

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

ALAN CASSELS AND JOEL LEXCHIN

Alan Cassels is the project leader of Media Doctor Canada, Victoria, BC. Joel Lexchin is a professor in the School of Health Policy and Management, York University, Toronto, Ont.

Competing interests: None declared.

Funding: This study was funded by a grant from the Office of Consumer Affairs at Industry Canada. The sponsor played no role in gathering or analyzing the data. The authors had full control over all contents of the paper.

Correspondence: cassels@uvic.ca

THE POPULAR MEDIA PLAY A CRUCIAL ROLE IN communicating information about health treatments. By informing the public about new research findings, they can affect how medical treatments are perceived¹ and, in so doing, influence their use.² Although some medical reporting is driven by public interest, many stories are prompted by companies, universities and research groups who are promoting their work and hope to get favourable coverage of it from major media outlets.³⁻⁵ A recent analysis by public relations specialists argues that the shift from traditional advertising to public relations is one of the most dramatic changes in the marketing field in decades and has come about because of the perceived superiority of this approach.³

Most recent studies of media coverage of medical treatments have found that many stories about pharmaceuticals lack complete information, particularly details

on the quality of evidence and on the reported benefits, harms and costs of treatments.⁶⁻⁷ Research in this area in Canada has led to recent calls for more direct and honest reporting of the results of research.^{3,8,9} In the last three years, three different services — Media Doctor Australia (www.mediadoctor.org.au/), Media Doctor Canada (www.mediadoctor.ca) and Health News Reviews (www.healthnewsreview.org) in the United States — have monitored hundreds of health treatment stories using similar criteria, posting results to their websites.

Media Doctor Australia, with input from medical media researchers in Canada and the United States, developed 10 criteria with which to analyze media stories about treatments.¹⁰ Our group, Media Doctor Canada, adapted these into a similar tool, dropping a criterion about the presence or absence of press releases and adding one about the quantification of harms from treatments. Table 1 shows the 10 criteria that we ultimately used.

We assembled a team of 12 reviewers with backgrounds in clinical epidemiology, clinical medicine, evidence-based medicine and media studies from personal contacts and people who had been involved in an earlier study of medical media reporting in Canada.^{6,11} Over an 18-month period between 31 May 2005 and 1 November 2006, Media Doctor Canada analyzed 87 unique stories dealing with treatments that appeared in 10 major English-language daily newspapers, a medical news service directed toward health professionals, and two web-based news services that are linked to two major broadcasters in Canada (CBC and CTV). Our method of evaluating stories followed the procedure used in Australia: Each story was rated Satisfactory or Not Satisfactory for each of the 10 criteria by two reviewers, and any disagreements were resolved by consensus. We felt that media coverage may be different for stories dealing with pharmaceuticals versus other forms of treatment, so we examined stories in these two categories separately.

Table 2 shows the percentage of Satisfactory scores for each of the 10 different rating criteria for all 87 stories about pharmaceuticals and other forms of treatment. Nearly all stories dealing with pharmaceuticals and other treatments were rated Satisfactory on two criteria: Novelty of Treatment (93.8%) and Disease-Mongering (89.7%). This is to say that the stories did not exaggerate or misconstrue the novelty of the treatment (saying something was new when it was not) or

Table 1: Media Doctor Canada rating instrument for assessing the quality of news stories about medical treatments

Dimension	Not Satisfactory	Satisfactory
1. Availability of treatment	No mention of availability of treatment in Canada	Accurate information on availability of treatment in Canada (both approval and provincial drug plan status)
2. Cost of treatment	No mention of cost, or cost downplayed as an issue, <i>or</i> Mention of cost only; no comparative information	Mention of comparative cost and comments on cost-effectiveness
3. Disease-mongering	Risk factors (e.g., bone mineral density, cholesterol) framed as a disease, <i>or</i> No mention (or else misrepresentation) of natural history of disease, <i>or</i> Exaggeration of prevalence or incidence, <i>or</i> Medicalization of normal human variation	No obvious elements of disease-mongering
4. Evidence	No mention of the nature of clinical evidence, especially RCTs, <i>or</i> Mention of the nature of the evidence but inappropriate interpretation or discussion	Where relevant, mention of strength of evidence and correct interpretation
5. Harms of treatment	No mention of harms, or discounting of potential harms	Balanced information about harms (frequency or seriousness)
6. Novelty of treatment	No mention (or else inaccurate representation) of whether treatment is genuinely new or just a re-formulation of an existing treatment, or another member of a well-established drug class	Accurate information on novelty (or lack thereof)
7. Quantification of benefits of treatment	No quantitative estimate of benefit, <i>or</i> Quantitative estimate in relative frame only	Estimate in both absolute and relative frames, or absolute frame only, or rates with and without treatment
8. Quantification of harms of treatment	No quantification of harms rates an "NS"	Even some quantification of harm rates an "S"
9. Sources of information	No mention of sources or possible conflict of interest (COI) No attempt at independent corroboration	Detail on information sources and their potential COI, reporting on independent source (a source with no potential financial COI), or mention of unsuccessful attempt to obtain corroboration
10. Treatment options	No mention of alternatives or their comparative performance	Mention of appropriate alternatives and comparative information

misrepresent the natural history of the disease (disease-mongering). For all other criteria, fewer than half the stories in either category (pharmaceuticals or other therapies) were rated Satisfactory. The largest difference in the rate of Satisfactory scores between the two categories was for Harms of Treatment: 49.2% for pharmaceutical stories versus 30.4% for stories about other treatments.

Our results were consistent with those reported by Media Doctor Australia, which also found the highest percentage of Satisfactory scores for Novelty of Treatment and Disease-Mongering.¹⁰ In addition, the lowest-scoring criterion in the Australian study was Costs of Treatment, which similarly ranked near the bottom in our study.

Despite the consistency between these two studies, there are a few possible weaknesses to our approach.

Although we trained our reviewers to apply the different criteria consistently, we recognize that there may have been individual biases that affected the scoring. Furthermore, we may have missed stories during our daily screening and selection, particularly because we looked only at stories from the largest English-language Canadian newspapers and two broadcast news agencies. The quality of stories appearing in other media, especially small media outlets where there are no journalists trained in health reporting, may be different.

Some journalists may consider our 10-criteria rating system to be difficult to implement, but none who communicated to us about our evaluations of their stories raised this concern, and we have had many favourable reviews of our site.⁸ We recognize that many elements that go into making a "good" story from the

Table 2: Ranking and percentage of “Satisfactory” scores on assessment criteria

Rank	Criterion	“Satisfactory” scores, %		
		All stories (n = 87)	Stories about pharmaceutical treatments (n = 64)	Stories about “other treatments” (n = 23)
1	Novelty of treatment	93.8	93.1	95.7
2	Disease-mongering	89.7	89.1	91.3
3	Availability of treatment	62.2	66.7	50.0
4	Harms of treatment	44.2	49.2	30.4
5	Treatment options	43.4	41.0	50.0
6	Evidence	38.8	40.3	34.8
7	Quantification of benefits of treatment	31.3	32.3	28.6
8	Sources of information	25.0	21.0	36.4
9	Cost of treatment	20.0	20.8	18.2
10	Quantification of harms of treatment	8.2	8.0	8.7

point of view of journalists may not have been considered, but do not believe that these preclude accurate and informed reporting. Similarly, there are arguments that short news stories cannot accommodate all of the criteria we measure. However, this assertion has not been supported by previous work in which we have shown that there are few significant differences in the overall quality between short news briefs and longer stories.¹¹

The quality and comprehensiveness of the coverage of health technologies by the lay media is an important topic to study.^{1,12} Although journalism outlets strive¹³ to do a competent job while juggling competing interests, there are few mechanisms by which to provide them with feedback on the quality of their coverage. Since there is evidence that providing timely feedback of performance data can improve practice standards,^{6,14,15} auditing or monitoring the quality of health reporting in the lay press and feeding reviews back to news outlets may improve the informative value of these stories.

An obvious question then to ask is, Has Media Doctor Canada made a difference in the quality of Canadian medical reporting? We have recorded more than 59,000 unique hits on our site, but because they are anonymous we have no concrete evidence as to whether we are in fact contributing to the education of journalists. In the future, we intend to continue to build our database of articles, to send scores back to the editors and journalists whose stories we assess, to broaden and refine the scoring instruments and to periodically systematically analyze the collected data to see if there

have been any changes to the averages of the scoring criteria. One measure of success could be a finding of better reporting of the criteria where journalists are currently missing the mark, such as Quantification of Harms of Treatment. If this were coupled with focus-group interviews with journalists indicating that our site had a positive impact on their reporting, we could be confident that our endeavour was having a positive effect.

Acknowledgements: We would like to thank the following people who reviewed stories for Media Doctor Canada: Donna Barker, Carol Cole, Merrilee Hughes, Fariba Jaffary, Peter Jewesson, Sarah Kreaiger, Peter Loewen, James McCormack, Vijaya Musini, Marco Perez, Avis Picton, Gwen Preston, Lori Puil, Aaron Tejani and Jennifer Thornhill.

REFERENCES

- Phillips DP, Kanter EJ, Bednarczyk B, Tastad PL. Importance of the lay press in the transmission of medical knowledge to the scientific community. *N Engl J Med* 1991;325(16):1180–3. [[PubMed](#)]
- Grilli R, Ramsay C, Minozzi S. Mass media interventions: effects on health services utilisation. *Cochrane Database Syst Rev* 2002;1(1):CD000389. [[CrossRef](#)] [[PubMed](#)]
- Ries A, Ries L. *The fall of advertising and the rise of public relations*. New York: Harper Collins; 2002.
- White C. Publish and be pampered. *BMJ* 2003;327:348. [[CrossRef](#)]
- Woloshin S, Schwartz LM. Press releases: translating research into news. *JAMA* 2002;287(21):2856–8. [[PubMed](#)] [[Full Text](#)]
- Cassels A, Hughes MA, Cole C, Mintzes B, Lexchin J, McCormack JP. Drugs in the news: an analysis of Canadian newspaper coverage of new prescription drugs. *CMAJ* 2003;168(9):1133–7. [[PubMed](#)] [[Full Text](#)]

7. 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(22):1645–50. [[PubMed](#)] [[Full Text](#)]
 8. Picard A. On medical news, is the reporting healthy? *The Globe and Mail*. 2005. Dec 29;Sect: A17.
 9. Schwartz LM, Woloshin S. The media matter: a call for straightforward medical reporting. *Ann Intern Med* 2004;140(3):226–8. [[PubMed](#)] [[Full Text](#)]
 10. Smith DE, Wilson AJ, Henry DA, Media Doctor Study Group. Monitoring the quality of medical news reporting: early experience with media doctor. *Med J Aust* 2005;183(4):190–3. [[PubMed](#)] [[Full Text](#)]
 11. Cassels A, Hughes MA, Cole C, Mintzes B, Lexchin J, McCormack J. Drugs in the news: how well do Canadian newspapers report the good, the bad and the ugly of new prescription drugs? Ottawa: Canadian Centre for Policy Alternatives; 2003. [[Full Text](#)]
 12. Johnson T. Shattuck lecture--medicine and the media. *N Engl J Med* 1998;339(2):87–92. [[PubMed](#)]
 13. Angell M, Kassirer JP. Clinical research--what should the public believe? *N Engl J Med* 1994;331(3):189–90. [[PubMed](#)]
 14. Nelkin D. An uneasy relationship: the tensions between medicine and the media. *Lancet* 1996;347(9015):1600–3. [[PubMed](#)]
 15. Thomson O'Brien MA, Oxman AD, Davis DA, Haynes RB, Freemantle N, Harvey EL. Audit and feedback: effects on professional practice and health care outcomes. *The Cochrane Library*. 1999.
-

Contributors: Alan Cassels conceived of the idea for this paper, gathered the data and wrote the initial draft. Joel Lexchin helped analyze the data and revise the manuscript. Alan Cassels is the guarantor for this paper.

Citation: Cassels A, Lexchin J. How well do Canadian media outlets convey medical treatment information? *Open Med* 2008;2(2):e20-23.

Published: 22 April 2008

Copyright: This article is licenced under the Creative Commons Attribution-ShareAlike 2.5 Canada License, which means that anyone is able to freely copy, download, reprint, reuse, distribute, display or perform this work and that the authors retain copyright of their work. Any derivative use of this work must be distributed only under a license identical to this one and must be attributed to the authors. Any of these conditions can be waived with permission from the copyright holder. These conditions do not negate or supersede Fair Use laws in any country. For further information see <http://creativecommons.org/licenses/by-sa/2.5/ca/>.
