



Using Social Media Feedback to Improve FDA Risk Communication

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Actions in FDA's Strategic Plan for Risk Communication

Strengthen Science

- Monitor media and Web coverage of risk communication messages and survey consumer understanding and reported behaviors in response to risk communication during a food outbreak recall
- Assess utility/effectiveness of social media tools for reaching target audiences, including how the social media is covering FDA's messaging during a recall

Actions in FDA's Strategic Plan for Risk Communication

Expand Capacity

- Establish a significant new data collection mechanism to measure consumer reaction to food recalls and outbreaks on a just-in-time basis to adjust messages during the emergency for the greatest effectiveness

Addressing these Actions

- Interagency Agreement with CDC: Harvard Opinion Research Project
- Interagency Agreement with CDC: on-line survey of social media users about how they get food recall, and got egg recall, information
- Contract with Nielsen McKinsey Incite to follow social media coverage of food outbreak recalls over period of weeks

On-Line Coverage

- Contract designed to follow one food-borne outbreak retrospectively (12/1/08 – 4/30/09) and one outbreak prospectively for 22 weeks
- Initial report detailed on-line conversations about 2009 peanut product/peanut butter *Salmonella Typhimurium* outbreak
- In early fall 2010, followed 4 weeks of coverage associated with shell egg recall
- Reassessed needs and confirmed contract flexibility

Objectives

- Historical and “real-time” assessment
- Identify:
 - most frequently discussed themes/threads
 - discussants’ primary information sources
 - understanding of and reaction to government-disseminated consumer information about issue
- Assess sentiments, comments, suggestions about government management of issue

Methodology

- Automated system examines millions of sites for search terms and identifies relevant messages
 - blogs, boards, forums, groups, micro-blogs, traditional media
- Quantitative analyses of volume, sources, terms
- Sample of 100 messages per week randomly selected from those identified during search
 - analyzed qualitatively – margin of error $\pm 10\%$ at 95% confidence level
 - themes
 - sentiment

Issues Followed

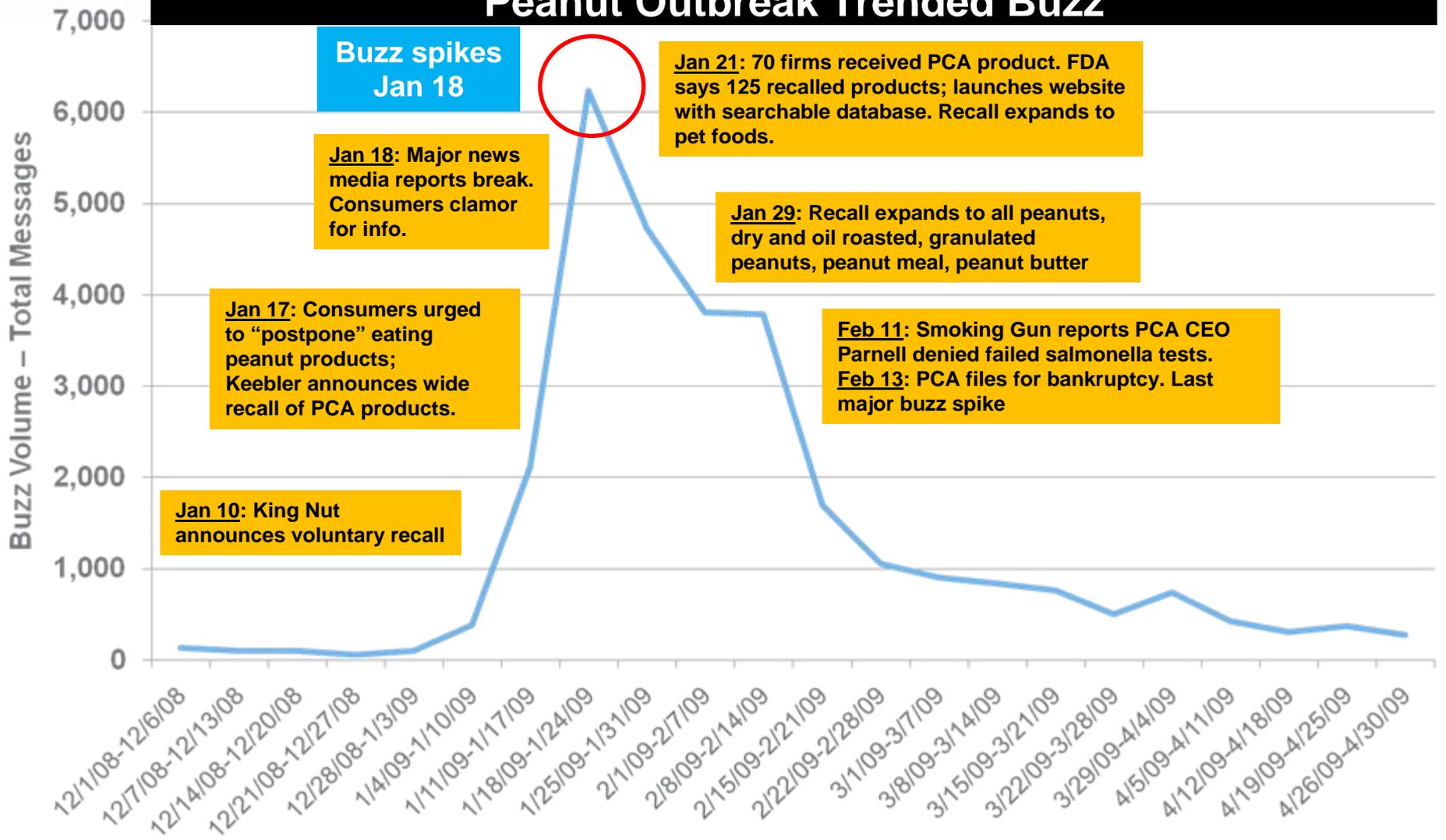
- Peanut Product Recall (22 weeks)
- Shell Egg Recall (4 weeks)
- Caffeinated Alcoholic Beverages Ban (2 weeks)
- GE Salmon/GM Foods (background)
- Graphic Cigarette Labels
- Infant Sleep Positioner Warning
- Acetaminophen Combination Products Warning
- Avastin Warning
- Tainted Dietary Supplements (2 non-consecutive weeks)
- Breast Implants (background)
- Sodium – Dietary Guidelines for Americans (2 weeks)
- Prescription opioids/prescription drug abuse (2 weeks)

Longitudinal Analysis

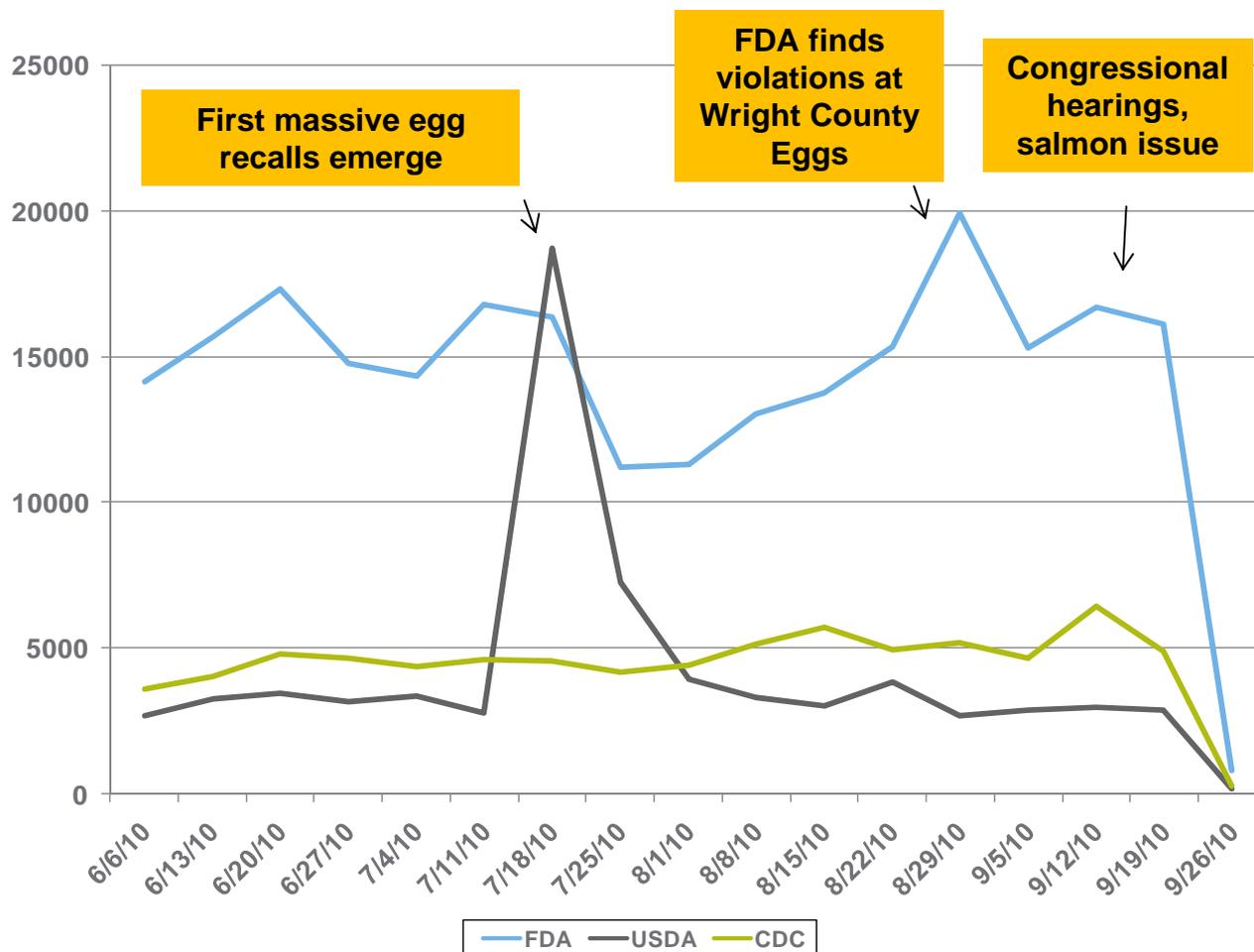
- Allows examination in greater detail
- Peanut product recall
- Shell egg recall

***Note: All examples are included only for illustrative purposes.**

Peanut Outbreak Trended Buzz



Buzz volume is depicted as total messages for Peanut Butter Outbreak from December 1, 2008 to April 30, 2009. Microblog (Twitter) data from January 9, 2009. 10



Buzz volume is depicted as total messages for the FDA, USDA, and CDC from June 1, 2010 to September 26, 2010.

Within discussions about the Congressional hearings, consumers debate FDA and USDA authority. FDA continues to attract more overall buzz.

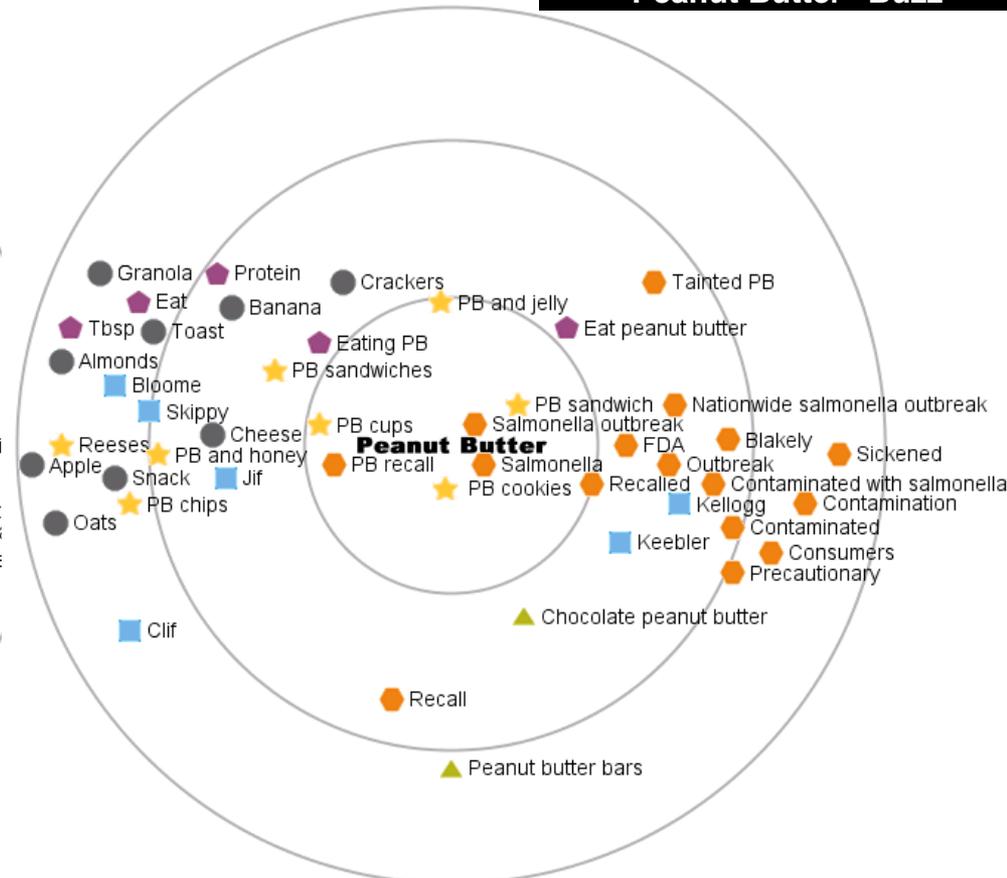
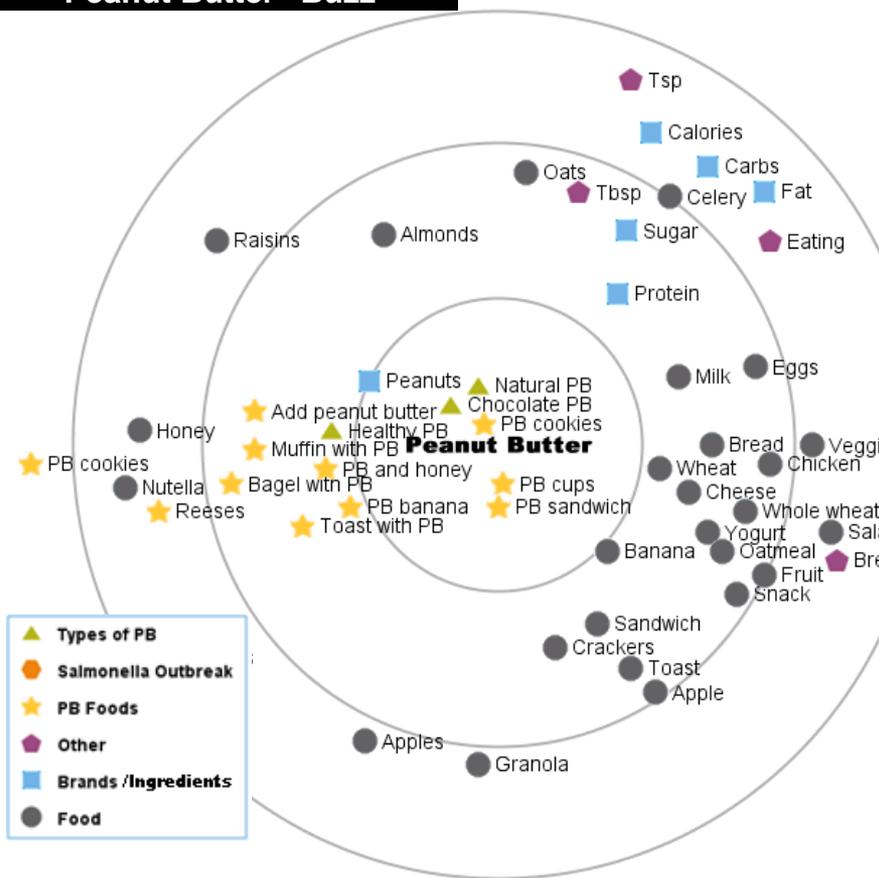
FDA and USDA inspections of the Iowa farms, prior to the recall, are called into question.

Some consumers worry that neither agency did its job because of other incentives/priorities; some feel neither agency has enough inspection authority.

Negativity clusters around “peanut butter” in the midst of the recall. Consumers educate others by mentioning specific brands associated with the recall.

Pre-Recall
Dec. 15, 2008 – Jan. 9, 2009
“Peanut Butter” Buzz

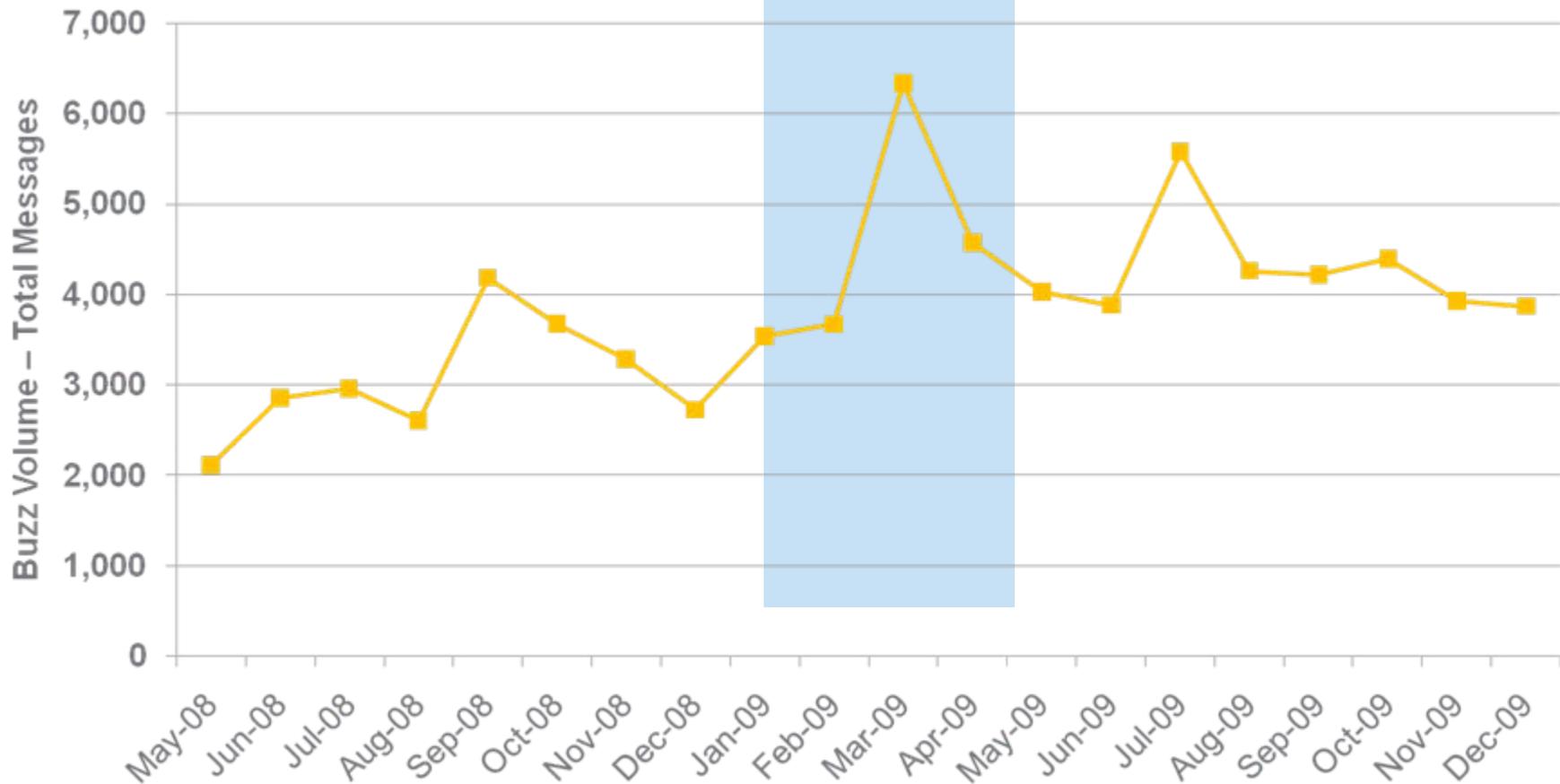
During Recall
January 10 – 24, 2009
“Peanut Butter” Buzz



Association map based on buzz volume for FDA in both time periods.

Food safety buzz rises after outbreak, suggesting concern beyond current event

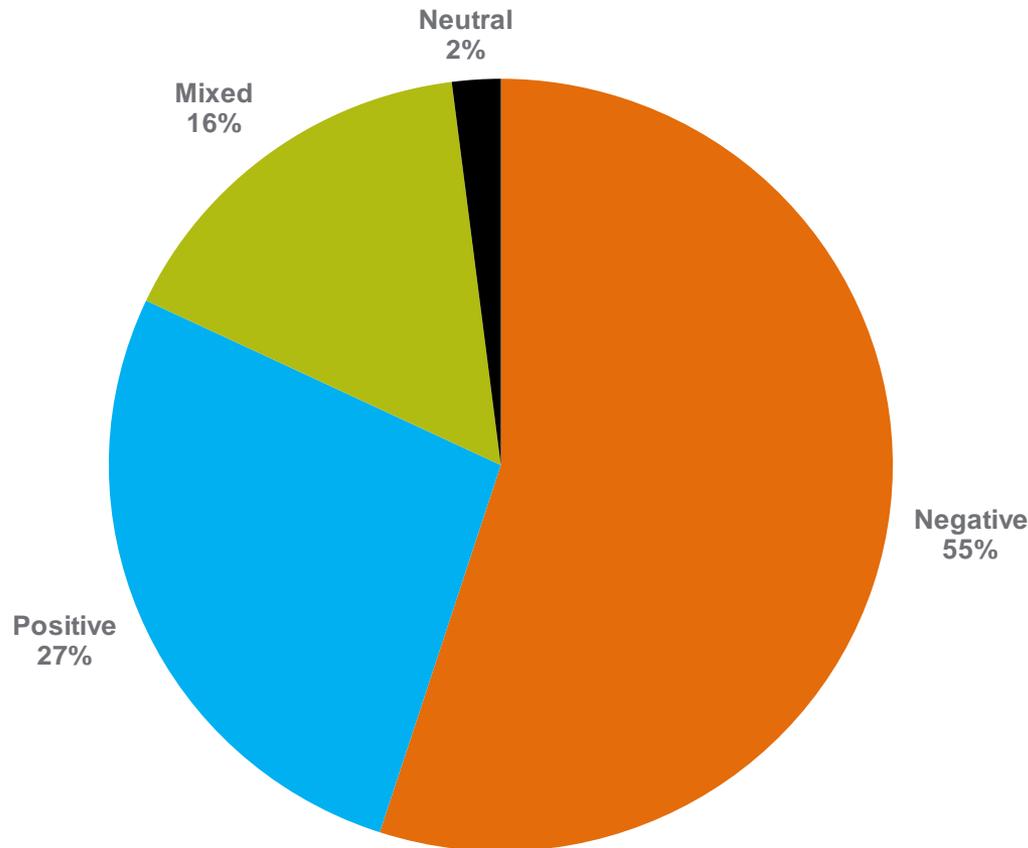
Food Safety Buzz – 2009



Buzz volume is depicted raw number of mentions about Food Safety.

Short-Term Qualitative Analyses

- For communications planning purposes
 - areas of concern
 - knowledge gaps
 - trusted sources
 - etc.



Sentiment Leans Negative For GM Salmon

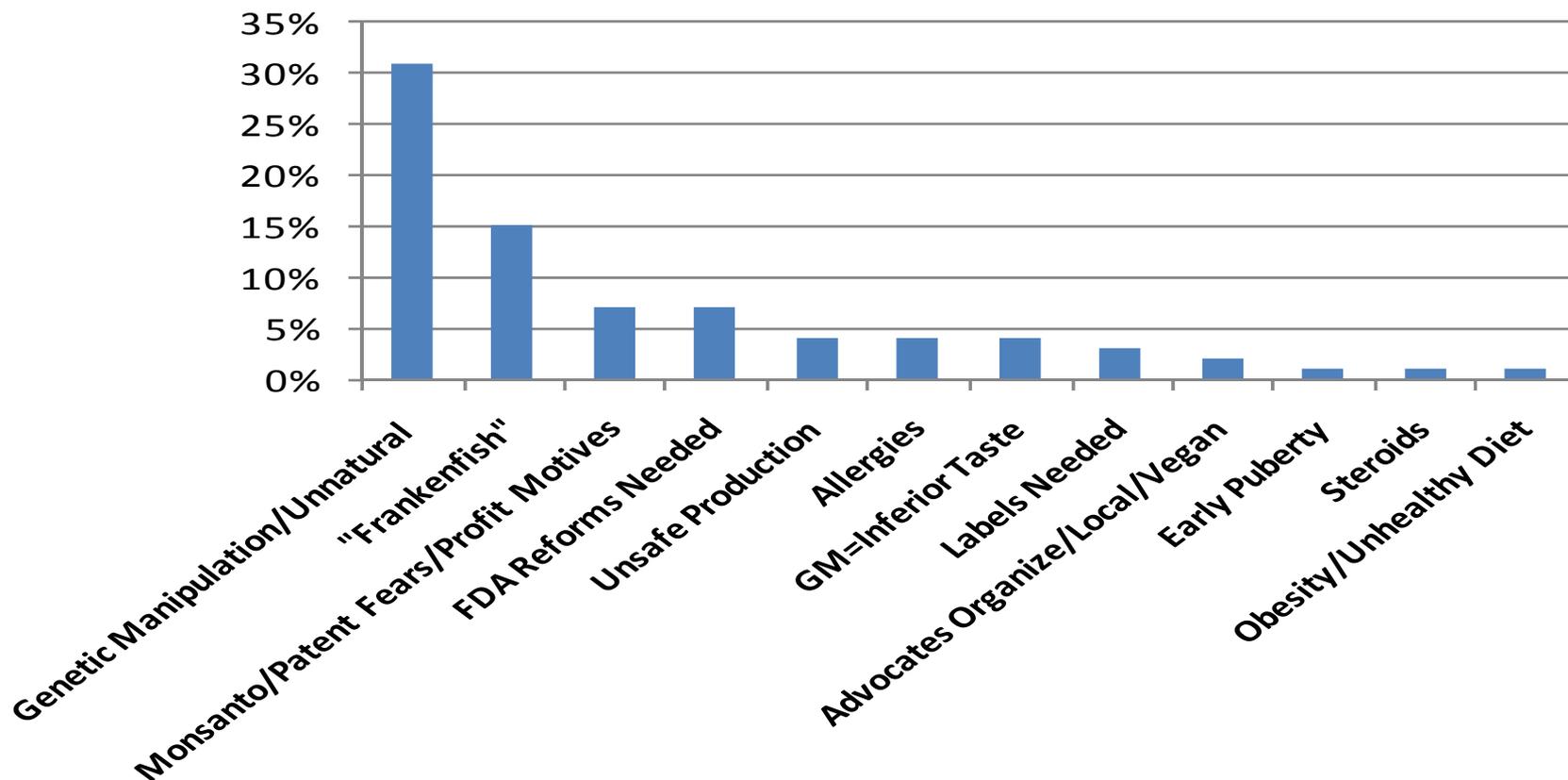
Negative: Opponents of GM salmon tend to think it is an unnatural food with unknown scientific and health risks

Positive: Supporters feel GM salmon has been tested and can serve as a solution to poverty

Mixed: Consumers take a wait-see attitude; want more info/studies

Consumers who oppose genetically modified salmon feel it is an unnatural phenomenon or the result of genetic manipulation; 15% refer to it as “franken fish.” Many feel more FDA oversight is needed to counteract the influence of private companies that patent, test and produce foods.

Negatives/Fears

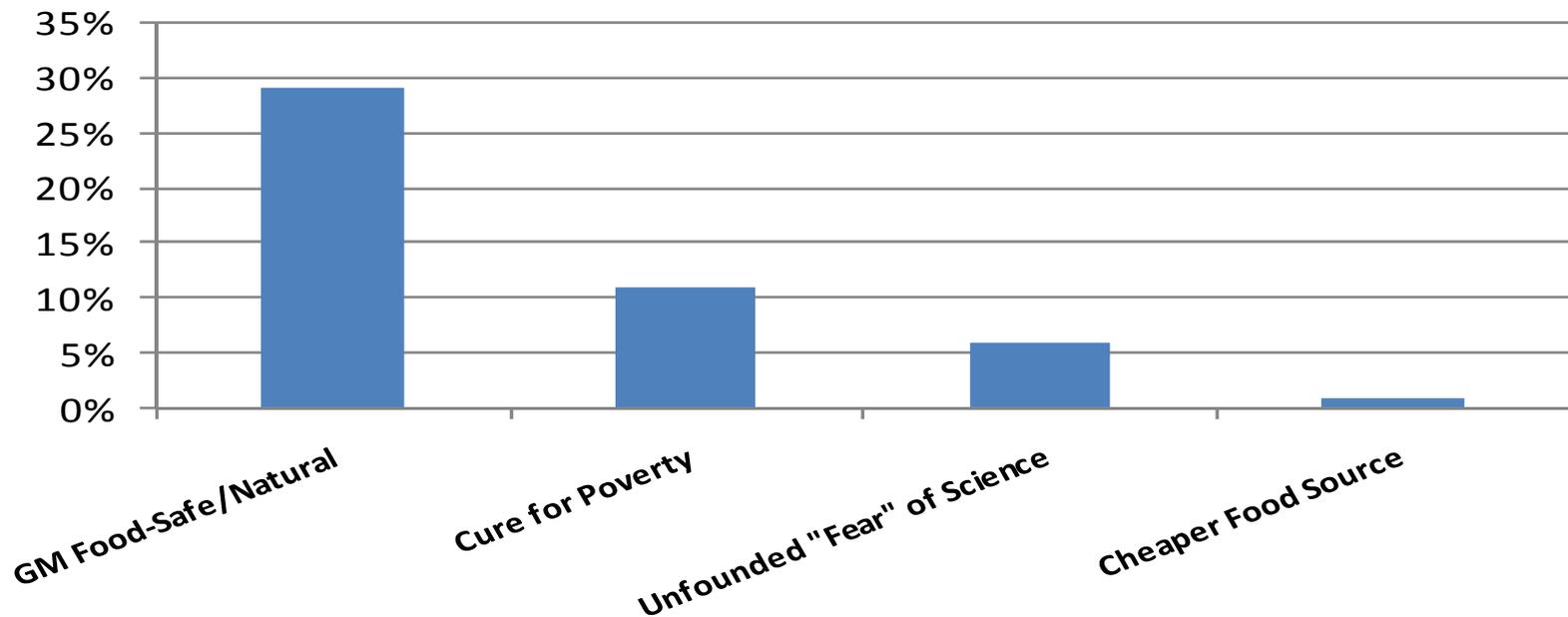


“Will be going Vegetarian at the minimum if the FDA oks genetically modified salmon to be in the food supply....”

% is from a sample of 80 negative-message topics

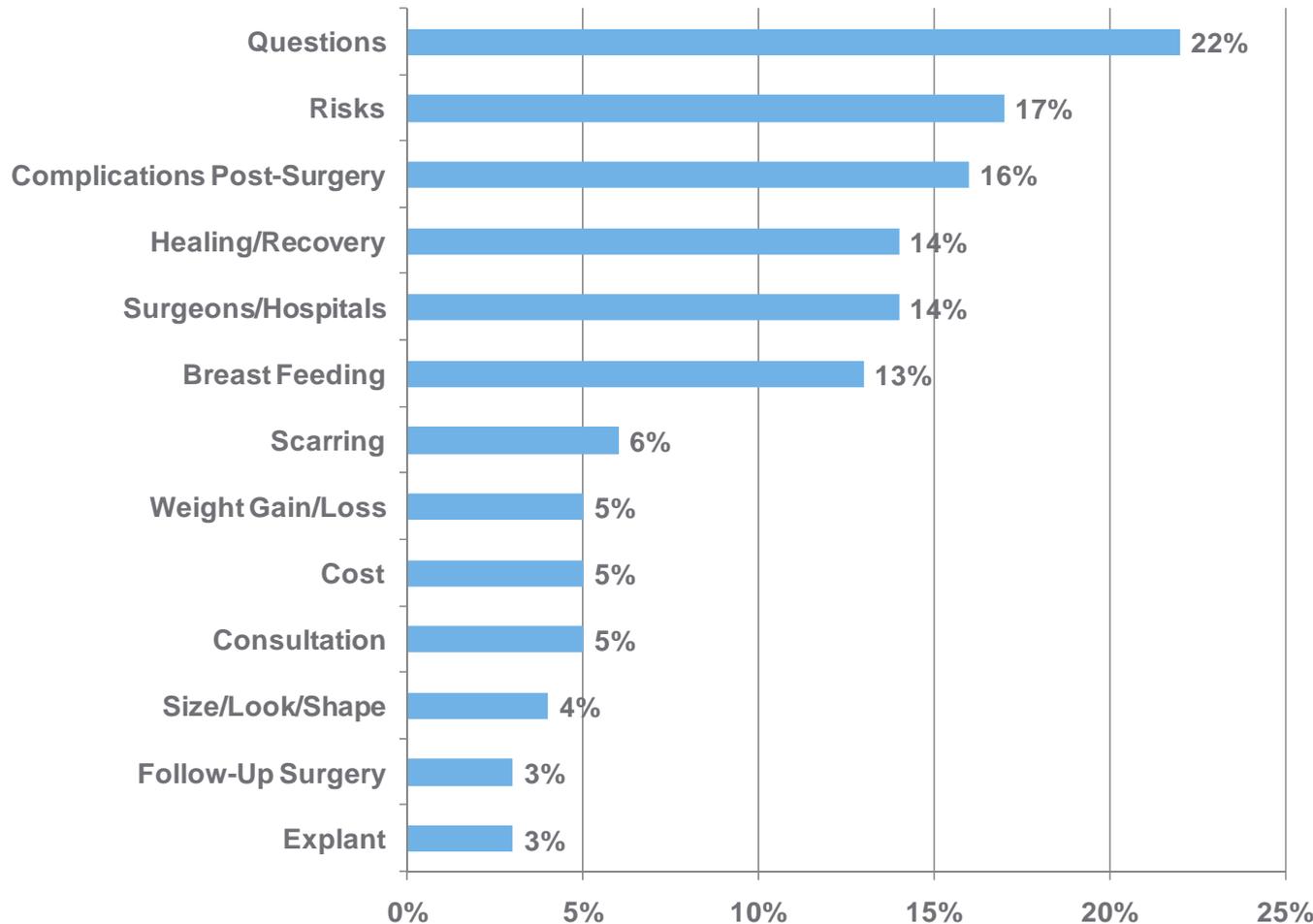
Consumers who support genetically modified salmon (27%) feel that GM foods are well tested and safe – or no different than mutations that take place in nature. In addition, 11% feel that GM foods could provide solutions to poverty/hunger, and they feel that opponents based their decisions on unfounded fears of science.

Positives/Support



Percents are from a sample of 47 positive-message topics

Topics of discussion within breast implant conversation



- Questions include which doctor to use, procedure options and healing time
- Some are concerned about implant risks, including eruption, health issues and cancer
- Numbness, scarring, swelling are some complications women experience during healing/recovery
- Women ask about breastfeeding with breast implants

Sentiment is qualitatively assessed. Volume is determined as a percent of a sample of 100 total messages for breast implants from October 1, 2010 through March 24, 2011.

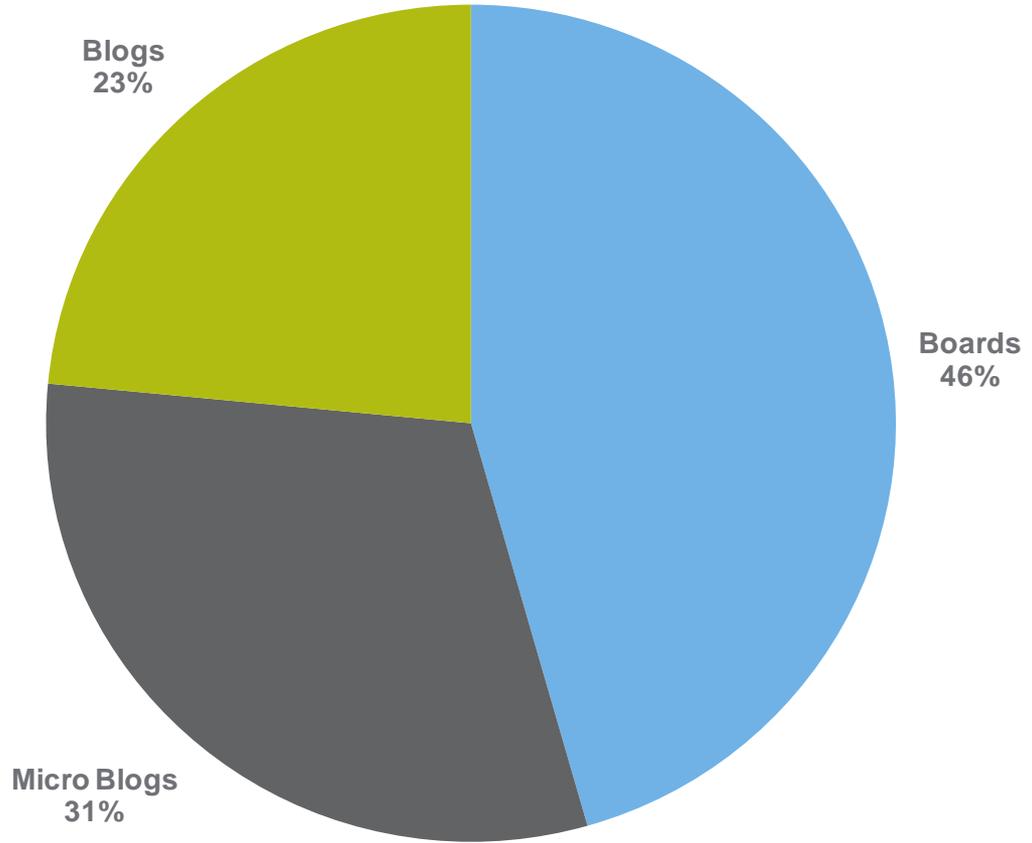
Short-Term Qualitative Analyses

- For communications evaluation purposes
 - can assess “pick-up” and understanding of FDA and other government or non-government messages
 - what sources were most attended to
 - what channels accounted for the greatest dissemination
 - etc.

Sleep Positioner Buzz Sources- By Social Media Platform

Board members drove 46% of buzz during the week of 9/24 – 10/4, followed by Twitter at 31%.

Board topics: Mainly mothers share information within boards. They debate further usage of sleep positioners, past usage of the devices, and the decision of the FDA and CPSC to issue a joint warning.



Buzz volume is depicted as total messages for the Sleep Positioner Warning from September 29, 2010 to October 4, 2010.



Parenting sites drive most of the warning-related sleep positioner discussion

Top Forums	Category	Traffic Unique Audience (000)
Justmommies.com	Parenting	313
Pregnancy.org	Parenting	88
Tallahassee.momslikeme.com	Parenting	NA
Cafemom.com	Parenting	3,150
Themommyplaybook.com	Parenting	NA
Messageboards.ivillage.com	Parenting	13,713
Tampabay.momslikeme.com	Parenting	NA
Forums.hippymom.com	Parenting	NA
Community.babycenter.com	Parenting	3,463
Lifamilies.com	Parenting	NA

Top sites for Sleep Positioner Recall, ranked by message volume. Traffic data source: Nielsen Netratings, September 2010 * Sample data is low and numbers should be used directionally.

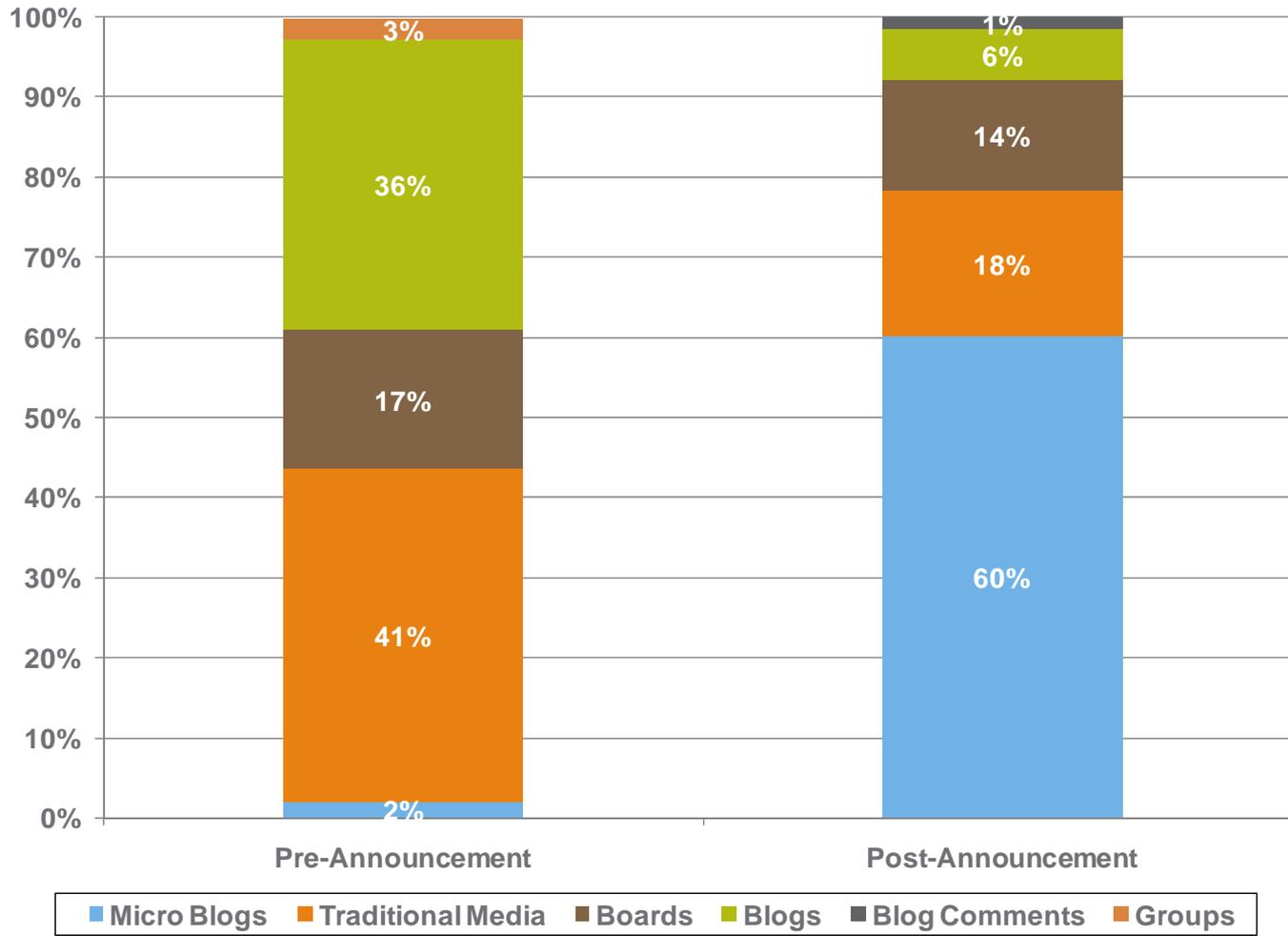
Sources of Buzz: Blogs, Boards, Groups

Health sources drive much of Acetaminophen buzz; patients discuss what the warnings mean for them.

Top sites	Number of Messages	Category
Medhelp.org	13	Boards
Allnurses.com	13	Boards
Freerepublic.com	13	Boards
Arthritis.org	12	Boards
Dailystrength.org	6	Boards
Topix.net	6	Boards
Healthcentral.com	5	Boards
Yahoo! Groups:Ra-support	5	Groups
Developers.evrsoft.com	4	Boards

Top sites for Acetaminophen, ranked by message volume.

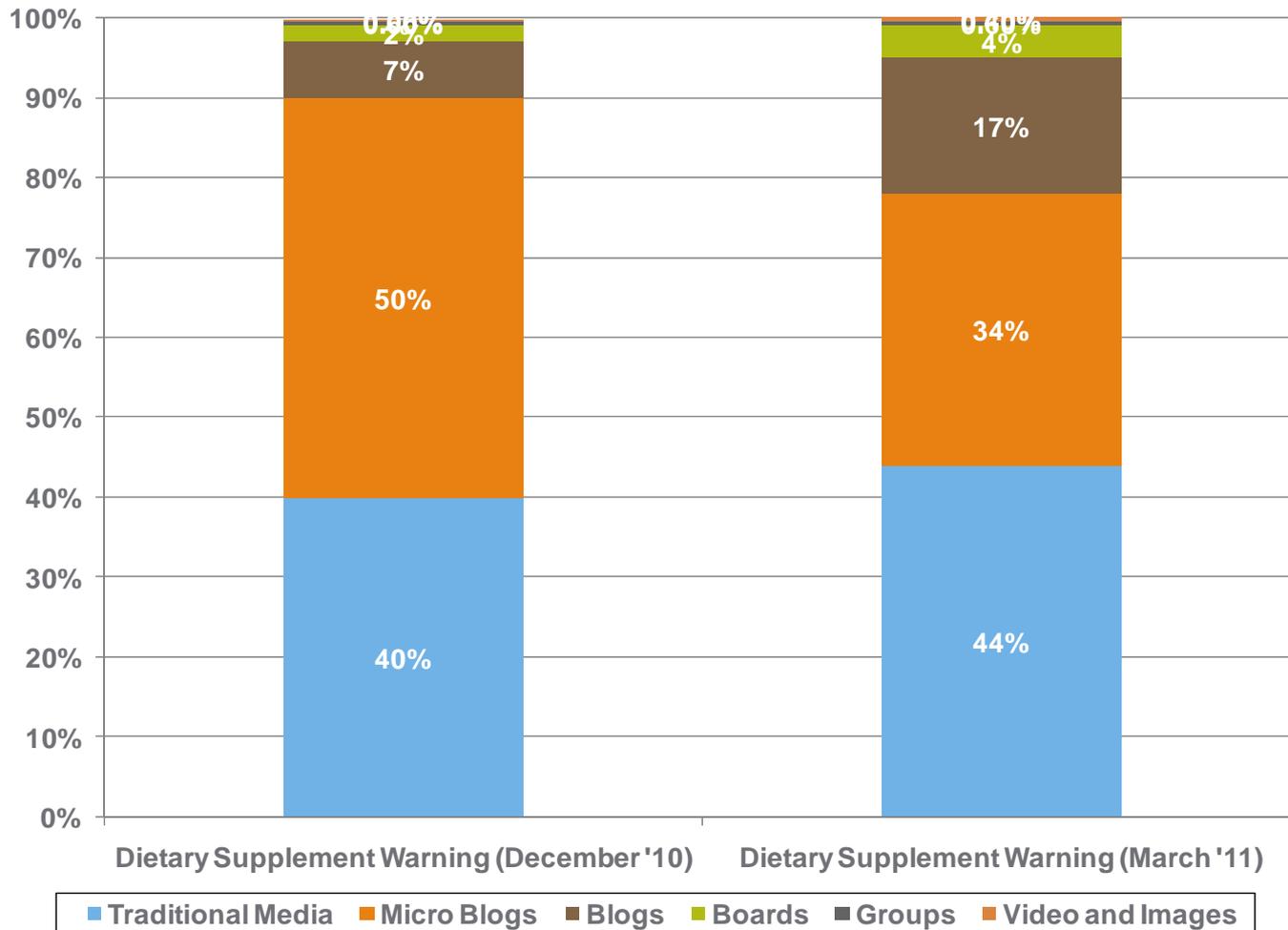
Sodium Related Buzz Sources - By Social Media Platform



- Consumers lean heavily on Twitter to share information about the updated sodium guidelines
- 18% of the buzz comes from traditional media coverage
- Pre-announcement buzz comes from blogs and media, with focus on diet/nutrition

Percentages are based on total messages mentioning sodium guidelines from 1/23/11-1/30/11 (pre-announcement) and 1/31/2011-2/7/2011 (post-announcement.)

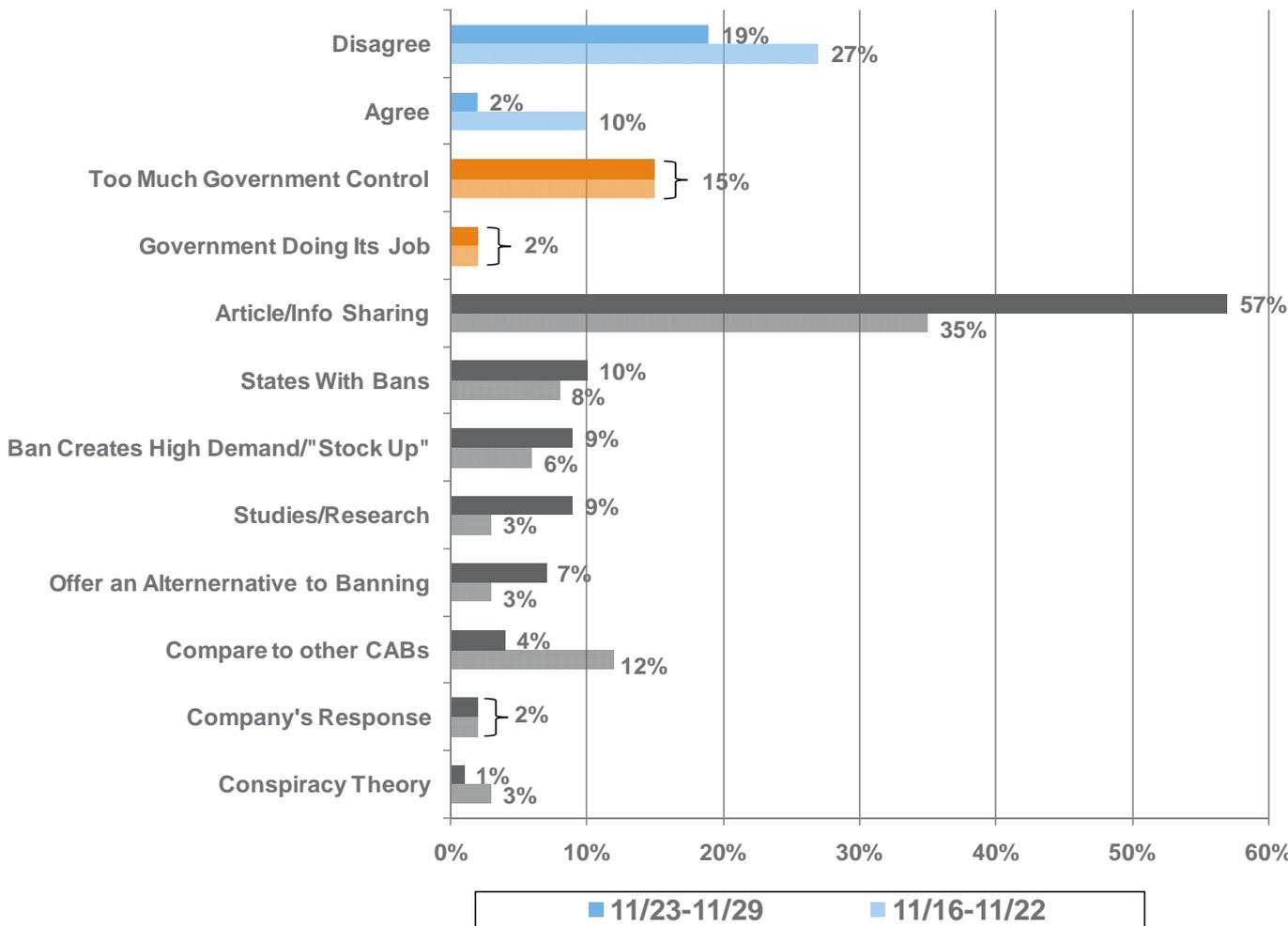
Tainted Dietary Supplement Buzz Sources- By Social Media Platform



- Almost half of buzz is driven by traditional media articles
- During the December update, discussion was greater on Twitter (50%) than it is in March (34%)

Percentages are based on total messages mentioning dietary supplement warnings from December 12, 2010 through December 18, 2010 and March 15, 2011 through March 21, 2011 across boards, blogs, groups, traditional media, microblogs and blog comments within the timeframe.

Topics of Discussion for Caffeinated Alcoholic Beverages Warning

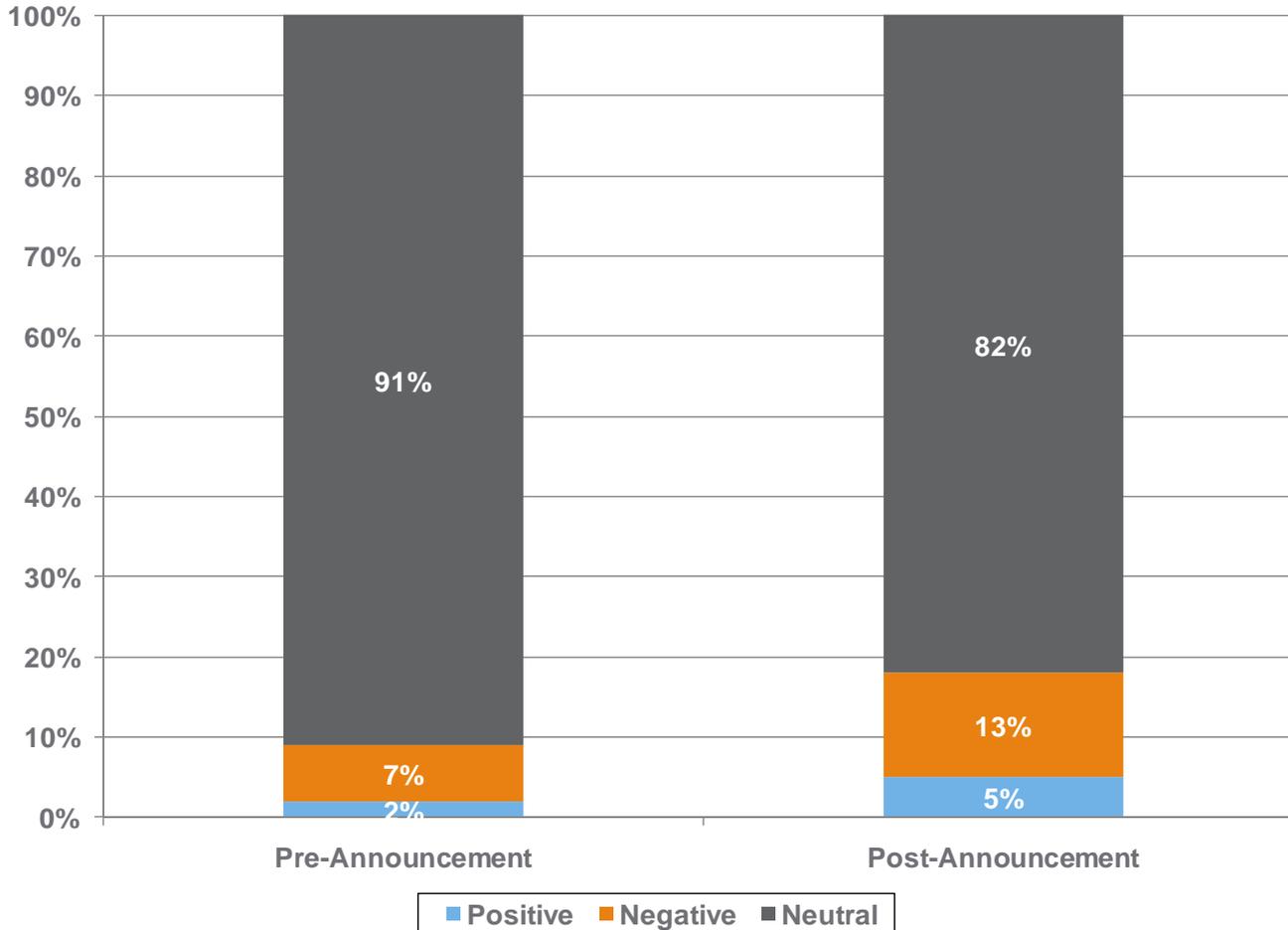


- Support for the ban drops to 2% (Nov. 23-29) from 10% (Nov. 16-22)
- Opposition to the ban drops to 19% (Nov. 23-29) from 27% (Nov. 16-22).
- 57% of buzz involves information-sharing (Nov. 23-29), up from 35% (Nov. 16-22)
- Some opponents think the government is too controlling
- Some debate the studies/research used to declare CABs unsafe

Discussion topics are qualitatively assessed. Volume is determined as a percent of a sample of 100 total messages for CABs warning letters from Nov 23-29, 2010. Darker bars are Nov. 23-29 data; lighter bars are Nov. 16-22 data.

Negative Sentiment Towards the FDA Increases

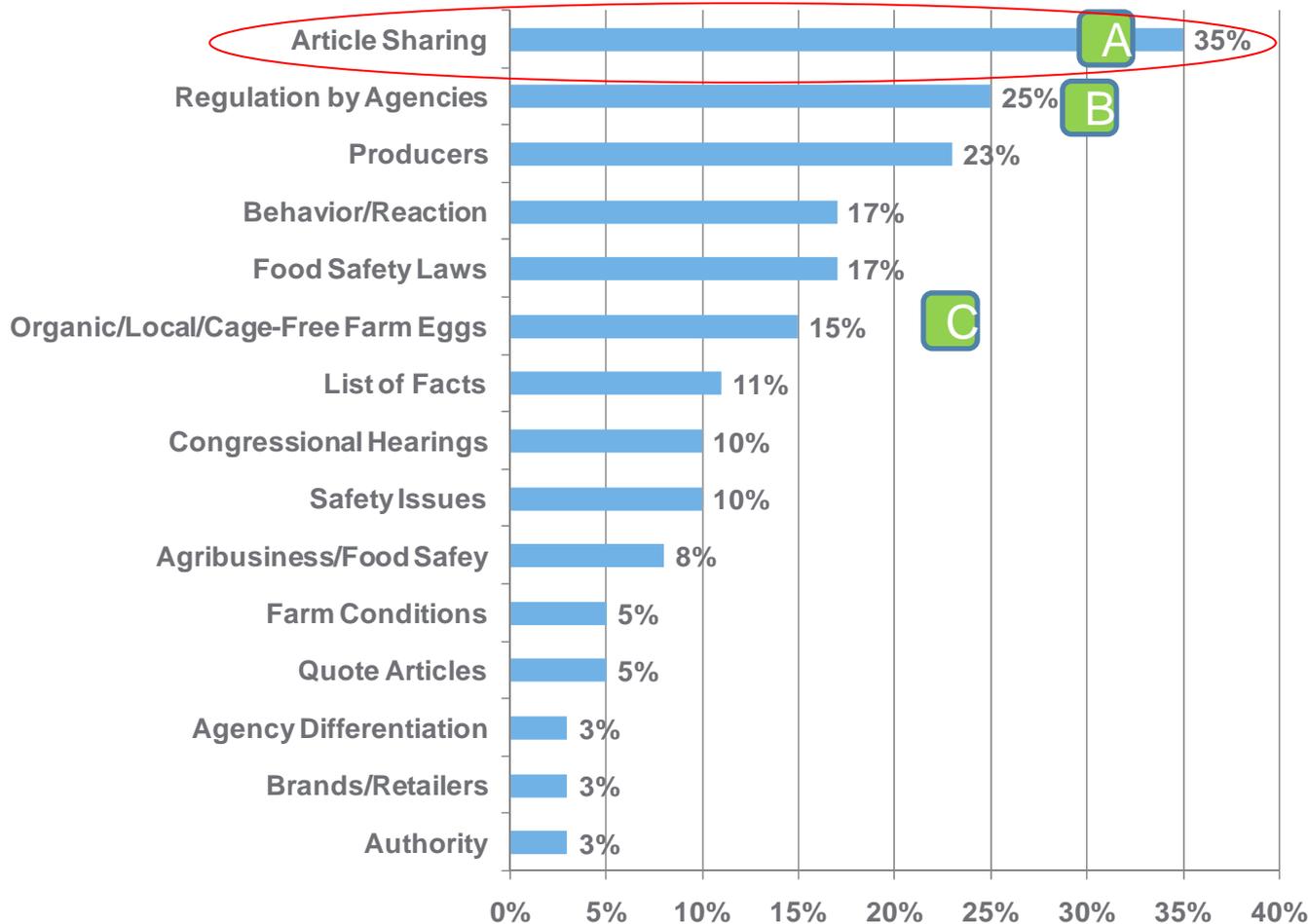
Sentiment toward the FDA within prescription drug abuse discussions



- Pre-announcement consumers are concerned that the FDA is violating the rights of legitimate patients
- Post-announcement negativity toward the FDA increases; consumers say the plan is “irresponsible and off-base”, “another step in the wrong direction” and too much control by the government
- Advocates express that the regulation is necessary and that “poor opiate prescribing practices is [due to] lack of education”

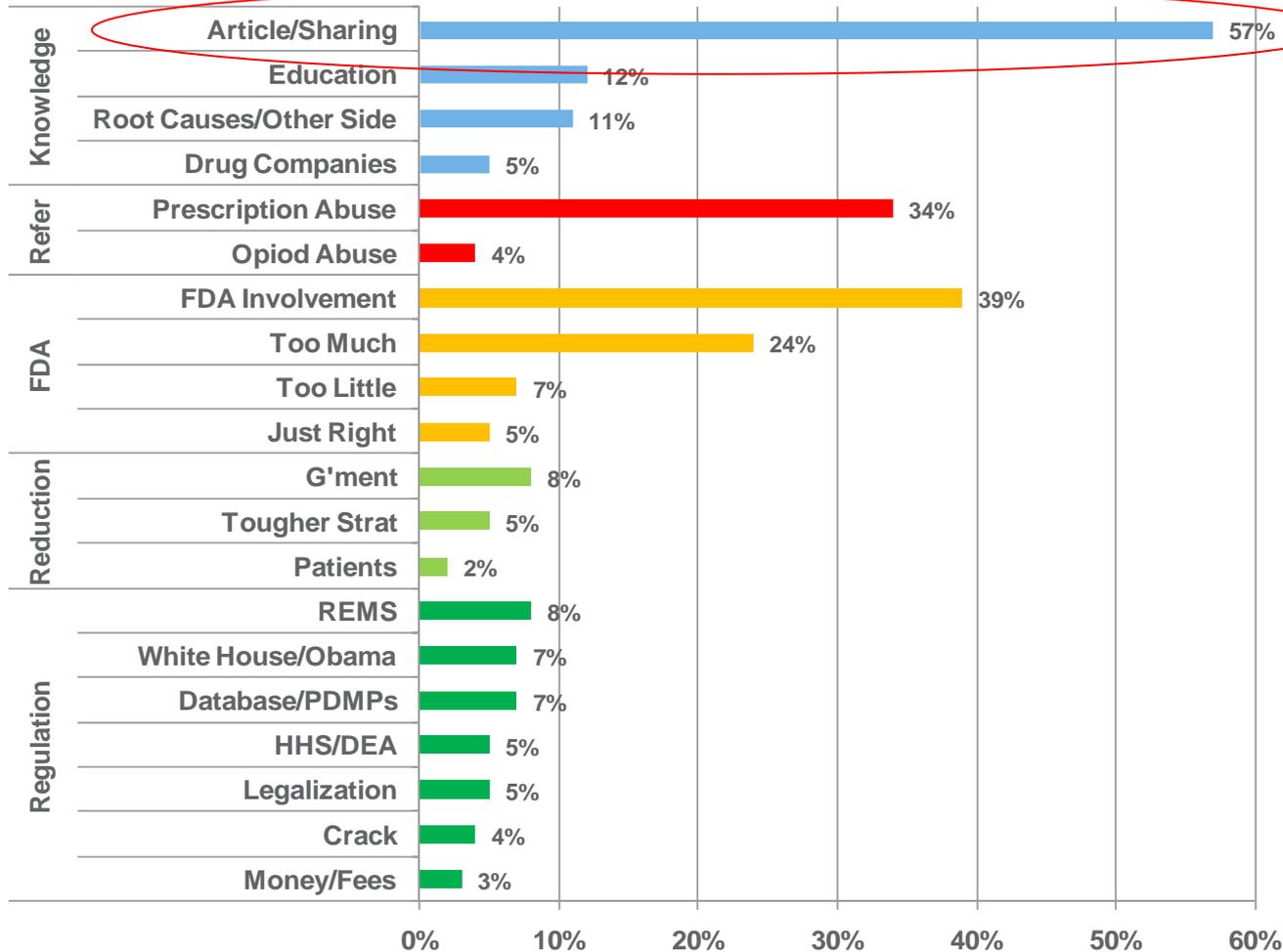
Sentiment is qualitatively assessed. Volume is determined as a percent of a sample of 100 total messages each for prescription drug abuse from 4/12/11-4/18/11 (pre-announcement) and 4/19/2011-4/25/2011 (post-announcement.)

Topics of Discussion for the FDA and USDA During the Egg Recall

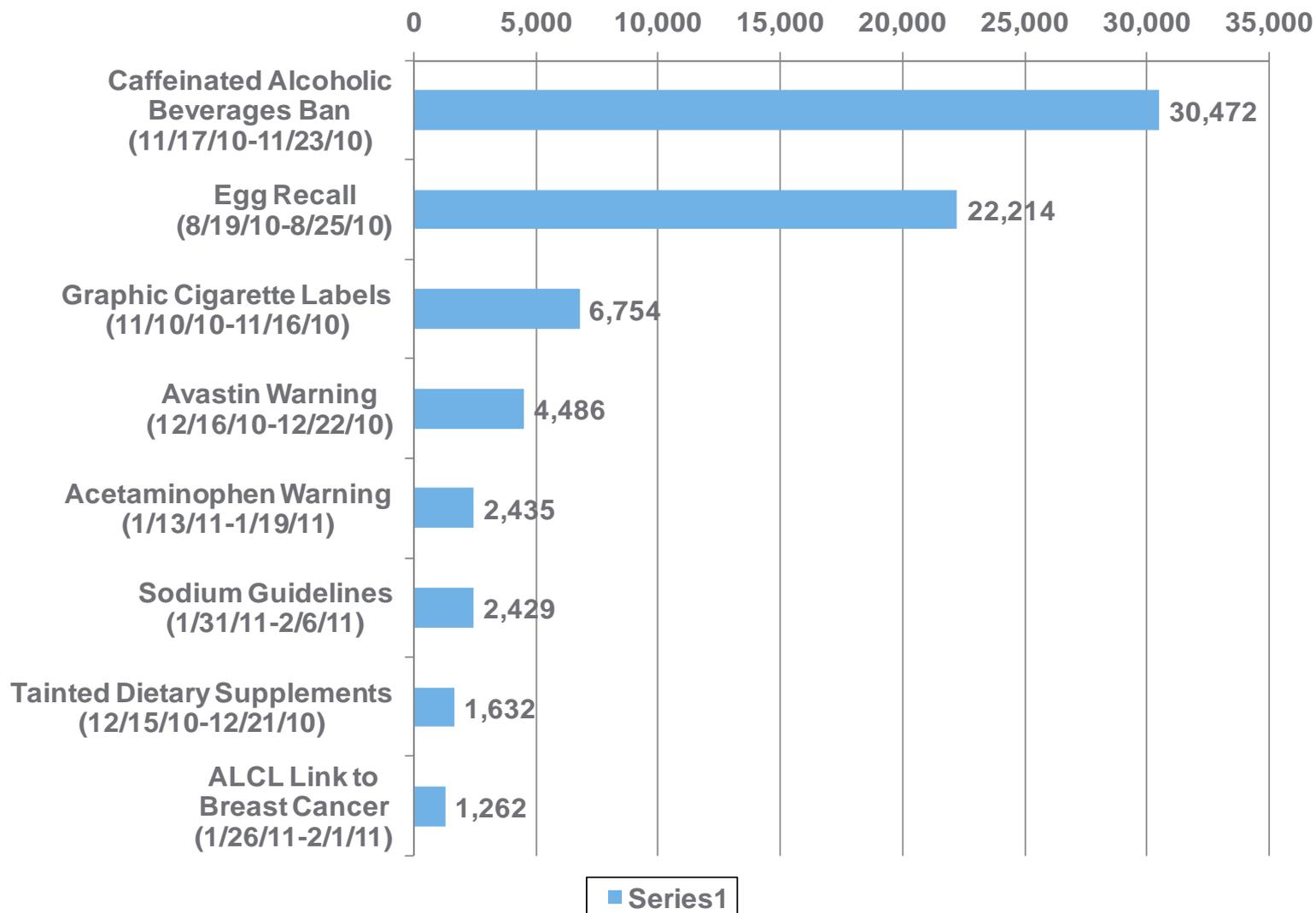


- A.** Consumers share articles relating to the Congressional hearings, as well as information about the owners of Hillandale Farms and Wright County Egg.
- B.** The FDA's and USDA's roles in the salmonella outbreak are discussed.
- C.** Some consumers continue to list the benefits of purchasing local, organic or cage-free eggs.

Topics of Discussion Post-Announcement for Risk and Evaluation Management Strategies (REMs)



- High amount of sharing/linking of the announcement (57%) allows word to spread quickly
- Abuse references change to “prescription” abuse from “opioid” abuse
- FDA and regulation issues are specifically buzzed about more post announcement



Caffeinated Alcoholic Beverages, Egg Recall Lead Among Topics



Thank you!

Questions?