Ensuring Responsible Media Communication about Cancer and Strategies to Build Public Trust

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One Way of Reporting on Cancer

Kill or cure?

Help to make sense of the Daily Mail's ongoing effort to classify every inanimate object into those that cause cancer and those that prevent it.

A B C D E F G H I K L M N O P R S T U V W X Y Z

If any of these results seems incorrect, please report it using the link next to the article.

anastrozole prevents cancer

- Can NHS afford wonder cancer drug?
- Claims over new breast cancer drug
- New study to test breast cancer drug

antacids prevent cancer

- Fresh hope for oesophagal cancer

antibodies prevent cancer

- Inoperable prostate cancer patients stage dramatic recovery after drug trial

How Are Journalists Doing?

Criteria (Did the Story Adequately…?)	% Satisfactory
Discuss costs	23%
Quantify benefits	28%
Quantify harms	33%
Discuss existing alternative options	38%
Seek independent sources and explore conflicts of interests in sources	56%
Avoid disease mongering	70%
Discuss quality of the evidence	35%
Establish the true novelty of the approach	85%
Discuss availability of the new approach	70%
Go beyond a news release	65%

Schwitzer G. How do U.S. journalists cover treatments, tests, products, and procedures? An evaluation of 500 stories. PLoS Medicine 2008 doi:10.1371/journal.pmed.0050095

How Are Journalists Doing?

207 stories

- 83 (40%) did not report benefits quantitatively
- 124 did, but
  - 103 (83%) reported relative benefits only,
  - 3 (2%) absolute benefits only,
  - 18 (15%) both absolute and relative benefits
- 98 (47%) mentioned potential harm to patients
- 63 (30%) mentioned costs
- 170 stories cited an expert or a scientific study
  - 85 (50%) cited at least one source with disclosed financial ties
  - 33 (39%) disclosed these ties

Moynihan R et al. Coverage by the news media of the benefits and risks of medications. N Engl J Med 2000; 342:1645-1650

Why It Matters:
Where do people find health information?

Survey of U.S. Latino adults
by the Pew Hispanic Center and the RWJ Foundation

- More than 25% lack a usual health care provider
- A similar proportion report obtaining no health care information from medical personnel in the past year
- More than 80% report receiving health info from the media
- 79% say they are acting on media information
- "…the survey findings clearly demonstrate the power and potential of these alternative outlets to disseminate health information to the disparate segments of the Latino population."

Pew Hispanic Center, 2008: Hispanics and Health Care in the United States: Access, Information and Knowledge.

Why It Matters:
Where do people find health information?

2010 Harris Poll

88% of adults have looked for health info online

81% of "Cyberchondriacs" looked online in last 30 days (mean, 6x/mo)

- 17% looked for health info online ≥10 times in the last month

Most are satisfied with their ability to find what they want online

- Only 9% say they were somewhat (6%) or very (3%) unsuccessful
- Only 8% think the info they found was unreliable

53% say they discussed online info with their doctors

51% looked for info online based on discussions with their doctors

Who Are Today's Health Reporters?

In a national survey of U.S. health and medical journalists:

- Nearly 70% had at least a bachelor's degree
- 19% reported having a master's degree;
- 4.5% had a doctorate; about 3% were M.D.s
- Almost half had a degree in journalism
- 13% had a degree in communications
- 8% were ''life sciences'' majors

Viswanath K et al: Occupational practices and the making of health news: A national survey of U.S. health and medical science journalists. Journal of Health Communication 2008; 13:759–777.

It’s the Incentives

Fewer reporters are doing more stories, broadcasts, and blog posts

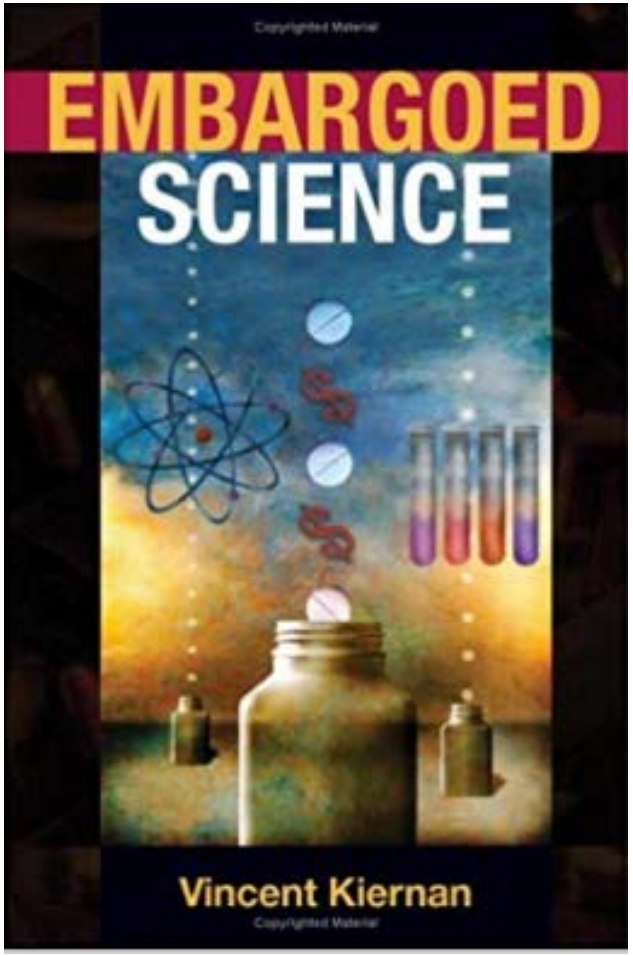
- Sites chasing more and more targeted advertising dollars
- Pressure to cover more and more, which places heavy reliance on journals and meetings

What Are The Barriers To Improvement?

- Lack of time, space and knowledge (the most common obstacles)
- Competition for space and audience
- Difficulties with terminology
- Problems finding and using sources
- Problems with editors and commercialism

Larrson A. Medical messages in the media--barriers and solutions to improving medical journalism. Health Expectations 2003;6:323-31.

Science Happens…When Journals Publish It?



Single Study Syndrome

Everybody does it. I'm certain that I've turned in SSS stories. It's not always a result of lazy reporting; sometimes genuine enthusiasm about scientific discovery contributes to SSS. At best, such stories excite readers about science and connect them to researchers and their processes, making complex research more accessible. At worst, SSS stories make health and lifestyle recommendations that lack substantial evidence for their efficacy, making them useless and sometimes even reckless.

https://www.outsideonline.com/1926341/beware-single-study-story

A Longstanding Problem

- Many health reporters feel it's hard to find independent experts willing to assist journalists
- They think editors need education in critical appraisal of medical news
- Nearly all want short, reliable, up-to-date background information on various topics available on the Internet
- Most (79%) were interested in participating in a trial to evaluate strategies to overcome identified constraints

Larrson A. Medical messages in the media--barriers and solutions to improving medical journalism. Health Expectations 2003;6:323-31.

Not Just Journalists

- Academic medical centers issue a mean of 49 press releases/year
- Among 200 randomly selected releases
  - 87 (44%) promoted animal or laboratory research, of which 64 (74%) explicitly claimed relevance to human health
  - Among 95 releases about clinical research, 22 (23%) omitted study size and 32 (34%) failed to quantify results
  - 113 releases promoted human research
    - 17% promoted randomized trials or meta-analyses
    - 40% reported on uncontrolled interventions, small samples (<30 participants), surrogate primary outcomes, or unpublished data—yet 58% lacked the relevant cautions

Woloshin S et al. Press releases by academic medical centers: not so academic? Ann Intern Med 2009;150:613-618

Not Just Journalists

Research

The association between exaggeration in health related science news and academic press releases: retrospective observational study

BMJ 2014 ; 349 doi: https://doi.org/10.1136/bmj.g7015 (Published 10 December 2014)
Cite this as: *BMJ* 2014;349:g7015

Results 40% (95% confidence interval 33% to 46%) of the press releases contained exaggerated advice, 33% (26% to 40%) contained exaggerated causal claims, and 36% (28% to 46%) contained exaggerated inference to humans from animal research. When press releases contained such exaggeration, 58% (95% confidence interval 48% to 68%), 81% (70% to 93%), and 86% (77% to 95%) of news stories, respectively, contained similar exaggeration, compared with exaggeration rates of 17% (10% to 24%), 18% (9% to 27%), and 10% (0% to 19%) in news when the press releases were not exaggerated. Odds ratios for each category of analysis were 6.5 (95% confidence interval 3.5 to 12), 20 (7.6 to 51), and 56 (15 to 211). At the same time, there was little evidence that exaggeration in press releases increased the uptake of news.

Conclusions Exaggeration in news is strongly associated with exaggeration in press releases. Improving the accuracy of academic press releases could represent a key opportunity for reducing misleading health related news.

Not Just Journalists

Exaggerations and Caveats in Press Releases and Health-Related Science News

Petroc Sumner, Solveiga Vivian-Griffiths, Jacky Boivin, Andrew Williams, Lewis Bott, Rachel Adams, Christos A. Venetis, Leanne Whelan, Bethan Hughes, Christopher D. Chambers

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Using quantitative content analysis, we analyzed press releases (N = 534) on biomedical and health-related science issued by leading peer-reviewed journals. We similarly analysed the associated peer-reviewed papers (N = 534) and news stories (N = 582). Main outcome measures were advice to readers and causal statements drawn from correlational research. Exaggerations in press releases predicted exaggerations in news (odds ratios 2.4 and 10.9, 95% CIs 1.3 to 4.5 and 3.9 to 30.1) but were not associated with increased news coverage, consistent with previous findings. Combining datasets from universities and journals (996 press releases, 1250 news), we found that when caveats appeared in press releases there was no reduction in journalistic uptake, but there was a clear increase in caveats in news (odds ratios 9.6 and 9.5 for caveats for advice and causal claims, CIs 4.1 to 24.3 and 6.0 to 15.2). The main study limitation is its retrospective correlational nature.

Conclusions

For health and science news directly inspired by press releases, the main source of both exaggerations and caveats appears to be the press release itself. However we find no evidence that exaggerations increase, or caveats decrease, the likelihood of news coverage. These findings should be encouraging for press officers and scientists who wish to minimise exaggeration and include caveats in their press releases.

What Can Be Done?

- Journals should make efforts to interest the press equally in negative and positive studies
- Scientists should check all institutional press releases for accuracy and clarity
- The health science community should promote contact with the media when confirmatory or non-confirmatory studies emerge in an area that has already been in the news
- Medical journals should revise their policies so that scientists who explain a study to reporters do not jeopardize their chances of publishing their work

Schuchman M. Medical scientists and health news reporting: a case of miscommunication. Ann Intern Med 1997;126:976-982

What You Can Do

…shuttered 2018

Uncertainty is…Good?

Motivated Processing: How People Perceive News Covering Novel or Contradictory Health Research Findings

Chingching Chang

First Published July 30, 2015 | Research Article | Check for updates
https://doi.org/10.1177/1075547015597914

Article information

Altmetric 34

Abstract

This article examines responses to news stories that cover novel (vs. familiar) or contradictory (vs. one-sided) health research findings. Drawing on motivated reasoning and uncertainty management literature, this article proposes that novel and contradictory health research news stories arouse uncertainty and confusion and thus trigger motivated reasoning. People discount the credibility of the target news and express less willingness to adopt the advocated behaviors. In addition, people devalue health research by strengthening their beliefs that scientific research is uncertain, which lowers their attitudes toward health research. A large telephone survey of the general public and two experiments test these predictions.

Uncertainty is…Good?

"[O]verrepresenting findings with dramatized characteristics has negative implications not only for the target news but also for the scientific community in general" like "loss of interest or trust in science"

-- Chang C, Science Communication

Uncertainty is…Good?

Communicating Scientific Uncertainty: Media Effects on Public Engagement With Science

Andrea Retzbach, Michaela Maier

First Published May 25, 2014 | Research Article | Check for updates
https://doi.org/10.1177/0093650214534967

Article information

Altmetric 11

Abstract

Scientific results are always afflicted with some uncertainty, especially where emerging technologies are concerned. While there are normative and practical reasons to call for an open admission of scientific uncertainties, concerns about detrimental effects of such communication on public engagement with science have been raised in the literature. The present study was conducted to investigate how the communication of scientific uncertainty in nanotechnology influences laypeople's interest in science and new technologies, beliefs about the nature of science, and trust in scientists. In a longitudinal field experiment, 945 participants were exposed to six real-world media reports (TV features and newspaper articles) on nanotechnology. Contrary to our expectations, the communication of scientific uncertainties was unable to change general beliefs about the nature of science. However, it had no detrimental effect on the trust in scientists, and with respect to interest in science and new technologies, slightly positive effects were observed.

Uncertainty is…Good?

"[Scientific] communication should incorporate scientific uncertainties in media reports whenever it is required by the current state of research."

-- Retzbach A, Meier M, Communication Research

De-Spinning Could Help

Three randomized controlled trials evaluating the impact of "spin" in health news stories reporting studies of pharmacologic treatments on patients'/caregivers' interpretation of treatment benefit

Isabelle Boutron ✉, Romana Haneef, Amélie Yavchitz, Gabriel Baron, John Novack, Ivan Oransky, Gary Schwitzer and Philippe Ravaud

BMC Medicine 2019 **17**:105
https://doi.org/10.1186/s12916-019-1330-9

For each RCT, 300 participants were randomly assigned to assess a news story with spin ($n = 150$) or without spin ($n = 150$), and 900 participants assessed a news story. Participants were more likely to consider that the treatment would be beneficial to patients when the news story was reported with spin. The mean (SD) score for the primary outcome for abstracts reported with and without spin for pre-clinical studies was 7.5 (2.2) versus 5.8 (2.8) (mean difference [95% CI] 1.7 [1.0–2.3], $p < 0.001$); for phase I/II non-randomized trials, 7.6 (2.2) versus 5.8 (2.7) (mean difference 1.8 [1.0–2.5], $p < 0.001$); and for phase III/IV RCTs, 7.2 (2.3) versus 4.9 (2.8) (mean difference 2.3 [1.4–3.2], $p < 0.001$).

Thank You

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