Canadian Newspaper Coverage of the A/H1N1 Vaccine Program

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ABSTRACT

Objectives: The A/H1N1 mass vaccination program in Canada garnered considerable attention from the media, including extensive newspaper coverage. Media reports have been shown to influence the public’s health care decisions, including vaccination choices. We analyzed Canadian newspapers’ portrayal of the A/H1N1 vaccine including mention of risks and benefits of the vaccine and whether the article supported, questioned or was neutral about the vaccine.

Methods: We compiled a data set of Canadian newspaper articles (N=234) and conducted a frequency content analysis to examine discussion and/or mention of evidence concerning vaccination, risks of the A/H1N1 virus and the vaccine, and tone of article in regards to the vaccination program in Canada.

Results: Reasons for getting vaccinated appeared in 71.8% of the articles, whereas only 18.4% provided reasons against getting vaccinated. Discussion of evidence to support claims for or against getting vaccinated appeared in only 27.8% and 6.8% of the articles, respectively. Risks associated with contracting the A/H1N1 virus were discussed in 49.6% of the articles and risks of the A/H1N1 vaccine were discussed in 12.4% of the articles.

Conclusion: Newspaper coverage in Canada was largely supportive of the A/H1N1 mass vaccination program. However, serious risks associated with contracting the A/H1N1 virus were also frequently discussed in the print media. The news articles rarely presented direct evidence to support statements that the vaccine was safe, effective and properly tested. Known risks (such as potential allergic reactions and flu-like side effects) of the vaccine were rarely reported. The relationship between media portrayals and vaccine uptake warrants further research.

Key words: Newspapers; influenza vaccines; Canada

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Can J Public Health 2011;102(3):200-3.

In March 2009, reports began to surface from Mexico of a virus dubbed the “swine flu” and later classified as the A/H1N1 virus. On June 11, 2009, the World Health Organization (WHO) declared a global influenza pandemic. Reports of vaccine development began to appear in the media about the same time.1 Mass vaccination clinics were established across the globe in the following months until the WHO officially declared the influenza pandemic over on August 10, 2010.2 In Canada, the mass vaccination program was approved and commenced in late October 2009, but the program was surrounded by debate from the outset. The safety and effectiveness of the vaccine was questioned, with concerns focusing on safety of the adjuvant and thimerosal in the vaccine and risks for pregnant women, children, and persons with allergies, asthma and auto-immune disorders.3 While the Canadian federal government provided recommendations for vaccine prioritization for high-risk groups, each province was responsible for determining the order in which high-risk groups and the general public were eligible to receive the A/H1N1 vaccine. Regional variation reportedly resulted in lengthy queues at some clinics and confusion about who could receive the vaccine.4,5

Ultimately, the Public Health Agency of Canada recommended the A/H1N1 vaccine for “all Canadians over 6 months of age who have no contraindication” and promised the “vaccine will be available for any person who needs and wants it.”6 Despite this recommendation for near-universal vaccination, rates of vaccination uptake varied widely across Canada. According to Statistics Canada, 41% of Canadians say they received the A/H1N1 vaccination, but vaccination varied widely by age (with a low of 32% among 22 to 44 year-olds and a high of 62% among those 85 and older) and by region (generally over 60% in the eastern provinces and around 35% in most of the western provinces).7

The A/H1N1 vaccine experience raises many important research questions about attitudes toward vaccination and factors that influence vaccination uptake. Previous studies show that news media reports play a key role in informing the public about vaccines.8-12 A previous study of news reporting on vaccines concluded that “the media do not necessarily provide balanced information about health issues or vaccine risks, and that the media reports may affect vaccine coverage. Thus, public health authorities are legitimately concerned with media accounts of vaccine safety and the extent to which such accounts may affect public confidence in vaccination programs as a whole.”13 A Canadian study conducted prior to the

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Acknowledgements: We thank Allergen NCE Inc. for funding support and the University of Alberta’s Health Law Institute for administrative support. We also gratefully acknowledge Robyn Hyde-Lay and Lindsey-Jo Ehrman for their research assistance.

Conflict of Interest: None to declare.
appearance of the 2009 H1N1 virus showed that Canadians were likely to perceive a pandemic threat as greater when it is covered extensively by the media. In a recent US study, however, Maurer et al. found that people who relied mostly on the media for information regarding the A/H1N1 influenza and the pandemic vaccine were less likely to choose to vaccinate than those who sought information from their health care providers or local health departments. Likewise, a French study suggested that print media and internet sources may have fueled public concerns about A/H1N1 vaccine safety, leading to low uptake of the vaccine. A survey of Canadian physicians and pediatricians conducted before the launch of the vaccination program and associated media coverage found that a majority intended to recommend the vaccine; the relatively positive media coverage of the vaccine may have served to reinforce health professionals’ recommendations.

The role of the popular press on public opinion and behaviour is complex. Both reflecting and helping to shape attitudes toward health issues, the relationship between media and the public is more than a simplistic and linear transmission of information. In addition, with the rise of new media, particularly via the internet, the relationship between media and public health is more complex. Both reflecting and helping to shape attitudes toward health issues, the relationship between media and the public is more than a simplistic and linear transmission of information. Other studies have found that health care professionals and researchers view the media as a powerful source of health information. Indeed, one study found that 85% of Canadians believe they have made at least one behavioural change as a result of media reports about health. Other studies have found that health care professionals and researchers view the media as a powerful source of health information.

Given the important role of the media – a role that has been recognized and embraced by public health agencies, as exemplified by the numerous A/H1N1-relevant press releases (e.g., refs. 20-22) – we examined print news reports concerning the A/H1N1 vaccine in Canada with the objective of exploring media coverage content, including discussion and/or mention of reasons and evidence for or against being vaccinated or risks associated with the A/H1N1 virus and vaccination; and theme, i.e., whether the article supports, questions or is neutral about the vaccine program.

METHODS

We conducted a quantitative content analysis to examine latent content such as benefit, risk, evidence and theme. To develop a representative sample of newspaper articles from across Canada, we searched the Factiva and Canadian Newsstand databases, which provide only textual results from a finite set of newspapers from major cities in each Canadian province or territory. We used the search terms ‘H1N1’ and ‘vaccine’ up until December 31, 2009. We included only articles for which the full text was available. Letters to the editor were excluded from the results. The final data set included 796 newspaper articles. To create a manageable data set, we first stratified our sample by province and then selected a random sample of one third of the articles from each province. Irrelevant articles were then excluded from the sample data set, resulting in a final data set of 234 articles. Articles were deemed irrelevant if the vaccine being discussed was the seasonal flu vaccine, not the A/H1N1 vaccine, or if the article discussed counterfeit H1N1 products being sold online.

To conduct a content analysis of the news articles, a coding frame was developed and pretested using methods similar to previous research. The coding frame included three sections. The first section collected information regarding date of publication, type of author (e.g., columnist, science writer, guest writer, newswire) and article format (e.g., latest news, column, editorial). The second section gathered information on content, which included whether the news article provided reasons for and/or against getting the vaccine, whether any evidence for safety and efficacy (or lack thereof) of the vaccine was provided, if there were any risks associated with contracting the A/H1N1 virus or with the A/H1N1 vaccine, as well as who was quoted within the news articles. Finally, the theme of the article was coded as descriptive, supporting the vaccine, questioning the vaccine, or presenting both sides. One team member coded all 234 articles. To assess the reliability of the results, a second coder, who was not otherwise involved in the project, coded a random selection of 20% of the articles. A Cohen’s kappa of .60 (substantial agreement) was used to determine inter-coder reliability. Scores ranged from k=.617 to k=1.000 with a mean of k=.725. All coding results were then analyzed using descriptive statistics.

RESULTS

From the sample of newspaper articles (n=234), news reports about the A/H1N1 vaccine began to appear in Canadian newspapers in June 2009, yet most of the vaccine coverage (184, 78.6% of all articles) occurred during October and November 2009, during the first month of the mass vaccination program in Canada. Coverage across the provinces was as follows: national papers (24, 10.3%), British Columbia (19, 8.1%), Alberta (28, 12.0%), Saskatchewan (23, 9.8%), Manitoba (15, 6.4%), Ontario (70, 29.9%), Quebec (20, 8.5%), Maritimes and Atlantic Canada (24, 10.3%), Territories (11, 4.7%). No significant differences were found in the content and theme of articles published in different regions of Canada.

To vaccinate or not to vaccinate?

A majority of articles (168, 71.8%) provided reasons in support of being vaccinated, while 18.4% (43 articles) provided reasons against getting vaccinated. Of these articles, 15.2% (36 articles) provided both reasons for and against getting vaccinated. Just over a quarter (59 articles, 25.2%) did not provide a reason either for or against getting vaccinated.

Our coding frame revealed that nine specific reasons were provided for getting vaccinated; despite there being fewer articles providing reasons against getting vaccinated, 16 such reasons were provided (see Table 1). A small number of articles (23, 9.7%) mentioned that people should get vaccinated, but did not provide specific reasons.

Evidence

The content analysis looked for explicit and implicit discussion of scientific evidence in each article. With regard to articles that provided reasons for getting vaccinated, 27.8% of all articles (65 of 234 articles) either stated or implied some kind of scientific evidence in support of the vaccine. With regard to articles that stated or implied scientific evidence in support of the vaccine, 22.2% of all articles (52 articles) quoted or attributed the evidence and reasons for getting vaccinated to a person, usually an expert or authority figure, and 8.5% of all articles (20 articles) made reference to an
Table 1. Reasons Stated in Newspaper Articles for Getting and Not Getting the A/H1N1 Vaccine

| Reasons for Vaccination | % of Articles |
|-------------------------|---------------|
| At high risk for contracting A/H1N1 and becoming seriously ill | 29.5% (69 articles) |
| To avoid contracting the A/H1N1 virus | 22.2% (52) |
| To stop the spread of the virus | 12.0% (28) |
| Front-line worker (e.g., health care provider, prison guard, firefighter) | 6.0% (14) |
| Vaccine is proven safe | 4.7% (11) |
| Have children at risk of becoming seriously ill (e.g., asthma) | 3.8% (9) |
| Have children | 3.8% (9) |
| Pregnant | 3.4% (8) |
| Traveling overseas or frequent travel | 3.0% (7) |
| Concerns over vaccine safety | 5.6% (13 articles) |
| Short supply of vaccine and healthy individuals | 3.0% (7) |
| Adjuvanted vaccine has not been tested properly on pregnant women and children, or there is not enough data on safety and efficacy | 2.6% (6) |
| Wait times at clinics too long | 2.1% (5) |
| Vaccines in general are not proven effective | 1.7% (4) |
| Possible vaccine-autism link | 1.3% (3) |
| Allergy to eggs or thimerosal | 1.3% (3) |
| Vaccine is a cash grab (or power grab) for big pharmaceutical companies and/or government | 1.3% (3) |
| Too much uncertainty and hype over A/H1N1 flu | 0.9% (2) |
| No risk for healthy people | 0.9% (2) |
| Other reasons | 2.6% (6) |

Overall theme of articles

The overall theme of the articles was assessed for whether it was descriptive, supporting or advocating the vaccine, questioning or opposing the vaccine, or presenting both sides. The theme includes both the author's apparent attitude toward the vaccine program and/or the “sides” presented in the news article. For example, an author may write in a neutral or descriptive tone, but only opposing opinions are presented. This article would be classified as questioning or opposing. Results indicated that the newspaper articles were largely supportive of the vaccination program (110 articles, 47.0%), and by comparison, only 8.1% of articles (19 articles) questioned or opposed the program. Ten percent (24 articles, 10.3%) presented both supporting and opposing perspectives, and approximately one third of all articles were neutral on the subject and provided descriptive accounts of the vaccine (81 articles, 34.6%).

CONCLUSIONS

This study provides a descriptive account of the content and tone of print media reports concerning the A/H1N1 vaccination in Canada. A key finding is that the print media sources we analyzed provided a fairly positive perspective on the vaccine and were largely supportive of the program. Serious risks associated with contracting the A/H1N1 virus were also frequently discussed in the print media, although the news articles rarely presented direct evidence that demonstrated that the vaccine was safe, effective, and properly tested. Known risks (such as potential allergic reactions and flu-like side effects) of the vaccine were rarely reported. While only a minority of articles mentioned risks of vaccination, an interesting finding is that the number of reasons cited for not getting the vaccination (16) was almost double that of the reasons given in favour of vaccination (9).

Our study does not draw conclusions about the impact of news coverage on actual vaccination rates in Canada, but the relatively low vaccination rates reported by Statistics Canada, especially among younger and Western Canadians, is worth additional exploration. Previous research suggests that the public seeks news that confirms pre-existing values and assumptions. Therefore, even a moderate amount of negative press may be sufficient to reinforce fears among those in the population already skeptical of a vaccine.
There are several limitations to our study. First, it is a sampling of Canadian news print articles. Second, the analysis did not include images that originally accompanied the news articles; images that evoke anxiety in some readers (e.g., close-up of a needle puncturing the skin, photo of a crying child getting vaccinated) may influence how the reader interprets the content of the article. While not a limitation of our study, it is important to recognize that there are many other forces that impact public perception. For example, the Internet may provide additional insight into the portrayal of the A/H1N1 vaccination program in Canada. The content and tone of government public health recommendations for vaccination also influence public attitudes and behaviour and present another area for research.

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Received: August 31, 2010
Accepted: December 4, 2010

RÉSUMÉ

Objectifs : Le programme de vaccination de masse contre le virus A/H1N1 au Canada a fait l’objet d’une couverture médiatique considérable, y compris dans les journaux. Il est démontré que ces reportages influencent les décisions du public à l’égard de la santé, notamment les choix concernant la vaccination. Nous avons analysé la représentation du vaccin anti-A/H1N1 dans les journaux canadiens, à savoir : la mention des risques et des avantages du vaccin et si l’article était pour ou contre le vaccin ou s’il était neutre à ce sujet.

Méthode : Nous avons compilé un jeu de données composé d’articles de journaux canadiens (N=234) et effectué une analyse de fréquence de contenu pour examiner la discussion et/ou la mention des preuves liées à la vaccination, les risques du virus A/H1N1 et du vaccin, et le ton de l’article à l’égard du programme de vaccination au Canada.

Résultats : Les raisons de se faire vacciner étaient citées dans 71,8 % des articles, tandis que seulement 18,4 % citaient des raisons de ne pas se faire vacciner. Une discussion des preuves à l’appui des allégations pour ou contre le vaccin ne figurait que dans 27,8 % et dans 6,8 % des articles, respectivement. Les risques associés au virus A/H1N1 étaient discutés dans 49,6 % des articles, et les risques du vaccin étaient discutés dans 12,4 % des articles.

Conclusion : Les journaux canadiens étaient en grande partie favorables au programme de vaccination de masse contre le virus A/H1N1. Les risques graves associés au virus étaient fréquemment cités dans la presse écrite. Les articles de fond ont cependant rarement présenté des preuves directes à l’appui des déclarations selon lesquelles le vaccin était sûr, efficace et dûment testé. Les risques connus du vaccin (comme les réactions allergiques possibles et les effets secondaires pseudo-grippaux) ont rarement été mentionnés. Le lien entre la représentation du programme dans les médias et l’acceptation du vaccin devrait faire l’objet d’une étude plus poussée.

Mots clés : journaux; vaccins antigrippaux; Canada