

Is all published health care news actually newsworthy?

Gary Schwitzer

A wave of health news “watchdog” websites is spreading around the globe, as a movement that began just seven years ago has taken hold in a half dozen countries.

The originator of this concept is the Australian website, Media Doctor Australia (<http://www.mediadoctor.org.au/>). Perhaps the best known of the projects is the American website, Health NewsReview.org (<http://www.HealthNewsReview.org>). Others include Media Doctor Canada, Media Doctor Hong Kong, Media Doctor Japan and Medien-Doktor.de, the German HealthNews-Review.

In each project reviewers grade news stories about new health care interventions (treatments, tests, products, procedures, etc.), using ten standardized criteria. Each of the criteria represent journalism issues identified either in a *New England Journal of Medicine* paper in 2000 (1) or in the Association of Health Care Journalists’ Statement of Principles (2).

The criteria analyze these questions:

- Does the story adequately discuss the costs of the intervention?
- Does the story adequately quantify the benefits of the treatment/test/product/procedure?
- Does the story adequately explain/quantify the harms of the intervention?
- Does the story seem to grasp the quality of the evidence?
- Does the story commit disease-mongering?
- Does the story use independent sources and identify conflicts of interest?

- Does the story compare the new approach with existing alternatives?
- Does the story establish the availability of the treatment/test/product/procedure?
- Does the story establish the true novelty of the approach?
- Does the story appear to rely solely or largely on a news release?

The Australian team originally described its pioneering process in 2005 (3) and published an update of its findings four years later (4). The Canadian team reported its early results in 2008 (5), as did the American team (6). In 2011, the Columbia Journalism Review reported new results from the American data (7).

The latest cumulative data from the Health-NewsReview.org project is displayed in Table 1.

The criterion asking whether the story appeared to rely solely or largely on a news release requires some explanation. Note the high number of not applicable scores. In order to make a judgment on this criterion, reviewers must have a copy of a news release. Since that isn’t always possible, many stories are graded not applicable. The percentage of satisfactory scores may seem high; another perspective is that the fact that more than 100 stories were found to rely solely or largely on a news release is troubling.

What the numbers mean

The fact that about 70 percent of stories reviewed fail to adequately address costs, and fail to adequately quantify harms and benefits is especially

Table 1. Percent satisfactory grades of 1,675 stories reviewed on HealthNewsReview.org

Criteria	# satisfactory	# unsatisfactory	# N/A	% satisfactory (total minus N/A scores)
Costs	415	999	261	29%
Benefits	550	1081	44	34%
Harms	558	1045	72	35%
Evidence	620	1034	21	37%
Disease-mongering	1,213	383	79	76%
Sources/conflicts of interest	899	755	21	54%
Alternatives	687	924	64	43%
Availability	1,112	409	152	73%
Novelty	1,251	325	99	79%
Rely on press release*	1,160	104	411	92%

N/A: not applicable.

*Note earlier caveat about how this satisfactory score may be artificially high.

troubling. For an American audience trying to grapple with a world-leading 17 percent of the Gross Domestic Product spent on health care (8), but with more than 16 percent of the population uninsured (9), journalism may not be delivering vital information on important public policy issues. When one proposal to effect U.S. health care reform involves comparative effectiveness research, but news coverage overwhelmingly tends to exaggerate benefits and minimize or ignore harms, news stories are failing to educate health care consumers and news consumers about the reasons for such a proposal.

Many stories frame benefits in the most positive light by using relative risk reduction statistics without the corresponding absolute risk reduction numbers. In their book, *Know your chances: understanding health statistics* (10), Woloshin, Schwartz and Welch write that knowing only the relative risk figures is like having a coupon for 50 percent off some unspecified merchandise at a store, but you don't know whether it's an expensive item or a very cheap one. Only by knowing the absolute risk reduction numbers do you know the true value.

The "tyranny of the anecdote" ruins many otherwise carefully crafted stories. Often, positive, glowing patient anecdotes overwhelm a story. But journalists may not question whether what they are reporting is a representative outcome. We don't often hear about trial dropouts, compliance problems, or patient dissatisfaction.

Many stories fail to explain the limitations of observational studies, which can not establish cause and effect. This is the leading reason why stories are judged unsatisfactory on the "quality of the evidence" criterion. Repeatedly journalists use causal language in describing the results of observational studies, such as "coffee reduces stroke risk," when, in fact, all that can be said accurately is that there was a statistical association between fewer strokes and coffee consumption. Misreporting of observational studies leads readers to question the credibility of both journalism and science.

Many news organizations seem to believe that anything published in a medical journal is infallible and unquestionably newsworthy. These journalists should read the writings of Stanford professor John Ioannidis, such as why most published research findings are false (11). Increasingly, many news organizations cover more stories out of journals each week—often as a cost-savings measure because reporters can cover these stories without needing to leave the newsroom. But journalists who feed off of a steady diet of studies published in journals may not be aware of the publication bias in favor of positive findings in many journals. Negative findings are often not submitted or not published. So that steady diet of journal stories may itself convey to readers a biased and overly optimistic view of progress in research. Independent, enterprise journalism is still required.

About half of all stories reviewed are single source stories and/or those that fail to disclose conflicts of interest in sources. This should not give readers confidence in the balance and integrity of the story.

News about screening tests

We have only discussed general trends in coverage so far in this paper. The most troubling topic-specific content that the HealthNewsReview.org team has observed is in the coverage of various screening tests.

In line with what has already been stated, there is a clear pattern in many news organizations of emphasizing only the potential benefits of screening tests and minimizing or totally ignoring the potential harms.

Sir Muir Gray wrote «All screening programmes do harm; some do good as well» (12). But that is a concept unknown to, or ignored by, many journalists.

The most imbalanced screening news coverage occurred at the time of the 2009 US Preventive Services Task Force's mammography recommendations:

- The editors of the *Annals of Internal Medicine* referred to a media cacophony (13).
- Veteran science journalist John Crewdson wrote about the same proceedings: «There are multiple reasons women are ill-informed about breast cancer. The fault lies primarily with their physicians, the cancer establishment, and the news media –especially the news media. Until coverage of breast cancer rises above the level of scary warnings mixed with heartwarming stories of cancer survivors, women are likely to go on being perplexed» (14).

A similar pattern –although not seen as often– has occurred with news coverage of screening tests for lung cancer, prostate cancer, ovarian cancer, colorectal cancer and cardiovascular disease.

These stories seem to demonstrate the clash between:

- Science versus intuition.
- Evidence versus emotion.

- Data versus anecdote.
- Recommendations for an entire population versus decision-making by an individual.
- Grasping uncertainty versus promoting false certainty.
- What we can prove versus what we believe, wish or hope.

Struggling with how to evaluate the evidence themselves, many journalists, in the end, present imbalanced, simplistic, almost advocacy messages promoting screening. Although advocacy may not be intended, this one-sided view emphasizing only the benefits of screening violates basic journalism ethical principles such as this clause in the Association of Health Care Journalists Statement of Principles: «Distinguish between advocacy and reporting. There are many sides in a health care story. It is not the job of the journalist to take sides, but to present an accurate, balanced and complete report» (2).

News about new medical technologies

Many journalists also apparently struggle with reporting in an accurate, balanced and complete manner about new medical technologies. Stories about robotic surgical systems, intensity modulated radiation therapy, proton beam therapy, Cyberknife, and other expensive new technologies tend to convey whatever promoters tell the journalist. But they often fail to evaluate the quality of the evidence for the new approach, fail to make a meaningful, data-backed comparison with existing technologies, and often fail to seek the input of independent experts with no financial conflict of interest.

Journalists could help readers understand that in health care, newer isn't always better and more isn't always better.

Signs of improvement

After nearly 6 years of daily reviews, the HealthNewsReview.org project may be seeing small signs of improvement in the stories reviewed. Table 2 is an analysis of the first 814 stories reviewed through June 2009. The columns represent: the

number of satisfactory scores, the number of unsatisfactory scores, the number of not applicable scores, and the percent of satisfactory scores when you subtract N/A scores from the total.

Table 3 is a comparable chart for the next 855 stories reviewed from July 2009 to December 2011.

From the earlier time period to the later, grades improved on each of the first eight criteria.

Interestingly, the two that didn't improve both suggest the impact of news-release-driven news coverage:

- The number of stories that appeared to rely solely or largely on a news release went from 20 in the earlier time period (20/814 or 2.5%) to 84 in the later time period (84/855 or 9.8%).

- The percentage of stories that established the true novelty of the idea being reported decreased from 84% in the earlier time period to 75% in the later time period. Many news-release-driven stories tend to promote an idea as novel even though its true novelty may not be established.

The most positive developments:

- 11 percentage point improvement over time in the rate of stories adequately quantifying benefits.
- 9 percentage point improvement over time in the rate of stories evaluating the quality of the evidence.

Table 2. HealthNewsReview.org grades of 814 reviews from 2006 to June 2009.

Criteria	# satisfactory	# unsatisfactory	# N/A	% satisfactory
Costs	200	512	102	28%
Benefits	228	573	13	28%
Harms	273	534	7	34%
Evidence	266	545	3	33%
Disease-mongering	550	241	23	70%
Sources/conflicts of interest	427	385	2	53%
Alternatives	313	482	19	39%
Availability	552	225	37	71%
Novelty	657	129	28	84%
Rely on press release*	516	20	278	96%

N/A: not applicable.

*Note earlier caveat about how this satisfactory score may be artificially high.

Table 3. HealthNewsReview.org grades of 855 reviews: from July 2009 to December 2011.

Criteria	# satisfactory	# unsatisfactory	# N/A	% satisfactory
Costs	214	488	153	30%
Benefits	321	509	25	39%
Harms	284	512	59	36%
Evidence	355	488	12	42%
Disease-mongering	662	143	50	82%
Sources/conflicts of interest	471	371	13	56%
Alternatives	373	443	39	46%
Availability	562	183	108	75%
Novelty	595	196	64	75%
Rely on press release*	644	84	127	88%

N/A: not applicable.

*Note earlier caveat about how this satisfactory score may be artificially high.

- 12 percentage point improvement over time in the rate of stories avoiding disease-mongering.
- 7 percentage point improvement over time in the rate of stories comparing the new approach with existing alternatives.
- And average grades for four other criteria that all improved to a lesser degree.

Meantime, the overall picture that is still too bleak. In almost 6 years:

- Only 29% of stories satisfactorily discussed costs.
- Only 34% of stories adequately quantified potential benefits –often a matter of failing to explain how small is the potential benefit.
- Only 35% of stories adequately quantified potential harms –often a matter of failing to explain how large are the potential harms.
- Only 37% of stories adequately evaluated the quality of the evidence they were reporting on.
- Only 43% of stories compared the new approach with existing alternatives.

Summary

One of the themes of this symposium was the question, «Is All Published Health Care News Actually Newsworthy?» The question could be asked, «Worthy to whom?» To the people who count how many newspapers are sold or how many people click on a website? Or to the people who may be making health care decisions based on what they read?

It may be that editorial decision-makers are out of touch with the true needs and desires of health care news readers and of health care consumers. When asked what criteria they employ in the selection of, and reporting of, health care news stories, many struggle to answer.

The international health news watchdog projects described in this article challenge journalists to address a set of standardized criteria, with the belief that these are ten things readers need information on in order to judge the true value of a new health care intervention. The criteria are based on

journalism principles and on past research about what is missing in many such stories.

In health care news, where people may be harmed by inaccurate, imbalanced and incomplete journalism, a more thoughtful definition of newsworthy is needed.

References

1. Moynihan R, Bero L, Ross-Degnan D, Henry D, Lee K, Watkins J, et al. Coverage by the news media of the benefits and risks of medications. *N Engl J Med*. 2000;342:1645-50.
2. Schwitzer G. A statement of principles for health care journalists. *Am J Bioeth*. 2004;4:W9-13.
3. Smith DE, Wilson AJ, Henry DA. Monitoring the quality of medical news reporting: early experience with media doctor. *Med J Aust*. 2005;183:190-3.
4. Wilson A, Bonevski B, Jones A, Henry D. Media reporting of health interventions: signs of improvement, but major problems persist. *PLoS ONE*. 2009;4(3):e4831. doi:10.1371/journal.pone.0004831.
5. Cassels A, Lexchin J. How well do Canadian media outlets convey medical treatment information? Initial findings from a year and a half of media monitoring by Media Doctor Canada. *Open Medicine* 2008;2(2). Retrieved December 12, 2011, from: <http://www.openmedicine.ca/article/view/>
6. Schwitzer G. How do us journalists cover treatments, tests, products, and procedures? An evaluation of 500 stories. *PLoS Med*. 2008;5:e95. doi:10.1371/journal.pmed.0050095.
7. Brainard C. Mixed grades for medical coverage: analysis of nearly 1,500 articles over five years finds pluses and minuses. *Columbia Journalism Review* website. 2011. Retrieved December 12, 2011, from: http://www.cjr.org/the_observatory/mixed_grades_for_med_coverage.php
8. U.S. Centers for Medicare & Medicaid Services website. National Health Expenditure Data. Retrieved December 13, 2001, from: https://www.cms.gov/NationalHealthExpendData/25_NHE_Fact_Sheet.asp
9. U.S. Department of Health and Human Services website. Overview of the Uninsured in the United States: a summary of the 2011 Current Population Survey. Retrieved December 13, 2011, from: <http://aspe.hhs.gov/health/reports/2011/CPSHealthIns2011/ib.shtml>
10. Woloshin S, Schwartz L, Welch G. *Know Your Chances: Understanding Health Statistics*. Berkeley, CA: University of California Press; 2008. p. 41-50.
11. Ioannidis JPA. Why most published research findings are false. *PLoS Med*. 2005;2:e124.
12. Gray JAM. New concepts in screening. *Br J Gen Pract*. 2004;54:292-8.
13. Editors of *Annals of Internal Medicine*. When evidence collides with anecdote, politics and emotion: breast cancer screening. *Ann Intern Med*. 2010;152:531-2.
14. Crewdson J. Rethinking the Mammogram Guidelines. *The Atlantic Monthly*. November 19, 2009.