

# “Body bags ready”: Print media coverage of avian influenza in Australia

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## ABSTRACT

In 2006 the avian influenza A (H<sub>5</sub>N<sub>1</sub>) virus received considerable media coverage in Australia, as it did in many other countries. It is often argued that the media sensationalizes health crises, and experts cautioned about the risk of panic as a result of fear of avian influenza. The purpose of the present study was to systematically analyze Australian print media coverage of avian influenza in 2006 and to examine whether this coverage served the purpose of informing, rather than alarming, the general public. For the period January 1, 2006 to December 31, 2006, 20 Australian newspaper titles were monitored for coverage of avian influenza. The identified articles were analyzed using aspects of protection motivation theory for theoretical direction to determine whether there were any consistent themes or perspectives in the coverage. A total of 850 articles were identified for analysis. Concerning vulnerability, 46% of articles reported the incidence of human cases, with 24% noting that avian influenza was a potential threat to Australia. The most common severity theme was “deadly” with over 50% of mentions, followed by “pandemic” with 35%. Only 11% of articles referred to any form of self-protection. We found that a considerable proportion of the articles reporting on avian influenza were framed in a way that had the potential to incite fear and panic amongst the public; the intensity of media coverage reduced over time; and, of particular concern, that there was little media coverage that focused on protective or preventative issues. Whether an influenza pandemic eventuates or not, it is prudent for governments and health authorities to continually develop appropriate resources and strategies to prepare the health system and the general public to respond to current, and future, infectious disease risks.

**Keywords:** Avian Influenza; Bird Flu; Media; Communication Strategy; Newspapers

## 1. INTRODUCTION

The first outbreak of human disease from Avian influenza A (H<sub>5</sub>N<sub>1</sub>) was reported in 1997 in Hong Kong [1]. From late 2003, more human cases were confirmed across Asia and Africa; and the virus increasingly captured the world’s attention because influenza A is the only strain that has ever been shown to have the capacity to cause a pandemic [2]. H<sub>5</sub>N<sub>1</sub> can be spread by migratory birds and mechanical means (e.g., from one farm to another on the soil captured by tractor tires). It can be transmitted from birds to mammals (including pigs, seals, whales, mink, ferrets, tigers, leopards, stone marten and domestic cats), and it can be transmitted from birds to humans [3,4].

In May 2006, the discovery of H<sub>5</sub>N<sub>1</sub> infection within an extended family in north Sumatra presented the possibility of the first “extended chain of human transmission” of the virus [5]. Indonesia, Australia’s closest northern neighbor, reported the highest number of human cases in 2006, 82% of these cases were fatal [6].

With more incident reports of the virus infecting humans, H<sub>5</sub>N<sub>1</sub> began to be categorized as a global public health threat. Concern about a possible pandemic was based on a number of factors. First, given the wide-ranging flight paths of migratory birds, the virus had the potential to be spread to domestic poultry in a number of countries. Second, there was concern that the H<sub>5</sub>N<sub>1</sub> virus could mutate rapidly when it existed within a large contained domestic flock. Third, the close contact that occurs in many Asian countries between humans and domestic poultry provided numerous opportunities for the virus to infect humans through direct contact with infected poultry or surfaces that were contaminated by infected birds. Fourth, the lack of a vaccine combined with the lack of natural immunity to H<sub>5</sub>N<sub>1</sub> amongst the world’s population created the opportunity for a pandemic to occur [7]. Fifth, the avian influenza outbreak in north Sumatra

raised significant concerns about whether countries were prepared to respond to an avian influenza outbreak and capable of doing so in a manner that would result in the control of local outbreaks [5].

## Media Coverage of Avian Influenza and Previous Health Crises

Throughout 2006 there was considerable media coverage of, and public discussion about, a possible avian influenza pandemic. Public and government concern and fear about an avian influenza pandemic may have been significantly affected by the media's continual reference to the 1918 Spanish Influenza pandemic, in which an estimated 20 - 50 million people died.

The media are important sources of health information to many people. For example, in the mid-1990s, an Australian survey of 3000 women found that "the media" were the most common source of advice about breast cancer [8]. A US study of women's mammography screening behaviors found that doctor's advice accounted for 30% of the variance over time while media coverage accounted for 13% [9]. Thus, for many people the media have the ability to influence their perceptions of the seriousness of avian influenza, their susceptibility to it and the effectiveness of possible health-protective behaviors.

It is often argued that the media sensationalizes health crises; thus, media information should be treated with skepticism. This was illustrated in an article in *Informed Voice* magazine (a natural health publication), which advised readers:

*"Several years ago, SARS was the virus that was going to kill millions worldwide! Before it had even been identified properly, government and the media were spreading panic far and wide. Fortunately for us, and embarrassing for the doom-sayers, SARS was a non-event. Never giving up however, we are now being subjected to the Avian Influenza fear campaign"* [10].

Indeed, the media was subjected to a large amount of criticism in relation to its coverage of SARS, even being accused of manufacturing threats to the public's health and well-being that "draw upon past and present cultural myths of dangerous 'others' and contribute to unwarranted public fear, intolerance, and distrust" [11]. An analysis of the media coverage of SARS in UK newspapers revealed that the media depiction of SARS changed from an impending, significant threat to one that was totally contained within a 3-month period [12]. One wonders if the residents of Toronto, Canada were equally critical, however, given that the SARS outbreak that occurred there resulted in loss of life and had a major economic impact on the city.

Leading medical journals cautioned about the risk of panic and inappropriate behavioral responses as a result of fear of avian influenza even before a pandemic emer-

ges [13], and emphasized the need for appropriate risk communication strategies to inform the public without causing panic [14]. For example, fear of avian influenza damaged poultry sales in Thailand and China and resulted in the inappropriate stockpiling of antiviral drugs among individuals in more affluent countries [13].

Protection Motivation Theory (PMT) was postulated by Rogers in 1975 as a model for examining the effect of fear on an individual's behavior [15]. The original theory was further developed re-addressing the impact of persuasive communications on behavior change and focusing on the cognitive processes that influence and predict behavior [16]. This study used PMT components as a conceptual framework to explore how the Australian media portrayed the health risk of avian influenza by reviewing newspaper stories published during 2006.

## 2. METHOD

### 2.1. Search Strategy

For the period 1 January 2006 to 31 December 2006 major Australian national and metropolitan daily broadsheet and tabloid newspapers available through Factiva.com were searched (n = 20). A full-text search was conducted using the string: "bird flu" OR "avian influenza" OR bird near 3 flu OR bird near 3 influenza OR avian near 3 flu OR avian near 3 influenza OR Tamiflu OR Relenza OR antiviral OR "anti-viral" OR "anti viral" OR h5n1 OR superbug OR "super bug" OR superflu OR "super flu" and the results (metadata and full article) were imported into an Endnote Reference Library for analysis (n = 1649).

The news items were initially screened for relevancy and multiple versions. All "off-topic" articles were immediately excluded. In circumstances where two versions of a news item existed only one version was retained for coding. We also did not include meeting announcements, articles that described other topics and only briefly mentioned "bird flu" in less than two lines (e.g. political stories), articles that just used "bird flu" in an adjectival manner (e.g. "in these bird-flu-phobic days") and stories primarily financially focused.

### 2.2. Article Coding

Documents were analyzed using a coding framework developed from a variety of sources. The coding scheme by Washer [12] was examined and literature on media analysis of other health issues was reviewed to assist in the construction of appropriate themes.

We devised three main categories for the coding process: articles were coded for the presence of themes related to 1) "vulnerability" or the likelihood of avian influenza occurring; 2) the "severity" or seriousness of the avian influenza threat; and 3) "adaptive response" or

the perceived effectiveness of actions to avoid infection. A single article could be coded as presenting one or more themes under one or more of the main categories. Any articles that were unable to be coded under the model were assigned “other”. In addition to the themes, articles were coded for representations of spokespersons (e.g., Medical, Non-Medical), article type (e.g., general news, feature, opinion/editorial) and “panic” language.

Documents were coded by two authors and discrepancies of analysis were discussed until mutual agreement was reached.

The frequency of reporting was higher in the first five months, coinciding with reports of the first human cases in Turkey, Iraq, Egypt and Cambodia, new cases and fatalities in Indonesia and China, and the increasing incidence in animals across Europe and Africa.

### 3. RESULTS

#### 3.1. Amount of Coverage

A total of 850 articles were identified and analyzed (**Table 1**) with 72% accounting for general news articles and 12% for feature articles (*i.e.*, presenting more of a story than just facts of new cases). Arts and entertain-

**Table 1.** Newspaper titles, hit rate and total inclusions.

Newspaper	Hits	Inclusions
The Advertiser (Adelaide, SA)	176	133
The Age (Melbourne, VIC)	143	28
The Australian (Canberra, ACT)	229	76
Canberra Times (Canberra, ACT)	80	45
The Courier-Mail (Brisbane, QLD)	132	62
Daily Telegraph (Sydney, NSW)	152	86
Herald-Sun (Melbourne, VIC)	135	77
Northern Territory News/Sunday Territorian	120	97
Sydney Morning Herald (Sydney, NSW)	103	30
The West Australian (Perth, WA)	82	26
Hobart Mercury (Hobart, TAS)	106	87
Sunday Mail (Adelaide, SA)	30	14
Sunday Age (Melbourne, VIC)	8	2
The Sunday Mail (Brisbane, QLD)	12	5
Sunday Telegraph (Sydney, NSW)	33	22
Sunday Herald Sun (Melbourne, VIC)	24	10
Sunday Times (Perth, WA)	39	25
Sun Herald (Sydney, NSW)	20	8
Sunday Tasmanian (Hobart, TAS)	17	12
Canberra Sunday Times (Canberra, ACT)	8	5
Total	1649	850

ment reviews (e.g., “Killer Bird Flu special”, “Flu Time Bomb”, etc.), business stories, letters to the editor and other types of articles comprised the remainder of the dataset (**Table 2**).

#### 3.2. Thematic Coverage

The identified articles were examined for references to themes depicting 1) “vulnerability”, or the likelihood of avian influenza occurring; 2) “severity” or seriousness of the avian influenza threat; and 3) adaptive response or actions taken to avoid infection.

**Table 3** presents the frequencies of articles that were coded with themes depicting vulnerability. The focus was on reporting the incidence of both human (46%) and animal (33%) cases around the world. Coverage of scientific concerns on the potential for the virus to mutate (which is necessary for human-to-human transmission) accounted for 13% of stories. Avian influenza was reported as a potential threat to Australia in 24% of the articles.

**Table 4** presents the frequencies and percent of articles for the codes representing the severity or seriousness of the avian influenza threat. Over 50% of the articles reported that avian influenza was “deadly” and 35% mentioned an avian influenza pandemic.

Nearly 30% of the articles addressed some sort of treatment or prevention, with 19% specifically mentioning a drug or vaccine for human cases (**Table 5**). The impact of avian influenza on the world or local economies was addressed in 14% of articles and discussion on methods of self-protection such as hand washing was mentioned in just over 10% of articles.

Eleven (1%) of the articles were unable to be coded within the three main categories and comprised mainly of letters to the editor with a black humor undertone.

#### 3.3. Panic Language

The identified articles were examined for language that had the potential to incite fear amongst the public.

154 articles (18%) were coded “panic” due to the way avian influenza was framed in the article and the use of words and concepts that implied avian influenza was “deadly”, that the “next pandemic” was inevitable and

**Table 2.** Proportions of article by type.

Article type	Frequency	%
Business/Finance	76	9
Arts/Entertainment	19	2
Feature	101	12
General news	615	72
Opinion/Editorial	31	4
Other	8	1

**Table 3.** Tabulations of “Vulnerability” themes.

Code	Frequency (% of total)	Average Word Length
Animal cases	282 (33.2)	227
Human cases	387 (45.5)	214
Evolving scientific concerns	108 (12.7)	320
Geographical proximity	24 (2.8)	319
Imminent threat to Australia	207 (24.4)	357
Incompetence	17 (2.0)	300
Travel dangers	17 (2.0)	330
Other*	13 (1.5)	289

\*Codes: Insanitary conditions, local corruption, poverty.

**Table 4.** Tabulations of “Severity” themes.

Code	Frequency (% of total)	Average Word Length
Deadly	447 (52.6)	225
Earlier epidemics	73 (8.6)	430
Graphic description	10 (1.2)	367
Pandemic	300 (35.3)	329

**Table 5.** Tabulations of “Adaptive response” themes.

Code	Frequency (% of total)	Average Word Length
Animal vaccine	22 (2.6)	268
Human drug/vaccine	158 (18.6)	287
Livestock/Animal culling	82 (9.6)	245
Medical research/Vaccine development	57 (6.7)	249
Self-protection	96 (11.3)	354
Societal impact	121 (14.2)	277
Treatment/Prevention	250 (29.4)	278
Veterinary diagnostic kit	4 (0.5)	55
Wildlife checks/Risk area	22 (2.6)	259

that Australians should be “braced” for avian flu. The intensity of panic language was greater in the January to March quarter (56%) and steadily decreased through the next two quarters, accounting for only 10% of articles between October to December. There were a few “panic” style headlines in November with the use of “body bags” in the headline. These findings are illustrated by sample headlines in **Table 6**.

### 3.4. Media Spokespeople

The majority of sources quoted or mentioned were medical spokespeople (53%). The medical spokespeople included WHO health officials, Australian Commonwealth health officials and international health officials.

**Table 6.** Sample “Panic” story headlines.

Headline	Paper	Date	Pg
Bird flu epidemic sweeping nation	Hobart Mercury	7-Jan	16
Bird flu global death toll hits 78: plan for bird flu pandemic	Hobart Mercury	12-Jan	34
Bird flu horror spreads	Sunday Mail (Qld)	12-Feb	53
Pandemic to kill 1000 s, cost billions	Age	16-Feb	3
Bird flu threatens misery for millions	Sydney Morning Herald	16-Feb	1
Bird flu to hit 30 pc	NTN/ST	17-Feb	14
Deadly bird flu is already here	Daily Telegraph	23-Feb	22
Bird flu could decimate Australian life	NTN/ST	30-Mar	9
Bird flu warning Society “could fall”	Sunday Herald Sun	2-Apr	21
Morgue trucks for WA bird flu	West Australian	8-Apr	13
Detailed plans already set in place for dead West Aussies	Sunday Times	9-Apr	16
Bird flu battle lost, human war is to come: professor	West Australian	10-Apr	4
Bird flu fatalities pile up	Daily Telegraph	1-Jun	22
Bird flu “to kill 40,000”	Australian	27-Jun	2
All eyes on the enemy waiting by our door	Australian	8-Jul	25
Bird flu prompts body bag stockpile	NTN/ST	12-Nov	8
Body bags ready	Sunday Telegraph	12-Nov	29

Non-medical spokespeople (22%) tended to be overseas politicians (corresponding to the reports of detection of avian influenza within their countries) and members of the business community, who discussed concerns regarding the impact a pandemic would have on world markets and economies.

## 4. DISCUSSION

Avian influenza received considerable coverage in the Australian media in 2006. Analysis of this coverage suggests that the media focus was on reporting the number of cases (both animal and human) and the potential for an avian influenza pandemic, with increasing references to how deadly the virus is. Nearly 20% of articles were framed in a way that has the potential to incite fear and panic amongst the public.

The intensity of media coverage did reduce over time, both in terms of total print news coverage and the nature of the coverage. The potential impacts of this pattern of coverage are twofold. First, the use of high-fear language (such as “panic” and “death”) has the potential to cause elevated levels of concern among members of the general public at a time when the current risk to the Australia

lian population is extremely low. Second, the initial emphasis on avian influenza followed by the apparent reduction in coverage has the potential to artificially reassure the general public that avian influenza no longer poses a threat to Australia. This is particularly likely given public responses to media coverage of the SARS virus, which did not go on to become a public health issue for Australia.

It is particularly concerning that there was limited media coverage that focused on protective or preventative issues. The media coverage of avian influenza provided numerous, ongoing opportunities for journalists and health writers to discuss, or even emphasize, the value of preventative behaviors such as hand washing, use of disposable tissues, and other hygiene practices known to reduce the likelihood of transmission of influenza and other infectious diseases. Further, much of the media coverage stated, or at least implied, that Australia would be well prepared to handle a potential pandemic. Finally, a high proportion of articles suggested that appropriate treatments are currently available or will become available in time, thereby implying that Australia has the ability to ameliorate the effects of an avian pandemic. Thus, by inference, members of the general public may have felt that it was unnecessary for them to undertake simple preventative actions (such as increased hygiene) when a pharmacological treatment or a vaccine would be available to avert a pandemic.

In conclusion, as noted by Ratzan, whether an influenza pandemic eventuates or not, it is timely for governments and health authorities to develop appropriate resources and strategies—including public communication campaigns—to prepare the health system and the general public to respond to current, and future, infectious disease risks [17]. Results of the Australian National Emergency Zoonosis Exercise indicated there is significant opportunity for improvement in terms of communication strategies in the event of an avian influenza outbreak. The report on the exercise noted that “The magnitude of public interest in the outbreak was underestimated. The media could have been more aware of apparent contradictions, for example [the Department of] health’s caution regarding evidence for human to human transmission compared to [the Department of] agriculture’s unequivocal exclusion of this. In the absence of clear information, there could be attempts by the public to destroy wild birds and their habitats, some of which Australia has international obligations to protect. It would be useful to have this material prepared in advance, based on existing research knowledge” [18].

The findings from this study suggest that media coverage regarding avian influenza likely raised the “fear” level amongst the Australian public while providing them with little or no information about what to do in the event

of an avian influenza outbreak. A national communication strategy needs to be developed in advance of an outbreak of pandemic influenza, including the development and pre-testing of specific media messages. If this isn’t done, the most likely responses in the event of an outbreak will be fear and panic, both of which undermine public health efforts to control the outbreak.

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