

Public opinion guidance and science and technology dissemination for public health emergencies

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Abstract

Public opinion guidance plays a positive role in public health emergencies response and handling. This paper firstly discusses the guidance of science and technology dissemination on public opinion during health emergencies, and then analyzes the media agenda setting, public reaction change and government policies for the 2009 pandemic influenza A H1N1 with agenda-setting theory and case study method. On the basis of that, this paper makes further discussion on science and technology dissemination strategies for public health emergencies and reaches a conclusion that the content of dissemination should be directly related to security and health; should be information about incident development and government response which helps to compose an overall information stream during crisis communication; and should focus on problems arising after incident outbreak and subjects the public is interested in or concerned with; and also science and technology dissemination should be done at different developing stages of the incident with corresponding focuses.

Keywords: public health emergencies, public opinion guidance, media reports, science and technology dissemination strategies for emergencies.

1 Introduction

Public opinion guidance plays a positive role in public emergencies response and handling. Traditional “judge as it stands” method often cause inefficiency because of the complexity and urgency of the incident. In recent years, scientific reports made by the media about public emergencies have been highly praised by authorities and scholars for their uniquely active role on public opinion guidance during emergencies dealing. However, it is still a tough question to conduct



sci-tech information dissemination systematically and orderly for public opinion guidance when public health emergencies happen. By far, most of the research in this field focuses on conception-introduction, lacking systematic theory.

This paper firstly discusses the guidance of science and technology dissemination on public opinion during health emergencies, and then analyzes media agenda setting, public agenda setting and policy agenda setting for 2009 pandemic influenza A H1N1 with agenda-setting theory and case study method. On the basis of that, this paper makes further discussion on science and technology dissemination strategies for public health emergencies.

2 Public opinion guidance and science and technology dissemination for public health emergencies

Public health emergencies refer to the outbreak of public incidents that have happened or may happen. They can be infectious diseases, uncertain group epidemics, serious food poisoning or occupational poisoning, and other public emergencies which may do harm to public health. Most public health emergencies are of the nature of crisis. The abruptness, uncertainty and perniciousness of such emergencies usually make people unprepared and bring forth different public opinions that are of ‘fission’ diffusion, abnormal development and rapid spreading.

Science acts as the terminator of rumors and sci-tech information dissemination can effectively surpass the abnormal fission diffusion of public opinions. Science and technology dissemination can assimilate the public and transform their standpoints and views on public emergencies scientifically, thus guiding public opinions actively.

3 Case analysis of public opinion guidance of science and technology dissemination through the media during the infection of influenza A H1N1

3.1 Media Scientific reports on influenza A H1N1

This paper chooses People’s Daily and Sina.com as representatives of the media who disseminated science and technology related to influenza A H1N1 effectively.

3.1.1 Scientific reports on influenza A H1N1 in people’s daily

According to our study, among the reports about influenza A H1N1 made by People’s Daily from May 1st 2009 to December 31st 2009, 64 out of 110 take influenza A H1N1 as the sole topic, taking up 58.18% of the whole [1]

The 64 reports focusing on influenza A H1N1 can be classified into five parts, i.e. infection situation introduction, prevention and handling measures, typical people, international situation and others. Among these 64 reports, 8 on infection situation introduction and 29 on prevention and handling measures are the large

parts, taking up 45% of the whole. The 11 special reports about national leaders and influenza A victims playing an important role in media science and technology dissemination. The rest are 11 reports about international situation and 5 others [1].

Besides, 53 out of the 64 reports are science and technology news, taking up 82.8% of the whole. At the incubation period of Influenza A, reports stressed authorized information, including overseas epidemic situation and response mechanism. When the epidemic was getting close to the evolution period, science reports focused on two aspects. One is about prevention measures taken by different countries, districts, organizations and departments, like the reports in People Daily titled Move Forth Scientific Cure and Prevention to Control Influenza Orderly and Effectively on May 30th, Enhance Prevention and Control Measures and Continue Related Efforts Orderly on June 13th and Orderly and Forcefully Move Forward Influenza A Prevention and Control in Autumn and Winter on September 11th. The other is about development of detection reagents and influenza vaccines done by scientific research institutes home and abroad, like reports in People's Daily titled American Companies Produce First Batch of Influenza A Vaccines on June 25th and Traditional Chinese Medicine Community Develop New Medicine for Influenza A on December 18th.

3.1.2 Scientific reports on influenza A H1N1 in sina.com

From April 24th, Sina.com began to provide real-time report on the influenza with a special column of Influenza A H1N1. Content for the column are set into more than ten sections, such as the latest epidemic situation broadcast, epidemic situation in China, global epidemic situation, epidemic situation guidance, response measures, experts interpretation, media reviews and related video coverage. From April 27th to May 16th, Sina.com offered 136 different reviews made by more than 40 internal and external media units like People's Daily, the Beijing News, Nanfang Daily, Southern Metropolis Daily and Xinhua News Agency. Generally speaking, these reviews are mainly about influenza knowledge introduction, outbreak causes, countermeasures, experience summary and influenza impact. Agenda setting emphasizes how to fight against the influenza and appealing the joint efforts from all the society, with reviews on the two topics taking up 35.3% of the whole. Meanwhile, there are 26 reviews on the warning about weak links in epidemic prevention and the clues of improper response, taking up 19.1% of the whole. With the spreading of influenza, the key points of media reviews moved from related knowledge and outbreak reasons to how to react and joint efforts appeal and then to continuous fighting so as to meet information need and psychological expect of the public [2].

3.2 Cognition and behavior change of the public to influenza A H1N1

In September 2009, Suzhou Municipal Center for Disease Control and Prevention conducted a questionnaire survey on people's understanding of influenza A H1N1 and related information sources. The result suggests that citizen understanding rate on influenza A H1N1 was 85.8% and most respondents had gained basic knowledge about the prevention and cure of



influenza A H1N1, which demonstrates public confidence in fighting against the disease [3].

From November 2009 to March 2010, Chinese Center for Disease Control and Prevention made six telephone surveys on the KAP (knowledge, attitude and practice) at different development stages of the influenza A (H1N1) and found there was drastic change in public related knowledge. In fact, with the penetration of propaganda and education, understanding of influenza A H1N1 among the public increased gradually. For example, people got to know “air on the condition of ventilation”, “hand-shake and hug during the epidemic period”, “free inoculation policy against influenza A H1N1” and “priority inoculation policy against influenza A H1N1”. It was shown that the basic sanitary knowledge about coughing, sneezing and face-to-face talking are highly recognized during the surveys. It was also found that sanitary protective behaviors like “covering mouths and noses when coughing or sneezing”, “wash hands when arriving home” were generally on the rise. The behavior of “washing hands with soaps and sanitizer” was always stressed, with 97.9% of the respondents recognized. People who “have been inoculated with ordinary influenza vaccine” and “are inoculated with influenza A H1N1 vaccine” were generally on the rise. The rates of being inoculated with influenza A H1N1 during the first and fourth surveys respectively dropped a little, but began to rise during the last two [4].

According to the survey results, the media propaganda and education in China has played an important role in enriching related knowledge among the public.

3.3 Government policies against influenza A H1N1

Approved by the State Council, Ministry of Health of the PRC announced on April 30th that influenza A H1N1 would be included into category B infectious disease stipulated by the Law of the People’s Republic of China on the Prevention and Treatment of Infectious Diseases and should be prevented and controlled as category A infectious disease.

In order to prevent the import and spreading of the influenza, influenza A H1N1 is also included into the quarantinable disease stipulated by the Law of the Frontier Health and Quarantine Law of the People’s Republic of China. Ministry of Health also declared to release the prevention and control progress of influenza A H1N1 on its official website regularly. For example, it informed the public on July 11th 2009 of the fact that there are 79 new confirmed cases of influenza A H1N1 from 6 pm on July 9th to 6 pm on July 11th in China, among which 64 cases are overseas imported and 15 are infectious within the country. The timely release of related data effectively cleared panic among the public.

On May 29th 2009, Chinese Center for Disease Prevention and Control published the Technical Guide on the Epidemiological Investigation and Epidemic Situation Handling for Influenza A H1N1. The document applies to the imported cases of influenza A H1N1, infection among humans and even the disease outbreak at community level. It offered scientific guidance to the epidemic situation investigation of influenza A H1N1 for disease prevention and control institutions at different levels.

Meanwhile, Chinese Center for Disease Prevention and Control opened a health column of Influenza A H1N1 on its official website. The column provides information on epidemic situation variation diagram, epidemic situation, working trends, consulting phone numbers, countermeasures, technical guide, risk communication, science documents and video materials.

What's more, Gov.cn established a special website for preventing human-infected influenza A H1N1. The public can search different media materials like pictures about influenza A H1N1 prevention, general epidemic situation of different countries (the confirmed cases in a country or a district), epidemic situation express, symptoms of the disease, latest related news, newest videos and thematic reviews.

4 Science and technology dissemination Strategies for public opinion guidance during public health emergencies

From the above case analysis, it can be concluded that science and technology dissemination during public emergencies should be conducted in the following ways so as to guide public opinion effectively.

4.1 Disseminating sci-tech information on public health emergencies development and government response to compose an overall information stream on crisis communication

A complete government news release chain should include three parts, i.e. dynamic news about the incident, government response (expressing attitude is also a response) and scientific knowledge information. The first refers to current situation and future development trend of an emergency. The second usually includes the standpoints and attitudes of the government towards the emergency as well as specific measures they plan to take. And the last is the explanation of causes and development of the incident, scientific analysis of the developing trend, and scientific decisions and action of the government. During information release of a public health emergency, it is far from enough to simply emphasize the disclosure of government administrative information. Scientific information dissemination should also be stressed to dispel doubts, meet public demand for scientific knowledge and guide public opinions. Any single information cannot compose an overall information stream, only when the three integrate with one another.

4.2 Disseminating information about problems arising after public health incident and the subjects the public tend to be interested in or concerned with

(1) Sci-tech information dissemination should focus on issues that people are interested in and concerned with. Generally, there are always some rumors after a public health incident because of dissemination deviation or knowledge insufficiency. Since the public desire to testify the rumor with the truth, sci-tech



information dissemination at this time would play an important role in supervising public opinions and stabilizing society.

(2) Content of sci-tech information dissemination contains main problems, causes and influence of the emergencies. That is to say, such dissemination should first pose main problems that can arouse people's interest directly, analyze them to dispel the doubts and finally provide the views and research results of some expert or all the scientists to enhance the effect of the effort.

4.3 Sci-tech information dissemination should be done at different developing stages of a public health incident with corresponding focuses

According to the four-stage model presented by Steven Fink, crisis communication can be divided into four stages: potential, out-bursting, spreading and being solved. Disseminators should not only inform the media and the public of present state of the incident and so-far measures taken by the government, but also try to gain support from the public by helping them understand the coming danger correctly, providing for them with more pertinent background information and analyzing the situation with scientific knowledge, facts and data.

At the first stage, disseminators should make a series of preparation, such as making preplans, understanding the potential risks, collecting scientific materials about the coming crisis, contacting with the media and related government departments frequently and improving scientific quality.

The second stage of incident outbreak is always coupled with confusing and complex situation. Due to the difficulty to know the exact situation and true causes, the public need eagerly information about government attitudes and scientific countermeasures. At this stage, disseminators should provide for the public with authorized and verified information about the incident development, government and standpoints and attitudes and also sufficient scientific knowledge to determine the incident nature initially, clear rumors and react scientifically.

At the stage of spreading, scientific analysis of the incident and its development trend is the great concern for the public. So disseminators should help the public understand the danger they face accurately, accept feedbacks, define the incident nature formally and interpret government decisions.

At the last stage of solving the crisis, people are concerned with how to prevent new crisis, how to evaluate an emergency in a scientific way and how the responsibility is defined. Disseminators should digest feedbacks and raise people's sense of protection to avoid new crisis.

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