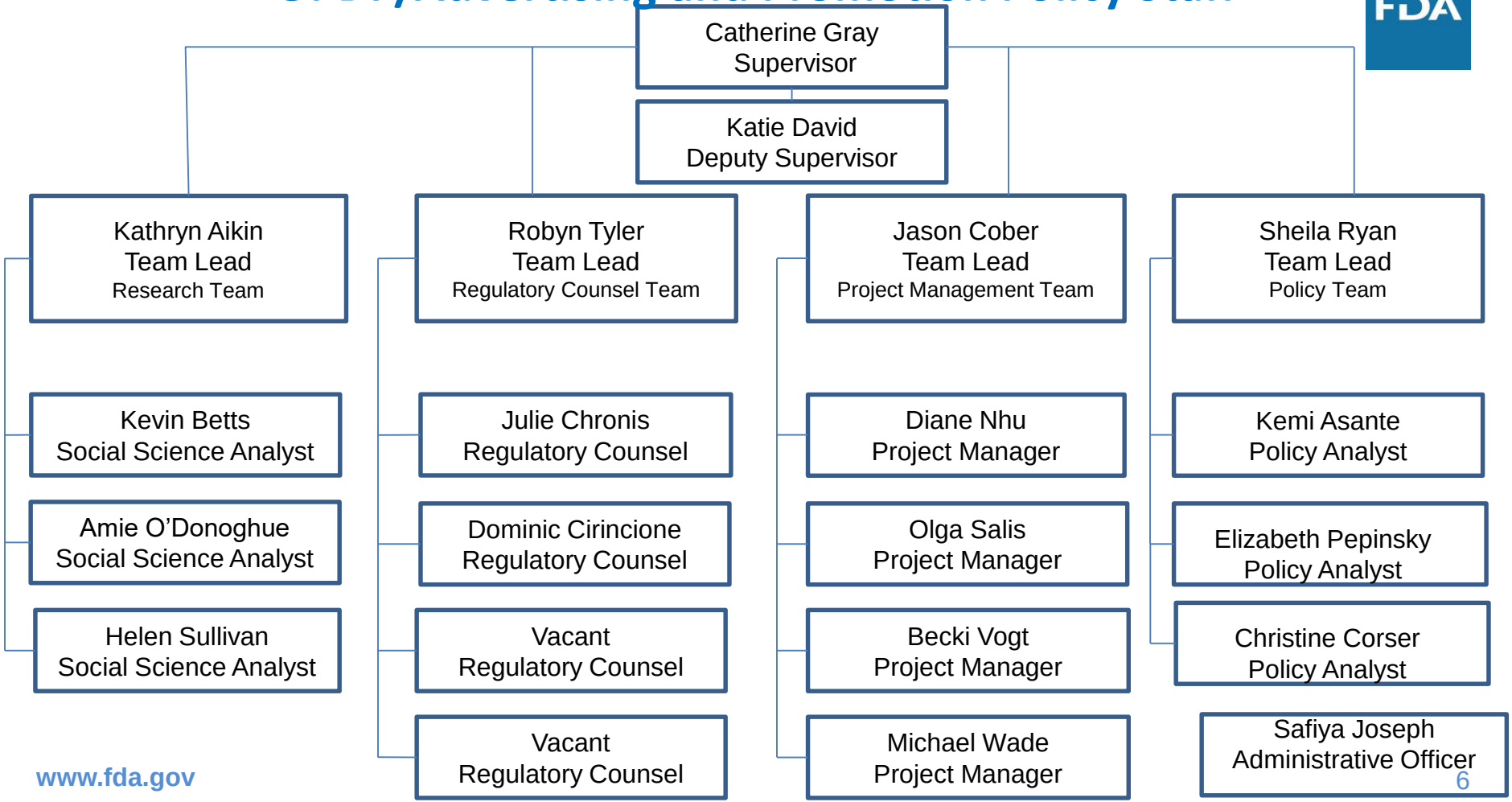
Organizational Structure


You Are Here

OPDP Organizational Structure



OPDP/Advertising and Promotion Policy Staff



OPDP Research Team

- Kathryn Aikin, Ph.D. (Team Lead)
- Kevin Betts, Ph.D.
- Amie O'Donoghue, Ph.D.
- Helen Sullivan, Ph.D., M.P.H.

How Social Science Can Inform Approach to Problems

- Help identify goals
- Identify barriers to achieving goals
  - Cognitive barriers (capacity, motivation, attention)
  - Behavioral barriers (time, opportunity)
  - Others (literacy)
- Identify potential solutions
- Test and verify effectiveness of solutions

Role of Research Team

What we do

- Provide scientific evidence and advice to help ensure that OPDP's policies related to prescription drug promotion have the greatest benefit to public health
  - Investigate issues relevant to healthcare professional and patient/consumer usage of medical product information
  - Consider the audience's perception and comprehension of medical product information
  - Assess the accuracy and effectiveness of the informational messages

Role of Research Team (cont.)

How we do it

- Apply social science and communication principles to OPDP's:
  - Advice to industry, academia or internal FDA stakeholders
  - Guidance and policy development
  - Research
  - Surveillance and compliance activities

OPDP's Research Agenda

- Provide science-based evidence and perspective
- Studies are proposed and selected to fulfill a number of purposes such as:
  - Congressional mandate
  - Help inform guidance and policy development
  - Enhance scientific literature base

Application of Social Science Principles to Research

- Advertising Features
  - Content
  - Format
- Target Population(s)
- Research Quality

Focus of OPDP's Research Studies

- Advertising Features
  - How do the features of the promotion impact the communication and understanding of prescription drug product risks and benefits?
  - Examples include:
    - Quantitative Information
    - Advertising and message elements
    - Disease characteristics
    - Product characteristics
    - Other elements

Focus of OPDP's Research Studies (cont.)

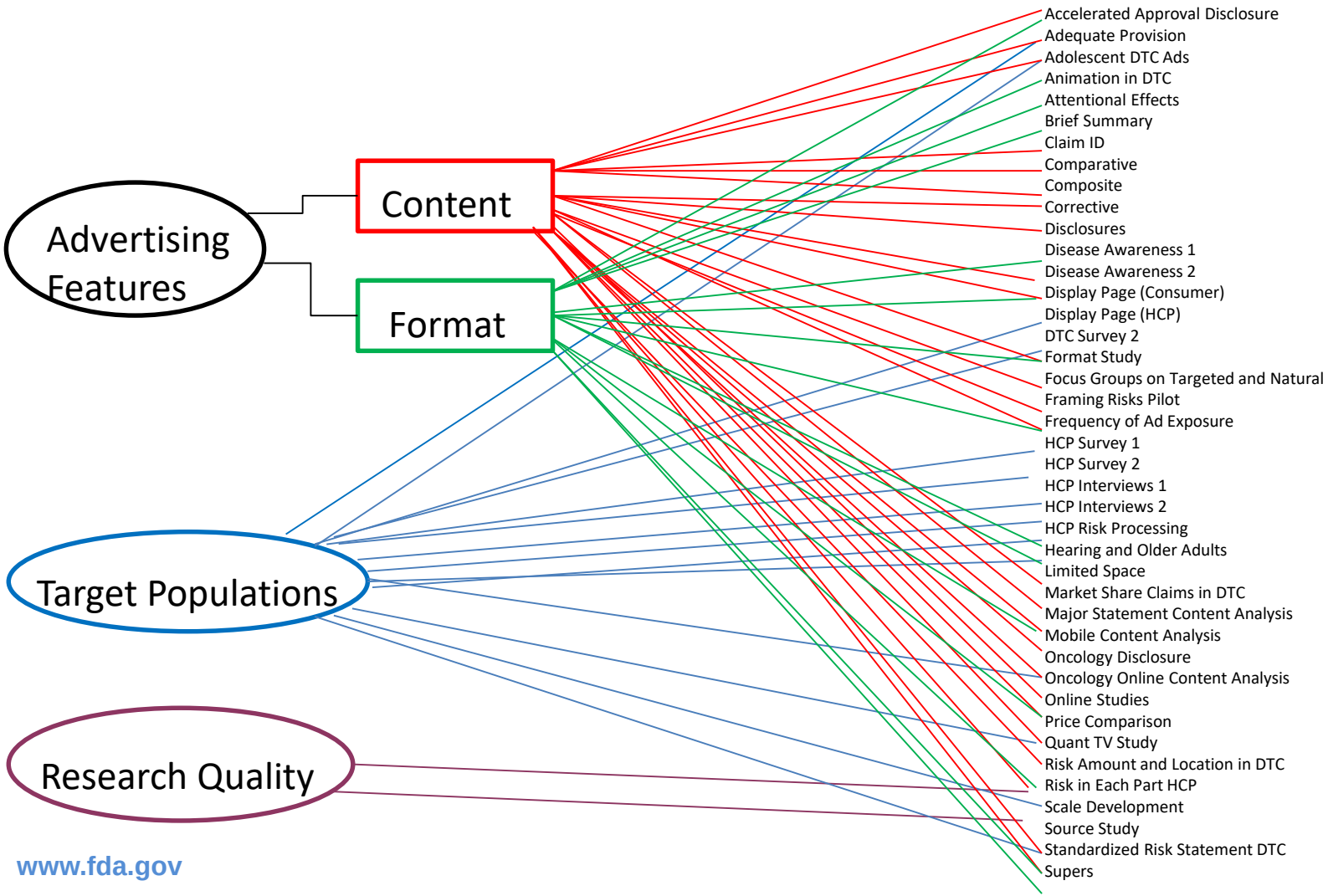
- Target Population
  - How does understanding of prescription drug product risks and benefits vary as a function of audience?
  - Variables include:
    - Literacy
    - Education
    - Age

Focus of OPDP's Research Studies (cont.)

- Research Quality
  - How can the quality of the research data be maximized to ensure the best possible return on investment for FDA?
  - Variables include:
    - Analytical methodology development
    - Sampling and response issues

Research Design Choices

- Surveys
  - Survey of opinions of DTC promotion
- Experimental research
  - Studies that employ random assignment to condition in order to test causative hypotheses
- Qualitative research for development purposes
  - Smaller studies designed to efficiently focus future research priorities and considerations


Advertising Features
Content
Format
Target Populations
Research Quality
Accelerated Approval Disclosure
Adequate Provision
Adolescent DTC Ads
Animation in DTC
Attentional Effects
Brief Summary
Claim ID
Comparative
Composite
Corrective
Disclosures
Disease Awareness 1
Disease Awareness 2
Display Page (Consumer)
Display Page (HCP)
DTC Survey 2
Format Study
Focus Groups on Targeted and Natural
Framing Risks Pilot
Frequency of Ad Exposure
HCP Survey 1
HCP Survey 2
HCP Interviews 1
HCP Interviews 2
HCP Risk Processing
Hearing and Older Adults
Limited Space
Market Share Claims in DTC
Major Statement Content Analysis
Mobile Content Analysis
Oncology Disclosure
Oncology Online Content Analysis
Online Studies
Price Comparison
Quant TV Study
Risk Amount and Location in DTC
Risk in Each Part HCP
Scale Development
Source Study
Standardized Risk Statement DTC
Supers

Public Comment Periods for OPDP Social Science Research

- Two statutory comment periods
- 60-day Federal Register Notice
  - Comments to FDA
- 30-day Federal Register Notice
  - Comments to OMB

Additional Information About OPDP Research

OPDP Research Website

- Completed projects
  - Link to publication
- Research in progress
  - Link to 60day FRN, 30day FRN
- https://www.fda.gov/AboutFDA/CentersOffices/OfficeofMedicalProductsandTobacco/CDER/ucm090276.htm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ADMINISTRATION

An Examination of Superimposed Text in DTC TV Ads

Amie C. O'Donoghue, Ph.D.
Center for Drug Evaluation and Research
October 17, 2018

Collaborators

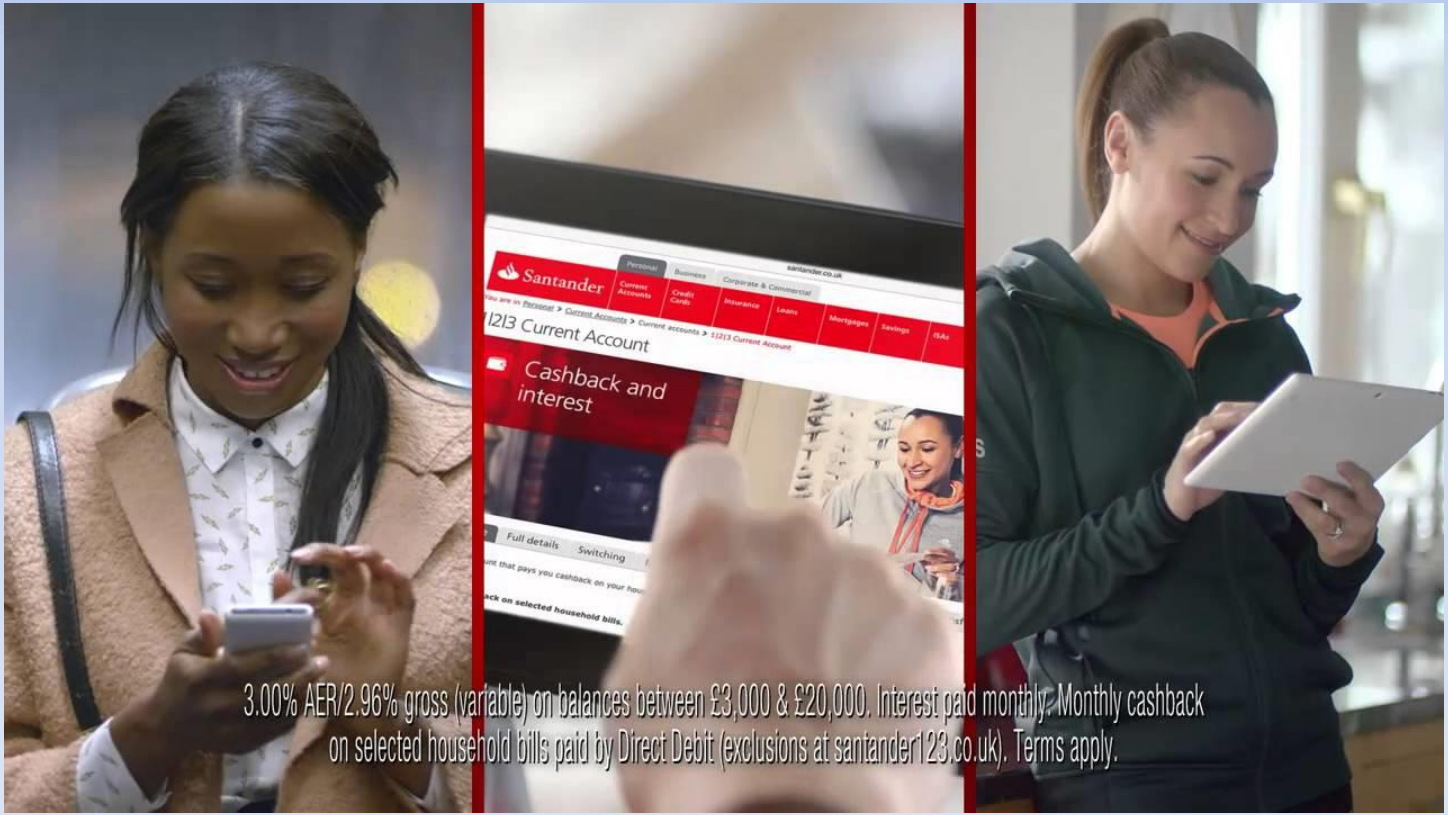
- **FDA**
  - Kevin R. Betts, Ph.D

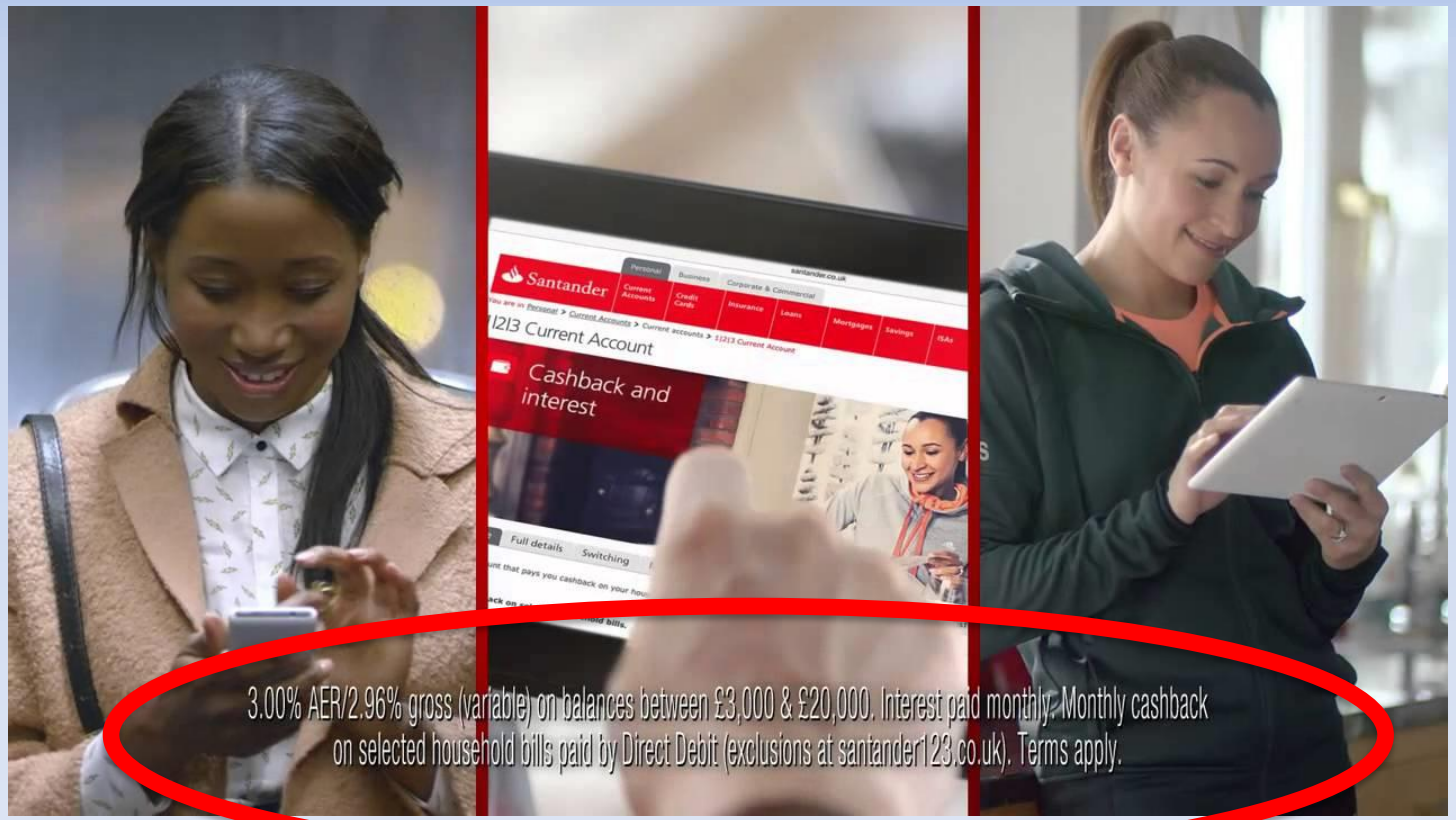
- **RTI International**
  - Ryan Paquin, Ph.D.
  - Mihaela Johnson, Ph.D.
  - Bridget Kelly, Ph.D.

Organization

- Background
- Methodology
- Results
- Conclusions

Superimposed text = “Supers”


Santander
Cashback and interest
3.00% AER/2.96% gross (variable) on balances between £3,000 & £20,000. Interest paid monthly. Monthly cashback on selected household bills paid by Direct Debit (exclusions at santander123.co.uk). Terms apply.


Santander
1|2|3 Current Account
Cashback and interest
Full details
Switching
3.00% AER/2.96% gross (variable) on balances between £3,000 & £20,000. Interest paid monthly. Monthly cashback on selected household bills paid by Direct Debit (exclusions at santander123.co.uk). Terms apply.

Background

Factors that can influence consumer information processing:

TYPE SIZE

• ◊ □ • ◊ □ • ◊ □

CPAFBIJFK versus **CPA FBI JFK**

CONTRAST

Background

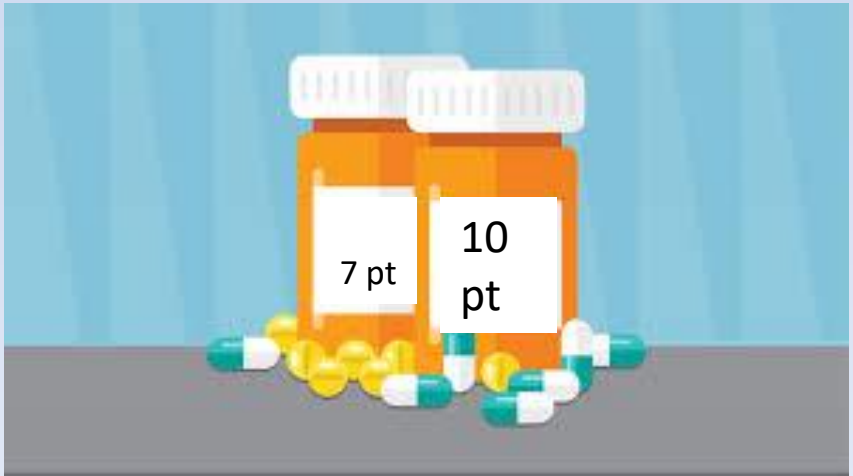
Factors that can influence consumer information processing:

TYPE SIZE

CONTRAST

Background

- Wogalter & Vigilante, 2003:
- Older and Younger Adults
- 12 different OTC bottle displays



Background

- Patients read more quickly and accurately when font is larger
- As font size increases, comprehension increases

e.g., Smither & Braun, 1994

Background

- Contrast has had consistent but small effect
  - Black text on white background most readable
    - Tinker & Paterson, 1931
  - Contrast brightness has largest effect
    - Shieh & Lin, 2000
- Contrast may become more important as text size decreases
  - Legge et al., 1987
- No studies of text size and contrast in DTC prescription drug ads

Background

- Most research conducted before 40+ inch TVs, tablets, even cell phones
- Average TV size today is 47-inches
- 58% of US homes had tablets in 2016
- 33% of Americans watch TV on cell phones

Current Study

- Does super size, contrast, and/or device type influence noticeability, recall, and perceived importance of super information?

- Does super size, contrast and/or device type influence recall of and attitudes toward the promoted prescription drug?

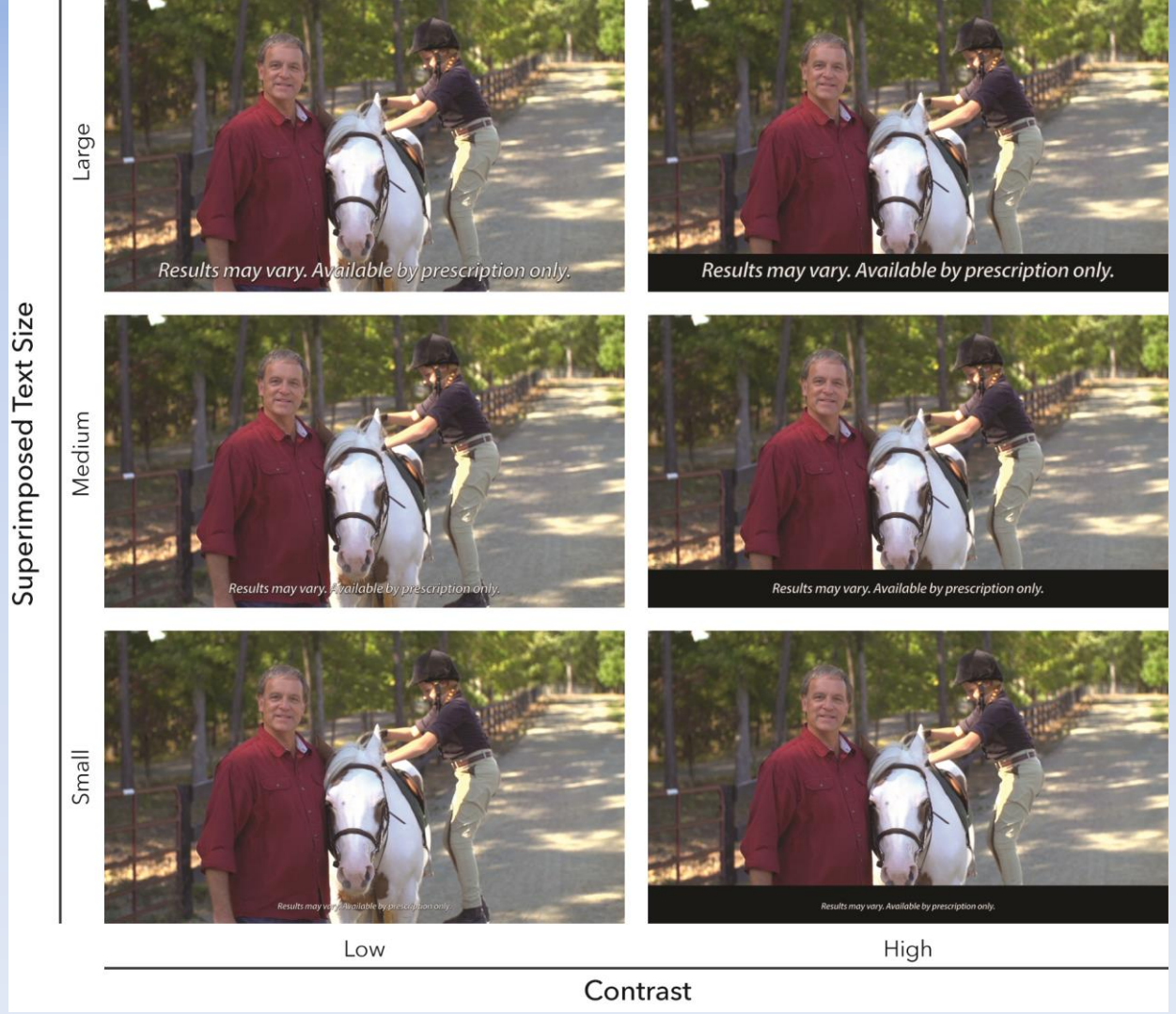
Design

Device Type		TV			Tablet			Total
Super Size		Small	Medium	Large	Small	Medium	Large	
Contrast	High	106	106	106	106	106	106	636
	Low	106	106	106	106	106	106	636
Total		212	212	212	212	212	212	1,272

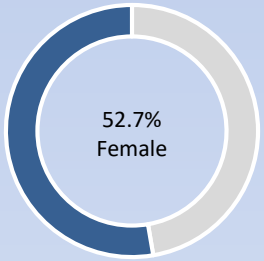
Size determination

- Cap height relative to display height
- Pretested 5 sizes with 242 participants

- Cap heights set at:
  - Small » 1/50th of display height
  - Medium » 1/30th of display height
  - Large » 1/20th of display height


Superimposed Text Size
Large
Medium
Small
Results may vary. Available by prescription only.
Low
High
Contrast

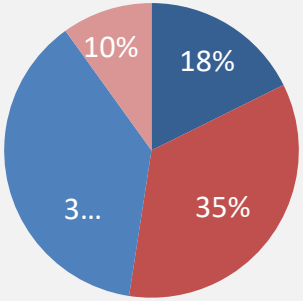
Gender



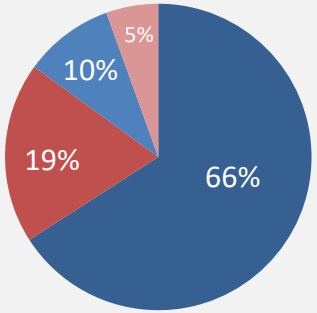
Mean Age

45

Education



Race/Ethnicity



Procedure

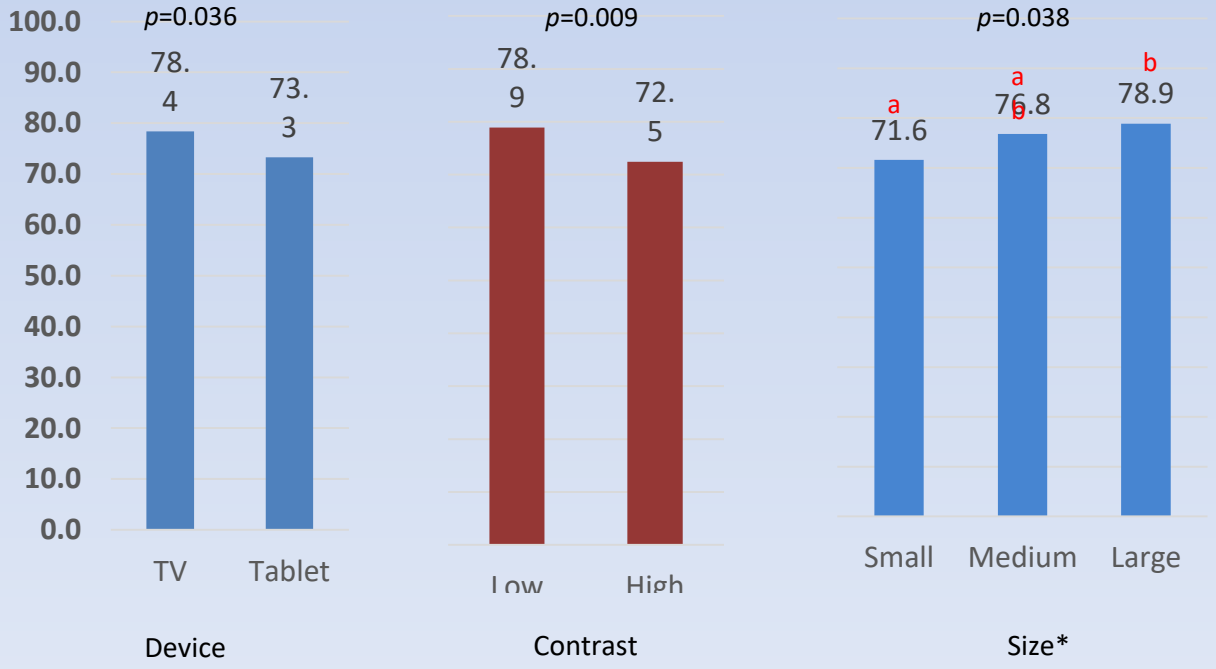
- In-person administration in
  - Tampa, FL
  - Cincinnati, OH
  - Los Angeles, CA

- Viewed one of 6 ads on either TV or tablet
- Completed questionnaire

Outcome Variables

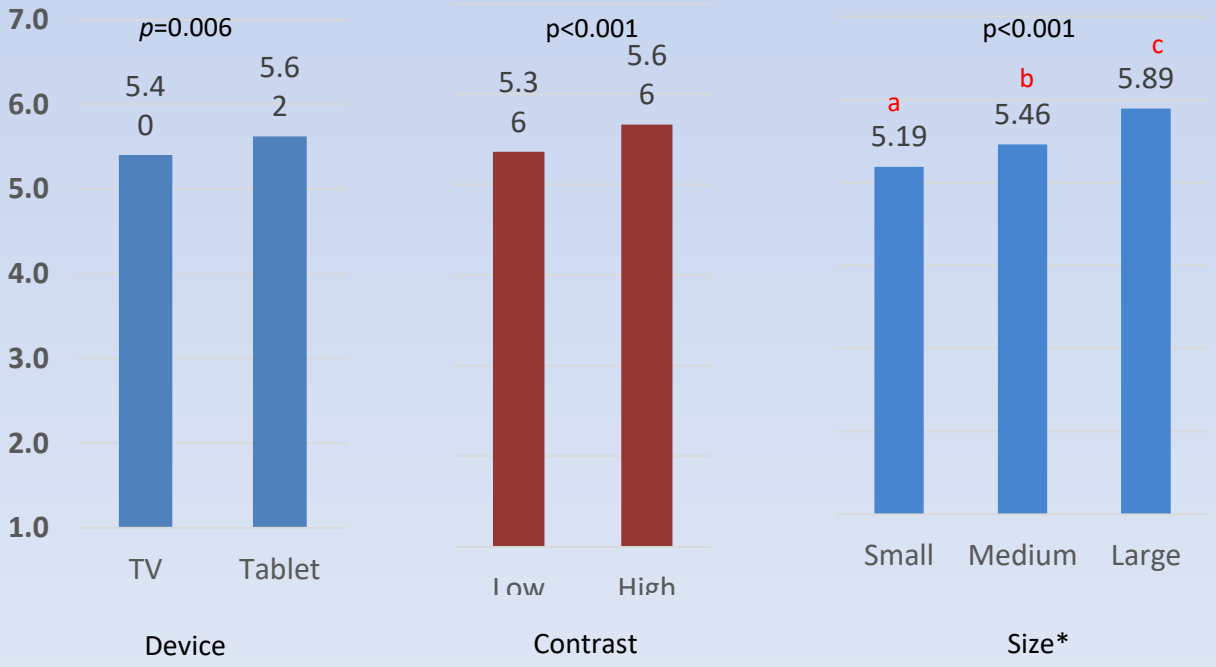
- Cognitive processing of super information
  - Awareness
  - Encoding
- Memory/interpretation of risk/benefits
  - Recall
  - Perceptions
- Attitudes

Results - Awareness of Supers



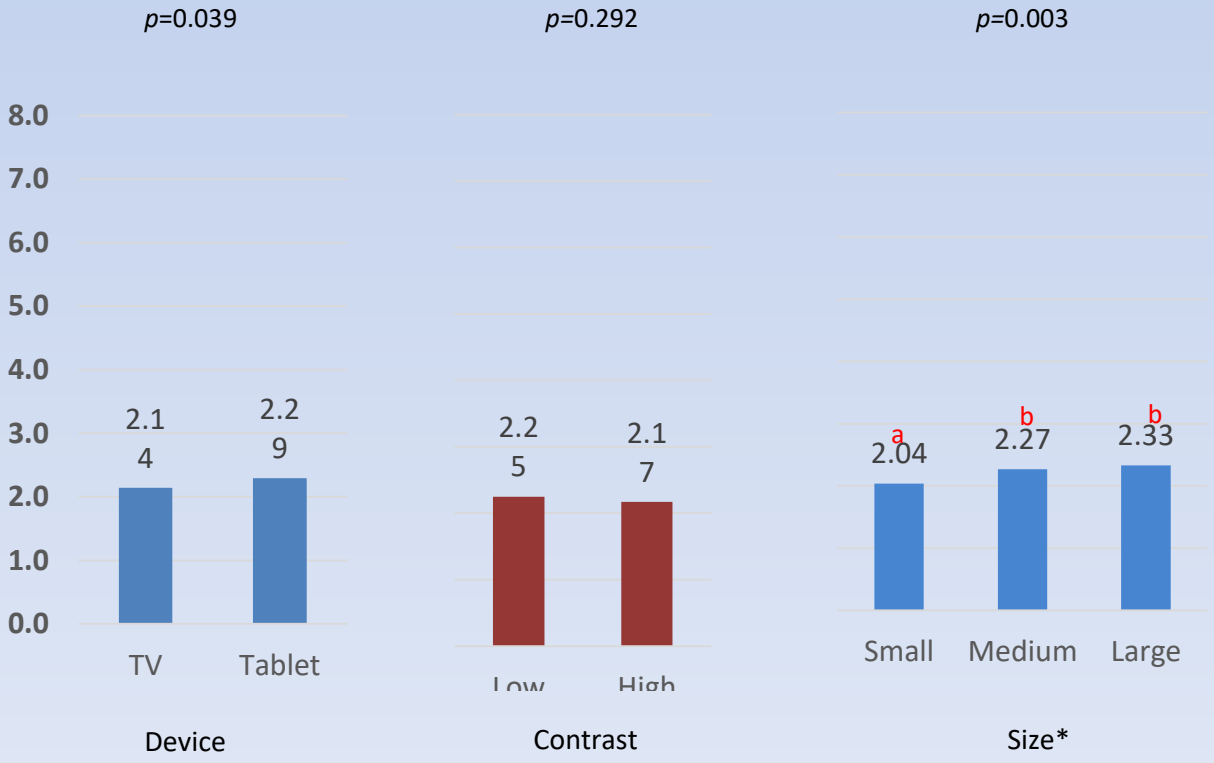
*Different superscripts indicate significant difference p<0.0167.

Results – Perceived prominence among those who noticed



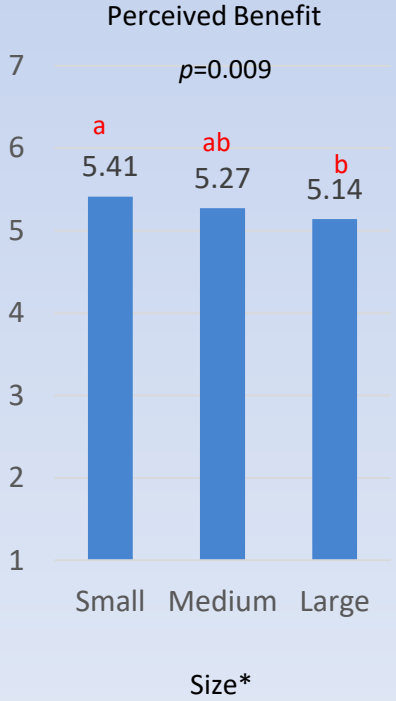
*Different superscripts indicate significant difference p<0.0167.

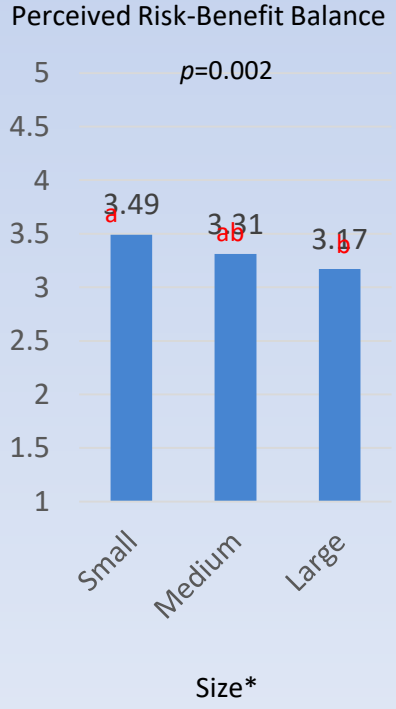
Results – Risk Recall



*Different superscripts indicate significant difference p<0.0167.

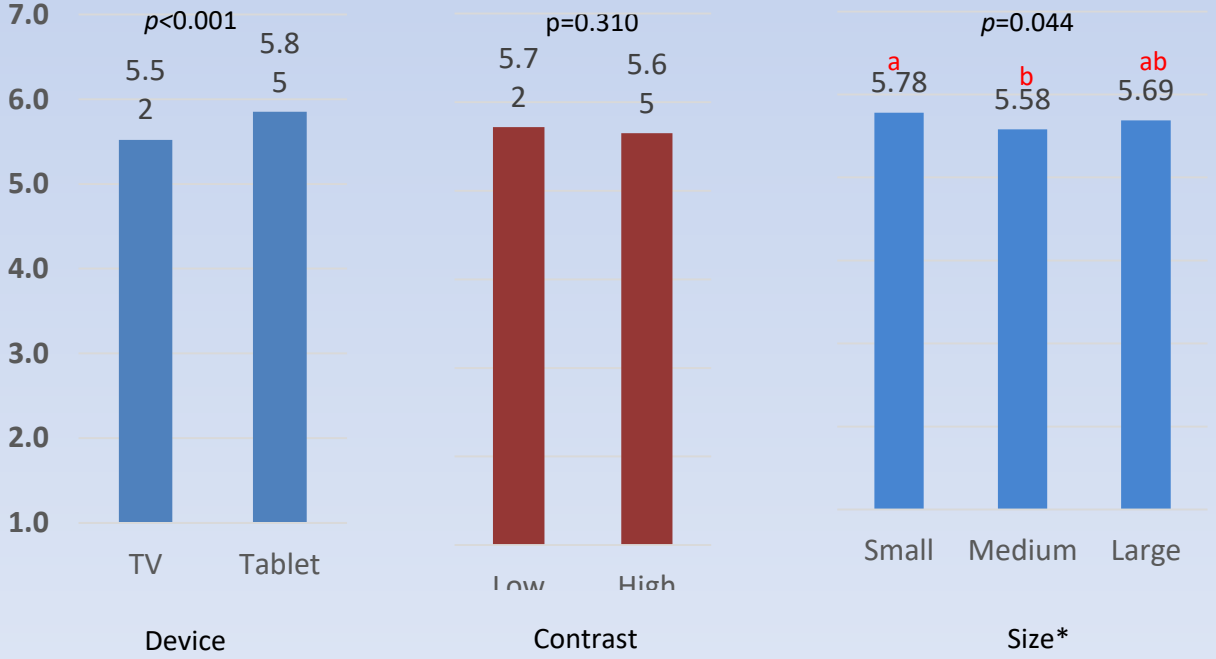
Results – Perceived Benefit





*Different superscripts indicate significant difference p<0.0167.

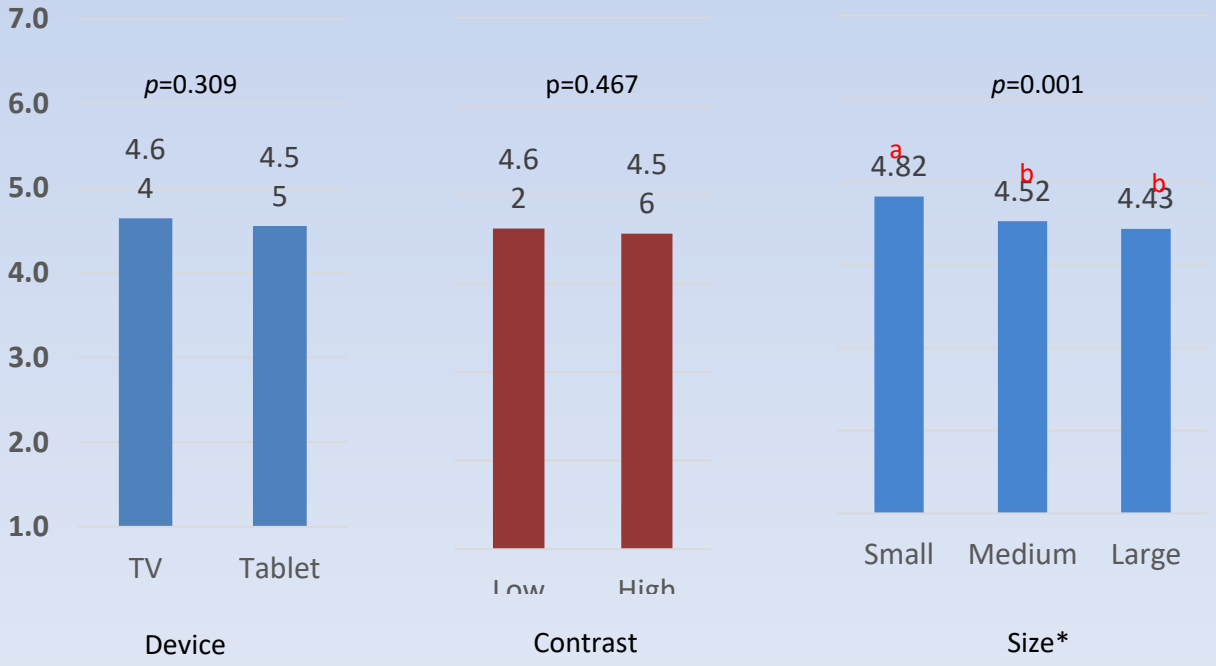
Results – Attitude toward the ad



Note: General perceptions of advertising was included in the model as covariate; it was significantly associated with attitude toward the ad.

*Different superscripts indicate significant difference p<0.0167.

Results – Attitude toward the drug



*Different superscripts indicate significant difference p<0.0167.

Summary

Super size had expected effects

- Larger supers more noticeable, prominent
- Almost everyone recalled the indication; but participants who saw the small supers:
  - Recalled fewer risks/side effects
  - Had more positive risk-benefit balance perceptions
  - Had higher benefit perceptions
  - Had more favorable attitudes toward the drug.

Summary

- People noticed low contrast super (in scene) more than high contrast super (black bar)
- Those who did notice supers thought black bar was more visually clear
- Contrast did not affect risk/benefit recall or perceptions

Summary

- TV watchers more aware of supers than tablet users
- Of those who noticed supers, tablet users thought they were more visually clear
- Tablet users:
  - Had greater risk recall
  - Had more positive attitudes toward the ad; no differences on attitudes toward drug

Limitations & Future Research

- One medication – could be different in others
- Only examined two devices – what about phones with even smaller screens?
- Two examples of contrast – many ways to show supers

Conclusions

- Size matters!
  - Important information is best presented in larger fonts, regardless of contrast
- Tablet usage may be more engaging with regard to risk information
- Black bar format may not be the best way to present supers

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TAKING REPEATED EXPOSURE INTO ACCOUNT

AN EXPERIMENTAL STUDY OF DIRECT-TO-CONSUMER PRESCRIPTION DRUG TELEVISION AD EFFECTS

Kevin R. Betts, Ph.D., Social Science Analyst
Office of Prescription Drug Promotion | CDER | FDA

FDLI Advertising and Promotion Conference, Washington, DC

October 2018

Some Observations

In a recent content analysis, Sullivan et al. (2017) found that major statements of risk in DTC prescription drug television ads often "included long and complex sentences…were often accompanied by competing non-risk information in the visual images, presented with moderately fast-paced music, and read at a faster pace than benefit information."

The major risk statement—as currently formatted—tends to be poorly processed by consumers (Betts et al., 2018).

But also...

Consumers are exposed to a particular DTC ad multiple times which together could promote adequate or at least improved processing of the major risk statement.

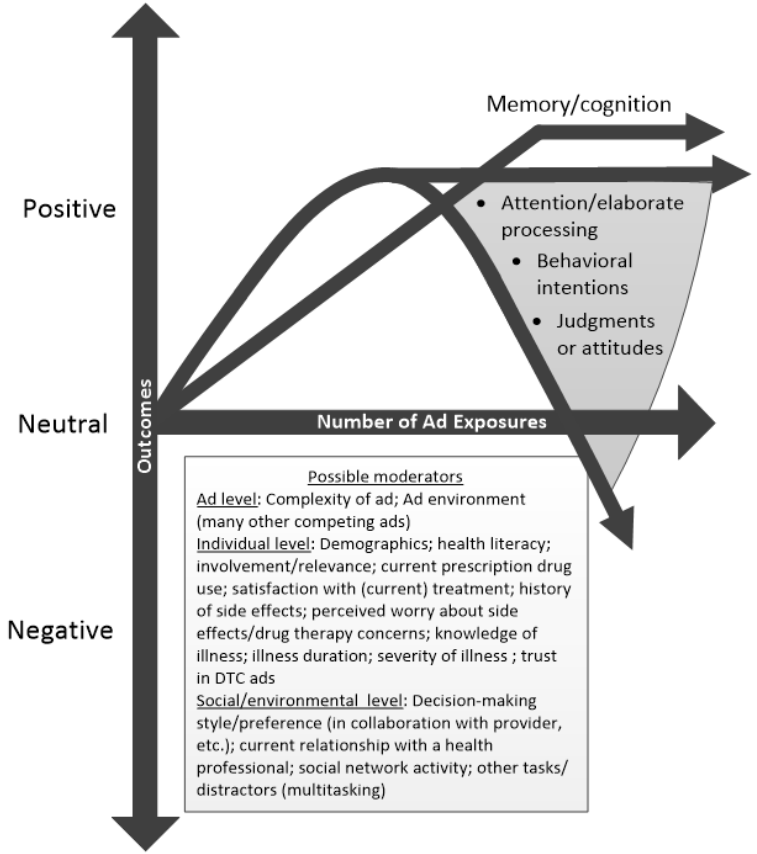
Sullivan et al. (2017). Communicating risk information in direct-to-consumer prescription drug television ads: A content analysis. *Health Communication [epub];* Betts et al. (2018). Serious and actionable risks, plus disclosure: Investigating an alternative approach for presenting risk information in prescription drug television advertisements. *Research in Social & Administrative Pharmacy, 14,* 951-963.

Ad Exposure Frequency Conceptual Framework

Our conceptual framework depicts potential effects of repeated DTC ad exposure.

Outcomes such as attention and attitudes are expected to follow an inverted-U curve, though the exact pattern may vary up to a leveling off.

Memory, in contrast, is expected to rise and then level off with repeated exposures.



Research Questions

Hypothesis (H1): As ad exposure frequency increases, recall and recognition of risks and benefits will increase.

Research Question 1 (RQ1): Will risk and benefit information be recalled or recognized differently (e.g., benefits recalled/recognized more easily than risks)?

Research Question 2 (RQ2): Will ad exposure frequency affect risk and efficacy perceptions?

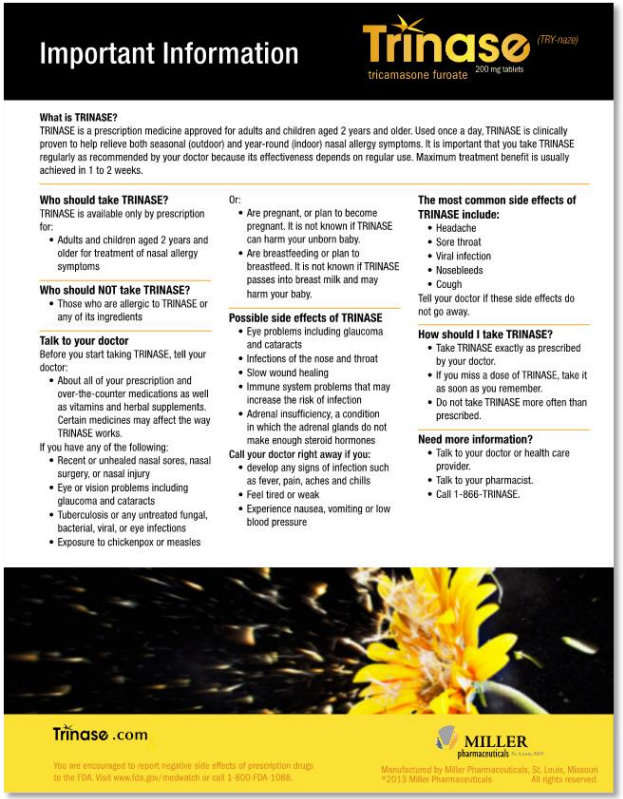
Research Question 3 (RQ3): Will ad exposure frequency affect behavioral intentions (specifically intentions to seek information about the drug or take the drug if prescribed)?

Research Question 4 (RQ4): Are effects of ad exposure frequency on recall and recognition mediated by increased elaborate processing or counterarguing?

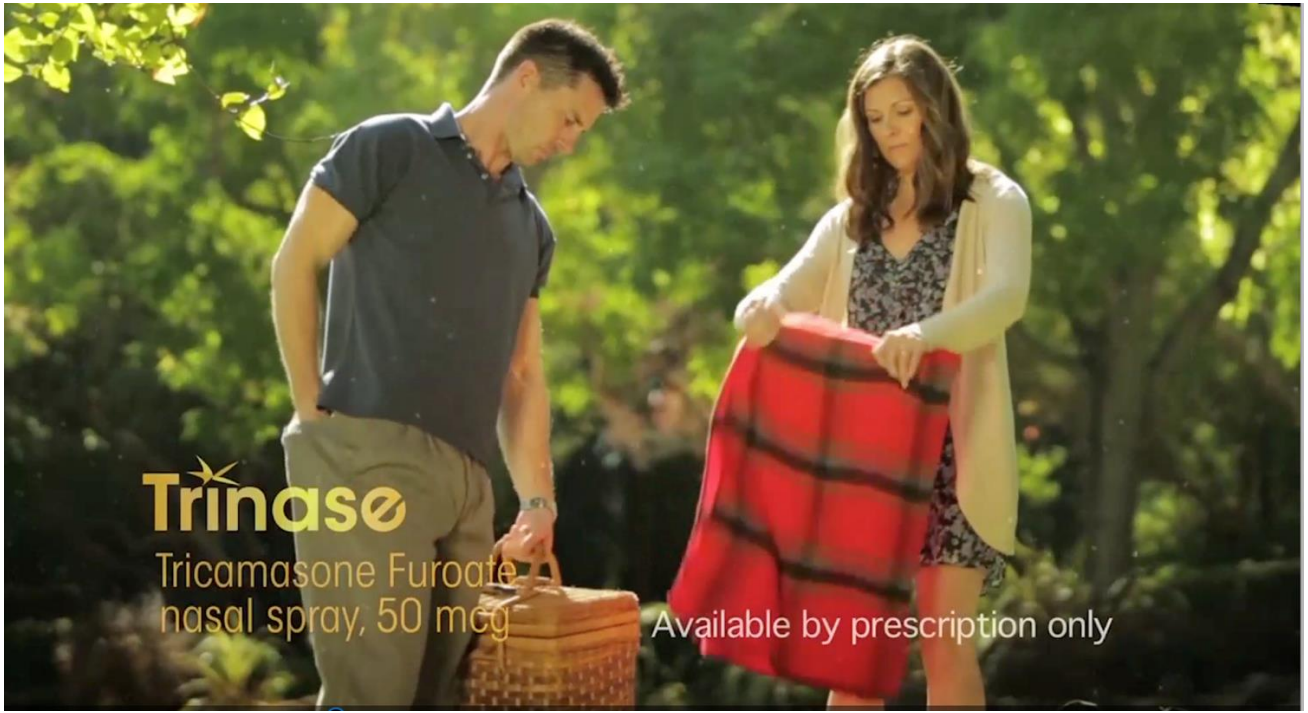
Research Question 5 (RQ5): Will attention be affected by ad exposure frequency?

Only H1, RQ1, and RQ2 are covered in this presentation.

Drug Profile



DTC Television Ad



Our fictitious DTC television ad was embedded alongside filler ads in a clutter reel, or commercial break.

Television Program

The two television programs lasted 60 minutes in total and presentation order was counterbalanced.

Study Design

Number of Ad Exposures	Clutter Reel Number					
	1	2	3	4	5	6
Low (1 exposure)						Mock DTC ad
Medium (2 exposures)				Mock DTC ad		Mock DTC ad
High (4 exposures)	Mock DTC ad		Mock DTC ad	Mock DTC ad		Mock DTC ad

- Participants were randomly assigned to low, medium, or high exposure experimental conditions.
- The clutter reel (commercial break) number shows placement of the DTC ad within the television programming.

Measurement

- Brand recognition
- Risk recall & recognition
- Benefit recall & recognition
- Perceived risk
- Perceived efficacy
- Elaborate processing
- Counterargument
- Self-reported attention
- Number of times viewed the ad
- Attitudes toward the drug
- Risk/benefit balance
- Length of time since diagnosis
- Current prescription drug use
- Satisfaction with current treatment

Sample

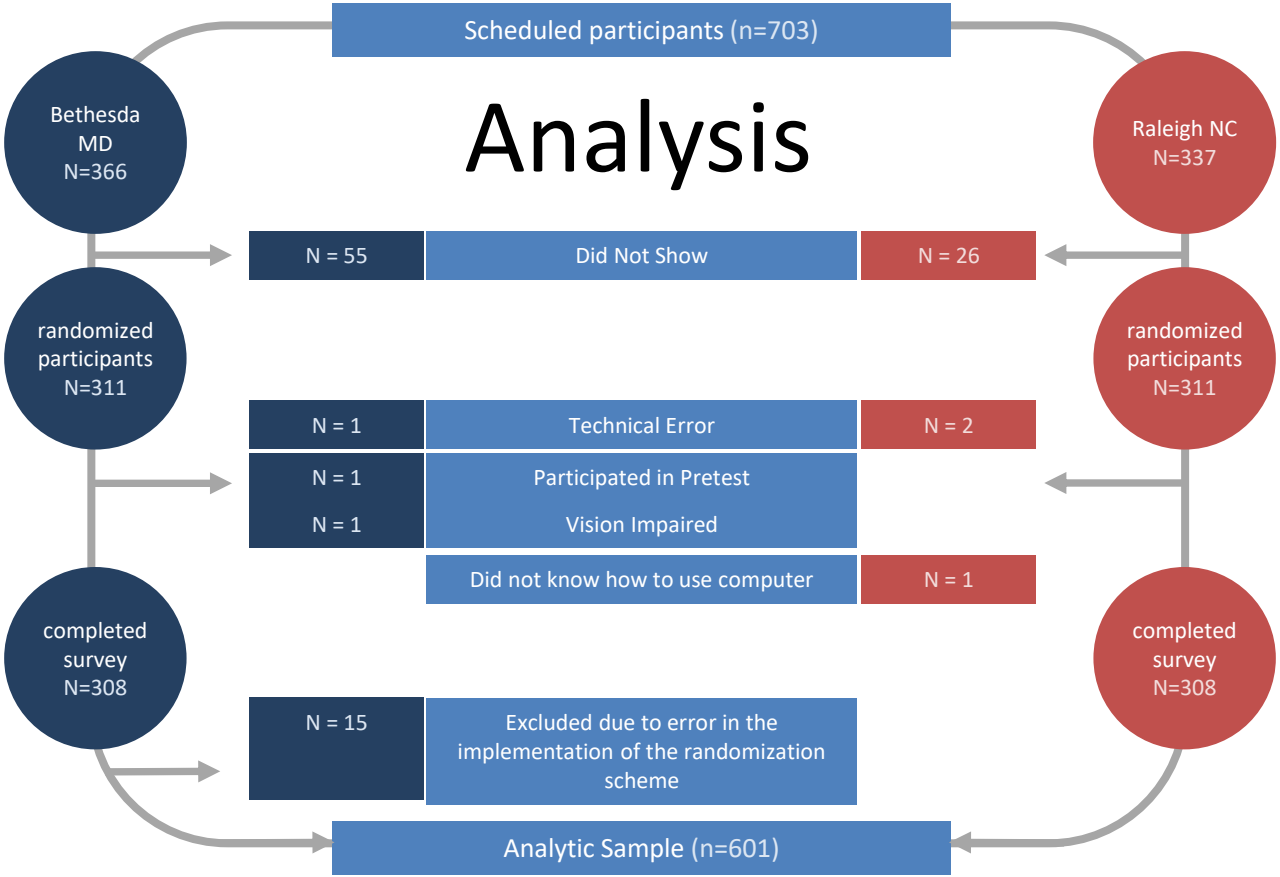
The sample consisted of adults with seasonal allergies identified through opinion research recruitment firm databases.

Individuals with healthcare or marketing backgrounds, or who had participated in the study's pretest were excluded from participation.

All participants could read and speak English.

Sample	Overall	1 exposure	2 exposures	4 exposures
	%	%	%	%
Gender				
Male	252 (43.5%)	91 (47.4%)	81 (40.9%)	80 (42.3%)
Female	327 (56.5%)	101 (52.6%)	117 (59.1%)	109 (57.7%)
Age				
Mean Age (SD)	47 (13.7)	49 (13.2)	47 (13.9)	46 (13.8)
Race/Ethnicity				
Non-Hispanic White	394 (73.4%)	137 (77.4%)	135 (72.2%)	122 (70.5%)
Non-Hispanic Black	105 (19.6%)	29 (16.4%)	42 (22.5%)	34 (19.7%)
Hispanic	15 (2.8%)	3 (1.7%)	6 (3.2%)	6 (3.5%)
Other	23 (4.3%)	8 (4.5%)	4 (2.1%)	11 (6.4%)
Education				
Less than high school	6 (1.0%)	4 (2.0%)	2 (1.0%)	0 (0%)
High school	95 (16.0%)	26 (13.1%)	36 (18.0%)	33 (16.8%)
Some college	104 (17.5%)	36 (18.2%)	34 (17.0%)	34 (17.3%)
College degree	389 (65.5%)	132 (66.7%)	128 (64.0%)	129 (65.8%)

Analysis


Scheduled participants (n=703)
Bethesda MD N=366
Raleigh NC N=337
N = 55
Did Not Show
N = 26
randomized participants N=311
randomized participants N=311
N = 1
Technical Error
N = 2
N = 1
Participated in Pretest
N = 1
Vision Impaired
Did not know how to use computer
N = 1
completed survey N=308
completed survey N=308
N = 15
Excluded due to error in the implementation of the randomization scheme
Analytic Sample (n=601)

Analysis

ANOVA models were used to test effects of exposure on continuous outcomes.

- When main effects observed, we conducted planned contrasts to identify differences between experimental groups.

For categorical outcomes, we conducted ordinal logistic regressions.

- When main effects observed, differences between experimental groups were examined using odds ratios and Wald chi-square stats.

In both cases, Holm-Bonferroni corrections were applied to control for inflation of error rates.

To examine whether participants recalled risk and benefit information differently at various ad exposure frequencies we compared regression coefficients using z-tests for the relationships between ad exposure and recall/recognition of risk and benefit information.

Consult forthcoming publication for details on approach to testing differences in regression coefficients, mediation testing, etc.

Analyses conducted using SPSS Version 23.0, SAS Version 9.4, and Mplus Version 8.

Results

Nearly all (99%) participants were able to recognize the name of the promoted drug.

Most (74%) were able to accurately recall the number of times they had seen the DTC ad.

Participants reported positive opinions about the drug.

- 65% said the benefits outweigh the risks.
- 72% reported positive attitudes toward the drug.

Results: Recall and Recognition

Risk and benefit recall was low overall.

- Participants on average recalled 1.09 risks (*SD* = 1.10) out of 7, and 1.44 benefits (*SD* = 1.03) out of 8.
- About 30% of participants recalled two or more risks; and about 41% of participants recalled two or more benefits.

On average, participants accurately recognized 4.61 risks (*SD* = 1.27) out of 7 as real or bogus claims, and 5.07 benefits (*SD* = 1.17) out of 7 as real or bogus claims.

Results: Risk and Benefit Recall

Ad exposure frequency was significantly related to risk recall (X^2 = 20.93, $p < .001$).

- Those who saw the ad four times were more likely to recall more risks compared to those who saw the ad only once (Odds Ratio [OR] = 2.36, $p < .001$) or twice (OR = 1.59, $p < .012$).

Ad exposure frequency was also significantly related to benefit recall (X^2 = 9.34, $p < .009$).

- Those who saw the ad twice (OR = 1.70, $p = .005$) and four times (OR = 1.59, $p = .014$) were more likely to recall more benefits compared to those who saw the ad only once.

H1: As ad exposure frequency increases, recall and recognition of risks and benefits will increase.

Results: Risk and Benefit Recognition

We also found that ad exposure frequency was significantly related to risk recognition ($F(2, 597) = 11.89$, $p = .001$).

- Those who saw the ad four times ($M = 4.91$, $SE = .09$, $p < .001$) and those who saw the ad two times ($M = 4.61$, $SE = .09$, $p = .012$) had higher risk recognition than those who saw the ad only once ($M = 4.30$, $SE = .09$).

We also found a significant relationship between ad exposure frequency and benefit recognition ($F(2, 597) = 3.17$, $p = .043$).

- Planned comparisons show that those who saw the ad four times ($M = 5.23$, $SE = 0.08$, $p = .017$) had higher benefit recognition than those who saw the ad only once ($M = 4.95$, $SE = .08$).

H1: As ad exposure frequency increases, recall and recognition of risks and benefits will increase.

Results: Differential Retention

When comparing those exposed to the ad two and four times, the slope of the relationship between ad exposure frequency and recall of risk information was statistically different than the slope of the relationship between ad exposure frequency and recall of benefit information, B_{risk} = .47, SE_{risk} = .18, $B_{benefit}$ = -.07, $SE_{benefit}$ = .19, z = 2.01, p = .044.

The difference in slopes for the relationship between ad exposure frequency and recognition of risks and ad exposure frequency and recognition of benefits was not significant, p = .0143 for one vs. two exposures; p = .635 for two vs. four exposures.

RQ1: Will risk and benefit information be recalled or recognized differently (e.g., benefits recalled/recognized more easily than risks)?

Results: Risk and Benefit Perceptions

Outcome	Overall	Experimental Condition			
		1 Exposure	2 Exposures	4 Exposures	X^2-value, p-value
	n (%)	n (%)	n (%)	n (%)	
Perceived risk likelihood (% >median = slightly likely-extremely likely)	158 (26.3%)	49 (24.6%)	61 (30.2%)	48 (24.0%)	2.41, .230
Perceived risk magnitude (% >median = somewhat serious-extremely serious)	125 (20.8%)	38 (19.1%)	48 (23.8%)	39 (19.5%)	1.63, .443
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	F-value, p-value
Perceived efficacy likelihood	3.41 (.84)	3.39 (.83)	3.42 (.87)	3.43 (.84)	.11, .896
Perceived efficacy magnitude	3.45 (.84)	3.40 (.85)	3.49 (.82)	3.48 (.84)	.71, .490

No significant differences were detected.

RQ2: Will ad exposure frequency affect risk and efficacy perceptions?

Recap: Key Findings

Retention of risks and benefits was low across experimental conditions, but did improve with ad repetition.

Ad repetition affected recall of risks more than benefits (that is, risk recall continued to improve with additional exposures whereas benefit recall tended to level off).

Risk and efficacy perceptions were not impacted by ad exposure frequency.

Limitations and Future Research

The number of repetitions may have been too low to detect more effects.

- Does risk recall plateau at some point after four ad exposures?
- Does greater ad exposure impact other outcomes?

Future research should assess memory, perceptions, and judgment outcomes after more than four ad exposures.

Practical Considerations

A key problem is that most DTC prescription drug television ads include a substantial amount of information despite known limitations to human memory capacity (Sullivan et al., 2017), with research showing that consumers recall only about one or two risks after viewing a DTC TV ad (Betts et al., 2018), which is not substantially improved after multiple exposures (Betts et al., in preparation).

A likely solution is to simplify DTC TV ad presentations! Consider health literacy, utilize consumer friendly language, implement best practices for ad design, etc.

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Quantitative Risk Information in Direct-to-Consumer Television Ads

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Background

- One way to improve consumers' understanding of medical information is to include quantitative, or numerical, information.[1]

- One study found that adding simple quantitative information about drug *benefits* to DTC TV ads can help improve consumer understanding of benefits.[2]

1. West et al. (2013). Communicating quantitative risks and benefits in promotional prescription drug labeling or print advertising. Pharmacoepidemiology and Drug Safety, 22(5), 447-557.
2. O'Donoghue, et al. (2014). Presenting efficacy information in direct-to-consumer prescription drug advertisements. Patient Education and Counseling, 95(2), 271-280.

Research Questions

- Can adding quantitative *risk* information to DTC TV ads help improve consumer understanding?

- How much quantitative risk information can consumers process?

Study Design

		Risk Presentation		
		No quantitative	General	Specific
Benefit presentation	No quantitative			
	Single outcome			
	Multiple outcome			

Study Design

Risk Presentation		
No quantitative	General	Specific

Risk Presentations

Quantitative	General	Specific
•Side effects of Vistasin include watery eyes, runny nose, loss of eyelashes, pain or stinging during application, •fever, light flashes at the outer edges of vision, loss of depth perception, •sensitivity to light, double vision, and detached retina.		

Risk Presentations

Quantitative	General	Specific
•Side effects of Vistasin include watery eyes, runny nose, loss of eyelashes, pain or stinging during application, •fever, light flashes at the outer edges of vision, loss of depth perception, •sensitivity to light, double vision, and detached retina.	•Side effects that occur in 10% or less of people who take Vistasin include watery eyes, runny nose, loss of eyelashes, pain or stinging during application, •fever, light flashes at the outer edges of vision, loss of depth perception, •sensitivity to light, double vision, and detached retina.	

Risk Presentations

Quantitative	General	Specific
•Side effects of Vistasin include watery eyes, runny nose, loss of eyelashes, pain or stinging during application, •fever, light flashes at the outer edges of vision, loss of depth perception, •sensitivity to light, double vision, and detached retina.	•Side effects that occur in 10% or less of people who take Vistasin include watery eyes, runny nose, loss of eyelashes, pain or stinging during application, •fever, light flashes at the outer edges of vision, loss of depth perception, •sensitivity to light, double vision, and detached retina.	•Side effects that occur in 6-10% of people who take Vistasin include watery eyes, runny nose, loss of eyelashes, and pain or stinging during application. •Side effects that occur in 1-5% of people who take Vistasin include fever, light flashes at the outer edges of vision, and loss of depth perception. •Side effects that occur in less than 1% of people who take Vistasin include sensitivity to light, double vision, and detached retina.


Side effects include watery eyes, runny nose, loss of eyelashes, pain during application
Side effects in 10% or less of people: Watery eyes, runny nose, loss of eyelashes, pain during application
Side effects in 6-10% of people: Watery eyes, runny nose, loss of eyelashes, pain during application

Procedure

- 20-minute study online
- Ad for fictitious prescription drug for cataracts

Participants were:

- Randomly assigned to view 1 of 9 TV ads
- Shown ad twice, then asked questions

Participants

- 945 US adults 60 years of age or older
- Internet panel

Participants

- 44% Currently or previously had cataracts
- 50% High school education or less
- 50% Male
- 83% White, 14% Black

Results

Two Kinds of Memory

Verbatim Memory

- For example, knowing the exact numbers in the ad

Gist Memory

- For example, knowing the idea the number conveyed, even if you don't remember the exact numbers

Gist Memory

Almost everyone who takes Vistasin will experience at least one side effect.

- Correct answer: False

Some of Vistasin's side effects are more likely to occur than others.

- Correct answer: True

Gist Memory

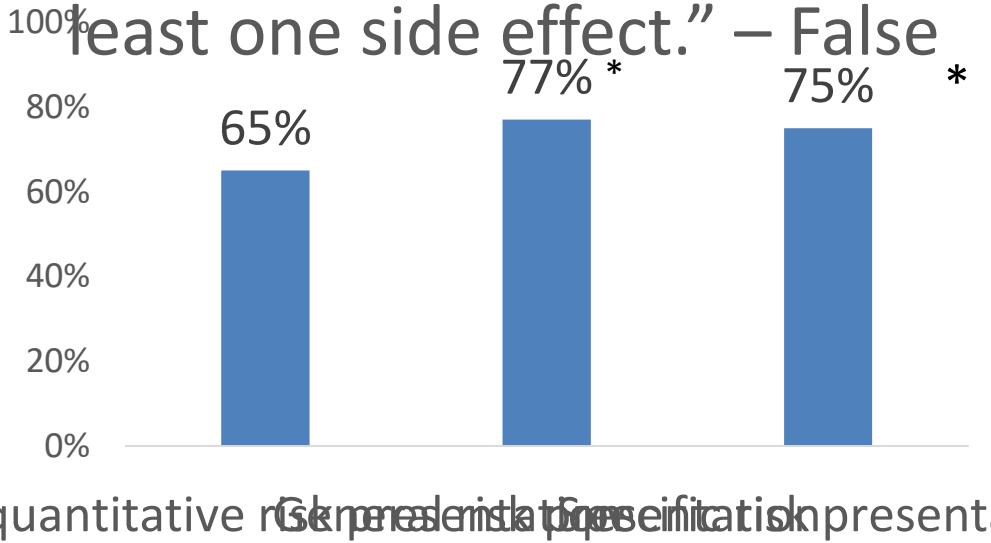
Vistasin's most common side effects occur in what percent of people who take it?"

- Correct answer: 6-10%

Vistasin's least common side effects occur in what percent of people who take it?"

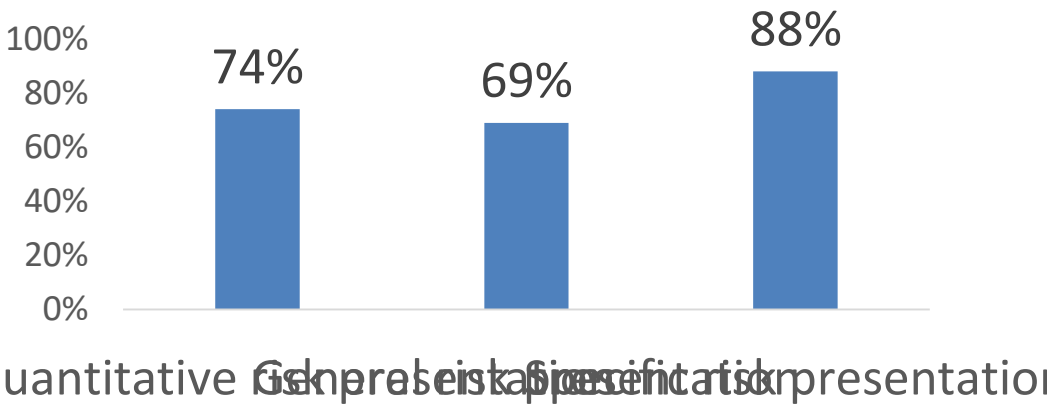
- Correct answer: < 1%

“Almost everyone who takes Vistasin will experience at least one side effect.” – False

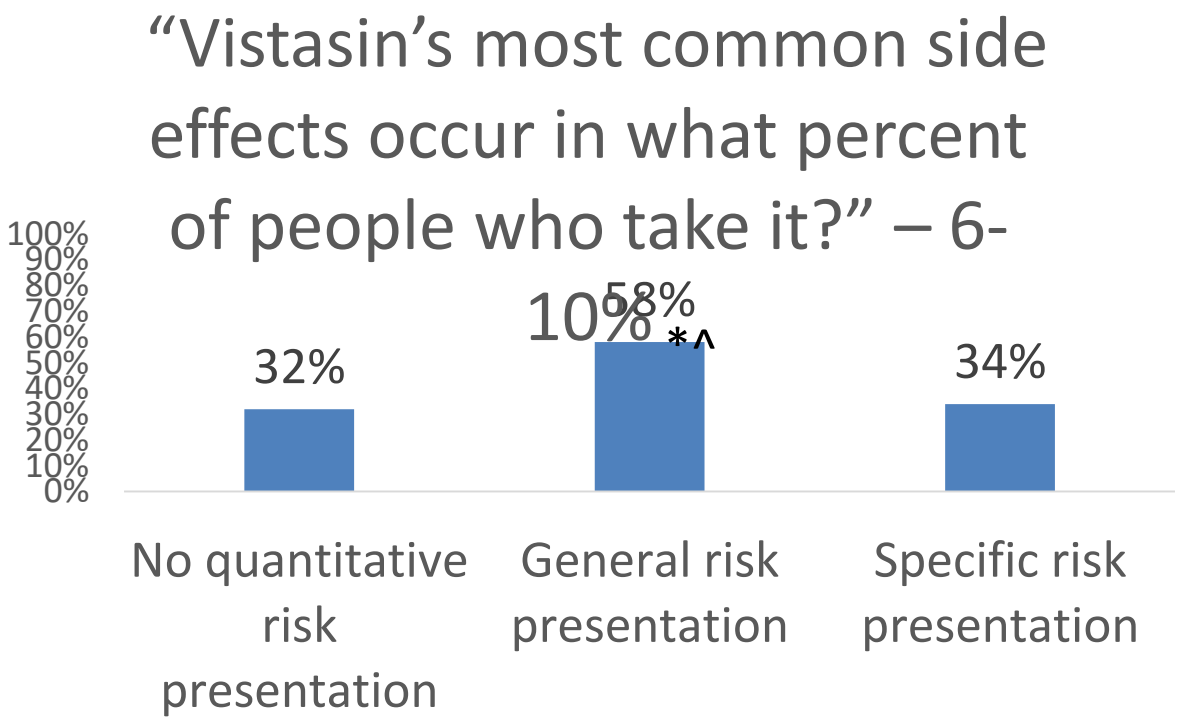


* = $p < .017$

“Some of Vistasin’s side effects are more likely to occur than others.” *^ – True

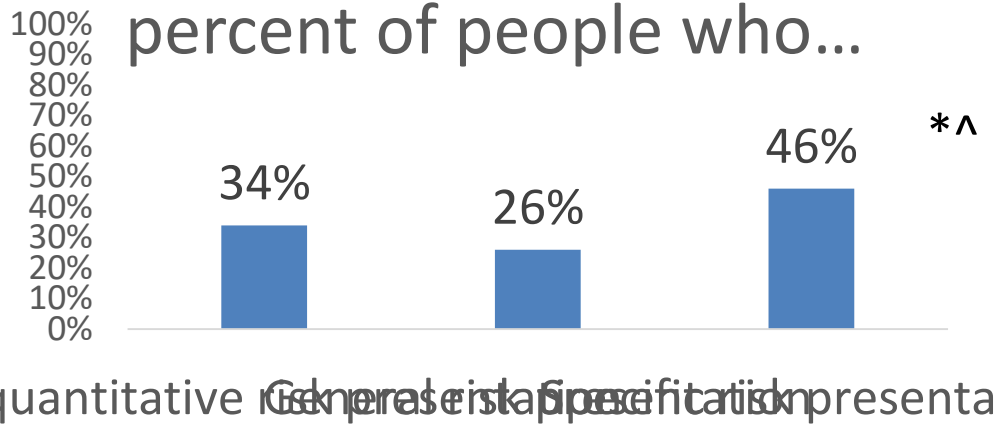


* = $p < .017$
^ = $p < .017$


“Vistasin’s most common side effects occur in what percent of people who take it?” – 6-10%
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
32%
58%
*^
34%
No quantitative risk presentation
General risk presentation
Specific risk presentation

* = $p < .017$
^ = $p < .017$

“Vistasin’s least common side effects occur in what percent of people who…

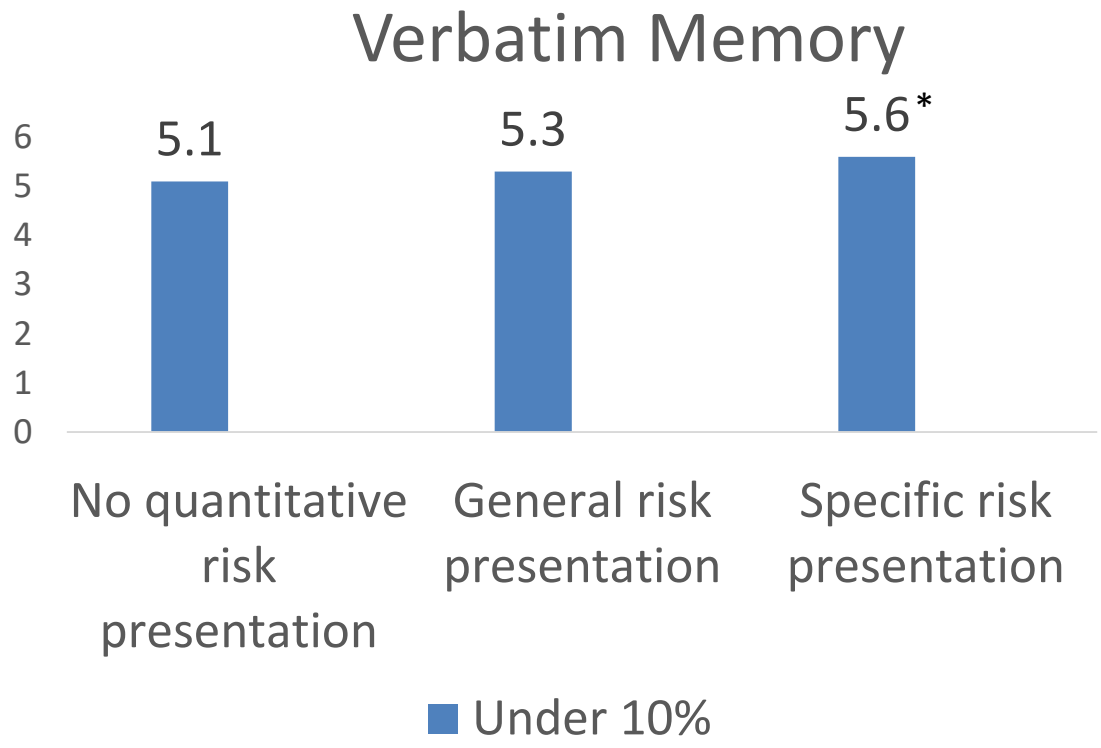


* = $p < .017$
^ = $p < .017$

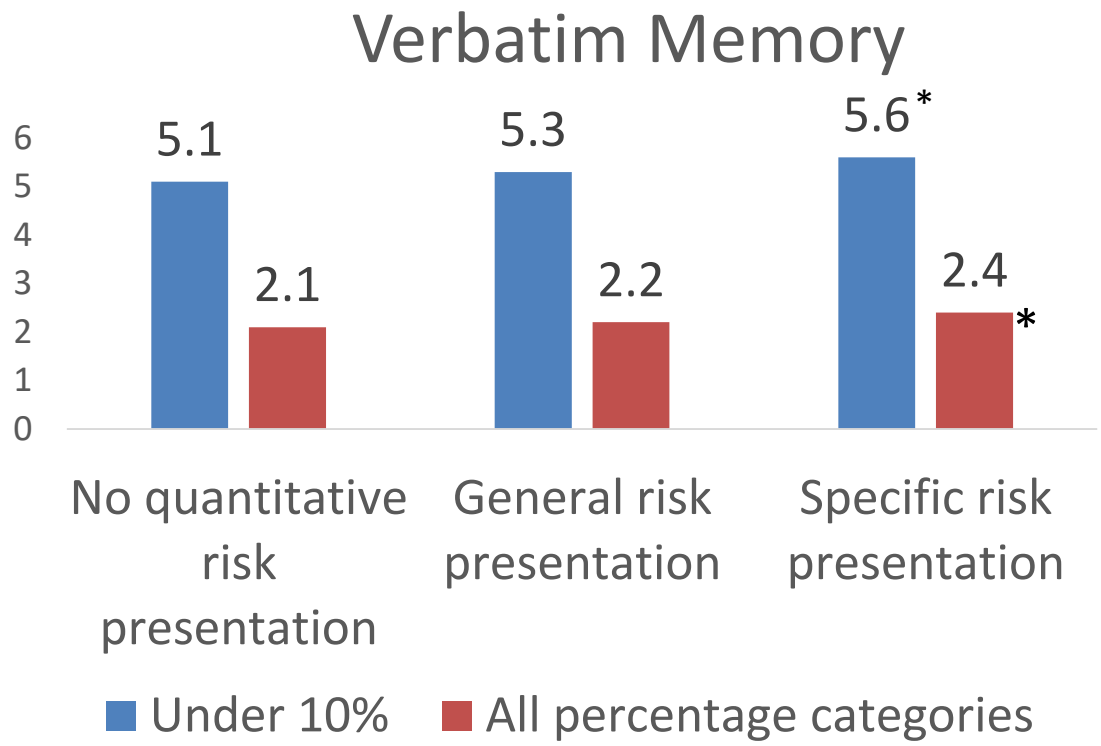
Verbatim Memory

Side effect occurs in ____ of people who take Vistasin.

% / Side Effect	Less than 1%	1%-5%	6-10%	11-15%	16-20%
Watery Eyes			X		
Runny Nose			X		
Fever		X			
Loss of Depth Perception		X			
Double Vision	X				
Detached Retina	X				


Verbatim Memory
6
5
4
3
2
1
0
5.1
5.3
5.6*
No quantitative risk presentation
General risk presentation
Specific risk presentation
Under 10%

* = $p < .017$


Verbatim Memory
6
5
4
3
2
1
0
5.1
2.1
5.3
2.2
5.6*
2.4
*
No quantitative risk presentation
General risk presentation
Specific risk presentation
Under 10%
All percentage categories

* = $p < .017$

Perceived Risk

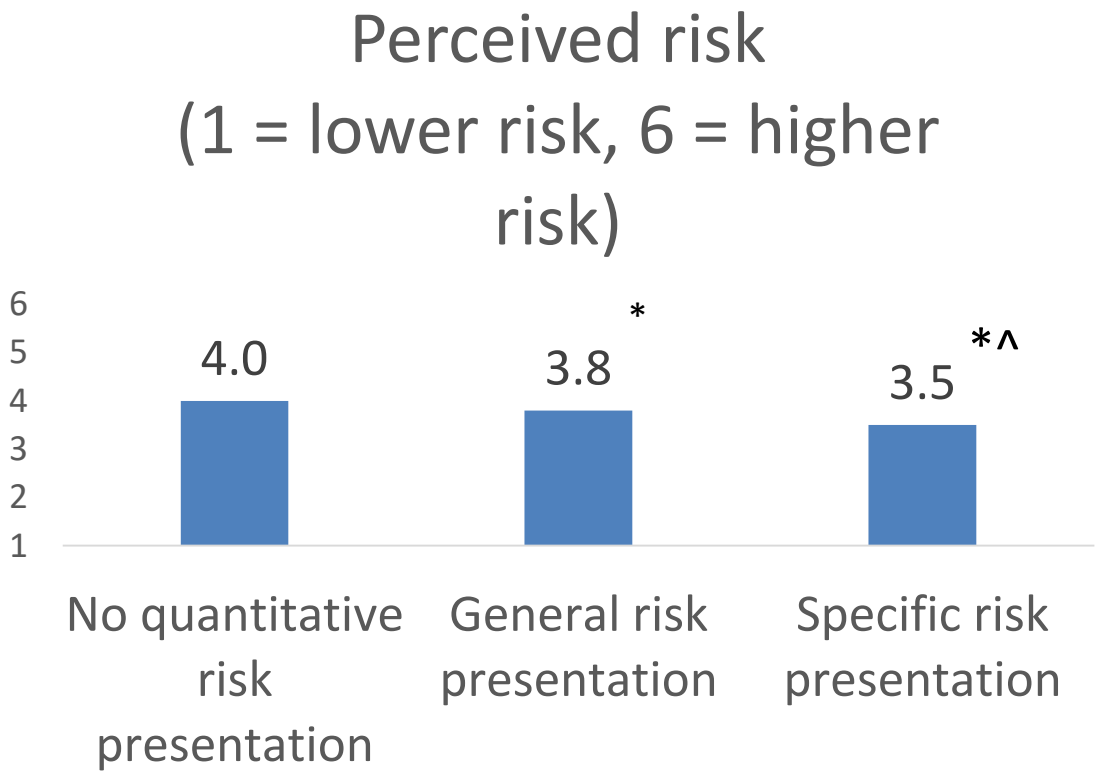
Vistasin is riskier than other treatments for cataracts.

How serious are Vistasin's side effects?

How bothersome would Vistasin's side effects be?

1 2 3 4 5 6

← Less risky more risky →


Perceived risk
(1 = lower risk, 6 = higher risk)
6
5
4
3
2
1
4.0
3.8
*
3.5
*^
No quantitative risk presentation
General risk presentation
Specific risk presentation

* = $p < .017$
^ = $p < .017$

Limitations

- One ad
- One medical condition
- Participants were at-risk, but did not all have the medical condition

Summary

- Consumers can process quantitative information about a drug's risks in DTC TV ads.

- Specific risk information may help consumers have a better understanding of a drug's safety profile.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