

## **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.**

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## **Abstract**

### **Background:**

The popular media play a crucial role in communicating information about health treatments. This article reports on the first 18 months experience of Media Doctor Canada, an organization that evaluates media stories about medical treatments.

### **Methods:**

A rating system employing 11 criteria was developed. Between May 31, 2005 and November 1, 2006 teams of reviewers using these criteria evaluated treatment stories appearing in major print and broadcast media in Canada. Stories were categorized as being about pharmaceutical therapies and other forms of therapy.

### **Results:**

A total of 87 articles were evaluated over the 18 months. 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%). The three criteria scoring the lowest were: the quantification of harms (8.2%), the costs of treatment (20%) and the sources of information (25%). The one major difference between the two categories was in the rate of satisfactory scores for “harms of treatment”: 48.4% for pharmaceutical stories versus 30.4% for stories about other treatments.

### **Discussion:**

Overall, only three criteria were rated satisfactory more than 50% of the time. Media Doctor Canada found that while some news stories did extremely well in reporting several important aspects of medical treatments, there are other aspects that are very poorly reported. This project is but one step in shifting the norms of medical journalism and will add to the field of knowledge around systems of audit and feedback for improving professional practice.

## Background

The popular media play a crucial role in communicating information about health treatments, and informing the public about new research findings and treatments thereby often setting the agenda about how medical treatments are perceived.<sup>1</sup> There is growing evidence that these channels of communication may have an important role in influencing the use of health care interventions.<sup>2</sup> At the same time, much medical reporting is driven by companies, universities and research groups promoting their research and otherwise attempting to get favourable coverage from major media outlets.<sup>3-5</sup> A recent analysis by public relations specialists insists that the shift from traditional advertising to public relations is one of the most dramatic changes in the marketing field in decades and this shift has been happening due to the perceived superiority of public relations over advertising: “PR allows you to tell your story indirectly through credible third party outlets, primarily the media,” and the analysis quite starkly notes that: “what builds brands are media messages.”<sup>3</sup> Medical journals also participate in generating media coverage by sending out press releases about the contents of each issue.<sup>5</sup>

The accuracy and completeness of that initial and subsequent news coverage can either provide a valuable and vital public service, setting appropriate expectations among consumers, or conversely, driving inappropriate demand for promising technologies which have yet to be supported by solid research evidence.<sup>6</sup> Both consumers and health care professionals often hear about new medical discoveries for the first time through media news stories and have those messages reinforced over time through further media news stories.

Positive initial coverage of new health technology or new research is crucial as it may set the tone for subsequent coverage, whereby larger media outlets, and prominent journalists influence the coverage

produced by their peers working for smaller media outlets

Most recent studies of media coverage of medical treatments have found that many stories about pharmaceuticals lack complete information, especially concerning the quality of evidence, and the reported benefits, harms and costs of treatment.<sup>7,8</sup> Many studies reported that media stories often omitted the financial ties between study groups or experts and the drug makers. Research in this area in Canada, has led to recent calls for a more direct and honest reporting of the results of research into the effects of medicinal drugs.<sup>3,9,10</sup>

There has been a recent international surge in interest in researching, monitoring and evaluating media coverage with a goal of improving the quality of reporting. In the last three years three individual services, Media Doctor Australia ([www.mediadoctor.org](http://www.mediadoctor.org)), Media Doctor Canada ([www.mediadoctor.ca](http://www.mediadoctor.ca)) and Health News Reviews ([www.healthnewsreview.org](http://www.healthnewsreview.org)) in the United States (U.S.) have monitored hundreds of health treatment stories using similar criteria and have posted results to their websites. Here we report the first 18 months data on articles evaluated by Media Doctor Canada.

## **Methods**

We initially adopted the 10 criteria developed by Media Doctor Australia ([www.mediadotor.org](http://www.mediadotor.org)) to analyze media stories. The initial criteria were developed by Australian researchers with input from medical media researchers in Canada and the United States who had experience in developing tools to assess the quality of medical news reporting. Media Doctor Australia drew up and tested the initial criteria to assess stories and obtained advice on the reviewing criteria from the Australian Press Council.<sup>11</sup>

Our team of 12 reviewers accepted these Australian criteria, but revised them, adding a single criterion that was not found in the initial Australian list: “Quantification of Harms”. The goal of this criterion was to try to capture the extent to which quantitative data related to the treatment’s safety reported in clinical trials are mirrored in media stories. This criterion was added based on previous research in Canada that showed that quantitative reporting about harms from treatment was largely absent from newspaper stories.<sup>7</sup>

The final 11 criteria were piloted by our team, collectively reviewing the same stories and ensuring that each of the reviewers were interpreting the criteria in a similar manner. In addition, a detailed guide for describing how to assess each criterion was developed and distributed to individual reviewers. See Table 1 which lists the criteria with a brief description of what constitutes a Satisfactory and Not Satisfactory rating for each criterion. We chose to use a Satisfactory/Not Satisfactory rating system rather than a more discriminating Likert scale for ease of administration and so that we could do future comparative research with Australian investigators.

Stories to be evaluated were chosen from those appearing in ten major daily English language daily newspapers, a medical news service directed towards health professionals, and two web-based news services which are linked to two major broadcasters in Canada (CBC and CTV). We conducted daily searches of these sites starting May 31, 2005 using online versions of the papers and websites of the broadcast outlets, extracting any stories where a health treatment claim was being made for drugs, devices or other remedies. For stories broadcast on television we relied on the web-based transcripts of the story.

Stories to be reviewed were selected by a single person (AC). However, reviewers were asked to comment if they felt that the story did not fit the selection criteria. We excluded Dear Doctor stories (stories where a medical doctor answers readers' questions) and all stories that were substantially about non-health topics. We did not review stories that were editorial in nature (as opposed to a news story), or that dealt with diagnosis or harms from treatments as we did not have rating systems to deal with these topics. We also excluded those stories which only mentioned the health claim in passing; for example, a story about a company's stock that happened to mention a drug it manufactured or a story on provincial coverage of pharmaceuticals that didn't substantially examine the treatment value of the drug(s) in question. Finally, French language stories were excluded owing to a lack of reviewers fluent in French.

Each story along with an assessment sheet was emailed to 2 reviewers, chosen on the basis of their availability. Our objective was to rapidly post reviews on our web site and therefore we chose to employ 2 reviewers to help ensure timely return of the reviews. This compromise was considered most logistically feasible as a larger number of reviewers could have delayed the process and each of the reviewers were volunteers with multiple other commitments. If a press release accompanied the story that was also sent. Reviewers independently rated each criterion as either "Satisfactory" "Not Satisfactory" or "Not Applicable" based on the instructions in the detailed guide. In addition, reviewers were asked to provide a brief commentary on the story. Reviewers were instructed not to use their individual knowledge about the products or treatments mentioned in the stories but to base their assessments solely on the information that appeared in the stories, in assessing whether it satisfied the individual criterion.

Assessment sheets were emailed back to one of the authors (AC) who resolved any differences between reviewers' scores through discussion with the reviewers until a consensus was reached.

For each criterion we report the percent of Satisfactory and Not Satisfactory scores for the entire sample of stories. We elected not to report summative scores for each article in this report. Given the relatively small numbers of stories from each media outlet, it was not appropriate to generalize from the summative scores. Future articles will deal with this topic once we have a larger sample size so that we can compare stories appearing in different media. All criteria were weighted equally. We did not undertake any statistical analysis and are reporting only descriptive data.

## **Results**

From May 31, 2005 to November 1st, 2006, 87 unique stories dealing with treatments were reviewed and the stories and their scores were posted on Media Doctor Canada's website ([www.mediadoctor.ca](http://www.mediadoctor.ca)). Stories were placed in one of two categories: pharmaceutical treatments (64 stories) and "other" treatments such as herbals, vitamins or other non-drug therapies (23 stories). Each story dealt with a different therapy. Table 2 shows the media origins of the stories.

Table 3 shows the percent of satisfactory scores on the 10 different rating criteria for all 87 therapies. We removed the criterion "reliance on press release" from our analysis as only 13 of the 87 stories analyzed had accompanying press releases.

Overall, there was a wide spectrum of the percent "satisfactory" scores on different criterion. 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 misrepresent the natural history of the disease (disease monger). For all other criterion fewer than half the stories in either category (pharmaceutical or "other" therapy) were rated satisfactory.

The three criteria scoring the lowest were: the quantification of harms (8.2%), the costs of treatment (20%) and the sources of information (25%). The largest difference between the two categories in terms of the rate of satisfactory scores was for “harms of treatment”: 48.4% for pharmaceutical stories versus 30.4% for stories about other treatments.

Although we are systematically reporting summative scores for individual stories, Boxes 1 and 2 show examples of stories at the opposite end of the quality spectrum. The story in Box 1 scored Satisfactory in 8/10 criteria while the one in Box 2 had only 2/10 Satisfactory scores.

## **Discussion**

For all 87 stories only three criteria were rated satisfactory more than 50% of the time (novelty of treatment, disease mongering and availability of treatment). The criteria with the lowest scores were quantification of harms, the costs of treatment and sources of information. Our results were consistent with those reported from Media Doctor Australia which also found the highest percentage of satisfactory scores for novelty of treatment and disease mongering.<sup>11</sup> In addition the lowest scoring criterion in the Australian study was costs of treatment that similarly ranked near the bottom in our study. Strong and weak areas in reporting on health related treatments appear to be the same in both countries.



There were only minor differences between pharmaceutical stories and “other” stories in terms of the percent of satisfactory scores on nine of the ten individual criterion. This finding may suggest that reporters are not trained to look for certain features when reporting on news about health related treatments whether those treatments are a prescription drug, or an ‘other’ treatment such as a vitamin or herbal therapy. The one area where there was a noticeable difference, “harms of treatment”, may reflect whether safety information was mentioned in the source material that the journalists used for their stories.

Our study has several limitations. This analysis only deals with treatment stories and may not apply to health related stories dealing with other topics. Media Doctor Canada has now added new categories of stories, and is reviewing ones that are primarily related to product harms and with product access.

Analysis of these new areas will be done once we have reviewed a sufficient body of articles. Although the criteria that we developed have face validity we have not verified that these are indeed the most important features for consumers in a news story. The fact that the initial criteria were formulated with international input and received advice from the Australian Press Council lends some credence to our belief that they are meaningful to journalists.

Some journalists may consider our 11-criteria rating system to be difficult to apply, but none of the journalists that have communicated to us about our evaluations of their stories raised this concern and we have had many comments and favourable reviews of our site.<sup>9</sup> Although we trained our reviewers so that they applied the same interpretation to the different criteria, changes in the way that reviewers applied the criteria could have resulted in biases in the ratings. It is possible that our daily screening and selection of stories may have missed stories that should have been evaluated, but we were open to recommendations from the review team and from Media Doctor readers through the ‘comments’

function on the Media Doctor website. Finally, we only looked at stories from the largest English language Canadian newspapers and those two broadcast news agencies. It is possible that stories appearing in other media sites, especially small media outlets where there are no journalists trained in health reporting, may be different.

The quality and comprehensiveness of the coverage of health technologies by the lay media an important topic to study.<sup>1, 12</sup> While journalism outlets strive<sup>13</sup> to do a competent job and juggle competing interests, there are few mechanisms to provide them with feedback on the quality of their coverage. Since there is evidence that providing timely feedback of data on performance can improve practice standards,<sup>7, 14, 15</sup> 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.

We recognize that there are many things that go into making a “good” story from the point of view of journalists including factors such as newness, a local angle and controversy. We do not believe that these preclude accurate and informed writing. Similarly, there are arguments that short news stories cannot cover all of the criteria that we measure. However, in previous work we have shown that there are few significant differences in the overall quality between short news briefs and longer stories.<sup>16</sup> Furthermore, the stories in Boxes 1 and 2 show that stories of approximately equal length can be widely dissimilar in quality.

Some may ask: Has Media Doctor Canada made a difference in the quality of Canadian medical reporting? It is too early to tell, but with over 70,000 unique hits on our site we believe that we’re contributing to the education of journalists. This project is one step in shifting the norms of medical journalism and will add to the field of knowledge around systems of audit and feedback for improving

professional practice.

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## **Authors**

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

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