

**MAJOR NEWSPAPER COVERAGE OF
EMERGING PANDEMIC DISEASES:**

**A COMPARISON BETWEEN
AIDS AND 'BIRD FLU'**

**Jeffrey L. Gower
University of Akron**

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MAJOR NEWSPAPER COVERAGE OF EMERGING PANDEMIC DISEASES: A COMPARISON OF AIDS AND 'BIRD FLU'

Adelman and Verbrugge (2000) analyzed the major newspaper coverage of the 1980s AIDS pandemic. They concluded that trends in AIDS news coverage parallel mortality trends, stating that "Death Makes News." This paper compares the authors' findings on major newspaper coverage on AIDS to the current potential bird flu pandemic using an identical LEXIS-NEXIS database search. I conclude that major newspaper reporting on the bird flu pandemic greatly exceeds that of AIDS at a similar mortality level, and suggest that the reason for this may be a combination of professional, societal, and economic reasons.

NEWSPAPER REPORTING

Newspapers often perform a "watchdog" role in free democracies. This public service function informs the general public about the actions of its public servants, and exposes unethical, illegal and corrupt behavior. Those readers who are voters, therefore, will have better information on which to base their next electoral decision. Active and industrious investigative reporters serve as an additional "check" on the accountable use of taxpayer funds.

However, it has been often noted that newspapers report on extreme events rather than the typical and mundane workings of daily life. The emphasis on the unusual in newspaper reporting rarely lead to a balance view of world events. For example, cognitive psychologists relate excessive media coverage of unusual disease outbreaks and

medical dangers to an over-estimation of risk by the public (Slovic, Fischhoff, and Lichtenstein, 1982).

'BIRD FLU' AND YOU: AN INTRODUCTION TO AVIAN H5N1 INFLUENZA

The World Health Organization (WHO) medical epidemiologists stated in November 2005 that over fifty fatal cases of avian H5N1 influenza (commonly referred to as “bird flu”) have been reported in southeast Asian. Vietnam and Thailand, countries where backyard poultry pens are common, reported the majority of the deaths. WHO health officials warn that a possible bird flu pandemic could cause between two and seven million deaths worldwide (Lin, et. al., 2000).

Avian H5N1 influenza originates in migratory aquatic birds. During migration, the influenza virus may be passed on to domestic birds such as chickens. During this transmission, the virus may “reassort” (mix genes) with any present mammalian or human influenza viruses to form new strains that can inhabit hosts in a different species (Osterholm, 2005). Zoonotic influenza virus strains may be formed that pass the virus from mammals (such as pigs in a backyard pen) to humans (Karesh and Cook, 2005). The transmission cycle and reassortment unpredictability rarely bring the same influenza strain from year to year, and allows for little immunity defense. Therefore, vaccines developed to treat one year’s strain of influenza virus has little value in the following flu season (Garrett, 2005).

Influenza pandemics are not new. In 1918, a form of avian H1N1 influenza virus (the “Spanish flu”) caused an estimated fifty million deaths worldwide. Lesser pandemics occurred in 1957 and 1968, both of avian origin. Each pandemic began in

southern China and caused millions of deaths. A 1997 outbreak of avian H5N1 influenza was contained in Hong Kong with minimal human loss of life. Local officials destroyed the estimated 1.5 million chickens, ducks, and geese to remove the possible source of the disease (Guan et. al., 2002). The current bird flu virus is considered to be a mutated form of the Hong Kong avian influenza virus (Lin, et. al., 2000).

The traditional Asian small farm, with penned fowl in a small yard, creates a beneficial environment for the migratory bird-to-domestic bird transmission and the domestic bird to human transmission scenarios. Other Asian preferences, such as purchasing live fowl at a community market for home slaughtering and cooking, create multiples of opportunities for the transmission of the influenza virus (Garrett, 2005).

THE ADELMAN AND VERBRUGGE STUDY

Adelman and Verbrugge (2000) performed an integrated analysis on the social impact of six diseases (cancer, heart disease, diabetes, arthritis, Alzheimer disease, and auto-immune deficiency disorder, a.k.a. AIDS) as related to recent social history and epidemiological (mortality, prevalence, and incidence) rates. The authors concluded that “Death Makes News,” as their study found that major newspaper coverage did not occur until deaths could be reported, and that the frequency of major newspaper coverage on a particular disease depended on the current mortality, prevalence, and incidence rates (Adelman and Verbrugge, 2000).

One method to measure a disease’s social impact is to measure the frequency of newspaper coverage (Adelman and Verbrugge, 2000; Earl, et. al., 2004). Of the six diseases in the study, AIDS is the best comparison to bird flu because it is recent in social

history, and is a new diagnostic construct. In contrast, Alzheimer disease, although a significant amount of cases have appeared only in recent decades, it has likely been undiagnosed (or misdiagnosed) in the general population for centuries. The medical community had significant knowledge and experience for centuries with the other four diseases.

The authors selected the study of newspapers in determining news coverage due to its broad public use in informing the public. Newspapers are inexpensive, widely acceptable, and usually contain scientific findings and government policy positions (Adelman and Verbrugge, 2000). In contrast, television reporting is often limited in useful content by time restraints, scientific periodicals have less accessibility and are expensive and scientific informational websites have narrower audiences (Fallows, 1997).

Adelman and Verbrugge (2000) tested three hypotheses, as follows:

Hypothesis #1: *Newspaper coverage of a disease has three developmental stages: emergence, maturation, and decline and death.*

Hypothesis #2: *Trends in newspaper coverage of a disease over time reflect trends in the mortality, prevalence, and incidence—especially its mortality (as a particular disease became more common, the major newspaper coverage would increase).*

Hypothesis #3: *Differential levels of newspaper coverage of diseases reflect their different mortality rates (coverage would increase as deaths rose, and decrease as the death rate fell).*

Hypothesis #1 for AIDS

Adelman and Verbrugge (2000) note that a disease becomes eligible for news coverage once the medical community achieves agreement on the name and diagnostic features of the disease. This may have been why little AIDS news coverage appeared before 1982, although many deaths from the disease were occurring at the time, the medical community had little coordination and competing interests in the recognition of the disease. Cultural taboos also may have some impact on the delay of AIDS media coverage, but the delay is eventually overcome by the media (Adelman and Verbrugge, 2000). Data gathered in the study showed an initial steep increase in AIDS newspaper coverage, then leveling off in the late 1980s and declining in the early 1990s as new treatments appeared and the mortality rate dropped (See Appendix 1). A conclusion can be made that AIDS news coverage had progressed through the developmental stages, from the emergence stage, and likely had entered the maturation stage by 1997 (Adelman and Verbrugge, 2000).

Hypothesis #2 for AIDS

Adelman and Verbrugge (2000) tracked whether the degree of newspaper coverage corresponded with the mortality rate. This was found to be true for the AIDS pandemic, as major newspaper coverage increased greatly during the late 1980s, tracking the amount of AIDS deaths, then decreased as AIDS deaths declined in the early 1990s (See Appendix I). The tracking of AIDS prevalence and incidence with major newspaper coverage found similar results.

Hypothesis #3 for AIDS

Adelman and Verbrugge (2000) found that journalists report more on diseases with higher mortality rates. AIDS, with the exception of several years in the early 1990s, had a lower total mortality rate than heart disease and cancer, and therefore journalists wrote fewer articles on AIDS. However, as deaths from the AIDS pandemic spiked and became to equal heart disease deaths in the early 1990s, the amount of newspaper coverage became equal also; as deaths due to AIDS decreased later in the decade and heart disease deaths remained relatively constant, the amount of news coverage on heart disease remained approximately the same, but decreased for AIDS.

METHODOLOGY

The Adelman and Verbrugge (2000) study drew from the archives of thirty-four major newspapers across the country. The only common denominator for these papers was their contribution to the LEXIS-NEXIS newspaper data base. Several of the largest newspapers were not represented, such as the Chicago Tribune (#6), the Dallas Morning News (#8) and the Detroit Free Press (#11). Some of the largest newspaper conglomerates, such as Belo Corporation and Hearst Communications, were not represented in the database, while other newspaper corporations had several affiliated papers.

I replicated the search analysis of the Adelman and Verbrugge study to determine if major newspaper coverage of pandemic diseases has changed since the advent of the AIDS crisis in the early 1980s. Although LEXIS-NEXIS added more major newspaper archives to the database since 2000, I limited my search to the original thirty-

four major newspapers used by Adelman and Verbrugge (see Appendix II).

Like Adelman and Verbrugge, I used the “Advanced Search” option in manipulating the database. I used the keyword term “avian influenza or bird flu” in my main search strategy to find the amount of coverage on the disease. Early searches using merely “bird flu” returned several irrelevant articles (known as “false positives” in LEXIS-NEXIS terminology), including ones concerning the illness of basketball coach Larry Bird and others concerning a different bird disease known as the West Nile. Keyword searches using the phrases “avian influenza” or “avian infl!” did not return as many relevant articles (known as “true positives”) as the combination of the two terms.

BIRD FLU HYPOTHESES

I made predictions before gathering data on the basis of general observations about bird flu based on Adelman and Verbrugge’s three hypotheses as follows:

Hypothesis #1: *Major newspaper coverage on the bird flu pandemic would be in the emerging stage.*

Hypothesis #2: *Major newspaper coverage would begin with the initial reported deaths, but would receive greater coverage for the initial deaths than did AIDS.*

Hypothesis #3: *Major newspaper coverage of bird flu would receive greater major newspaper coverage in its earlier stages than did the AIDS pandemic, despite bird flu having a lower death rate.*

I made these hypotheses from the following observations. First, avian H5N1 influenza has been recognized and labeled by health professionals since the earlier brush with the disease in 1997. AIDS, on the other hand, was not classified as an official cause

of death until 1982, although thousands had died from it prior to that time. Reporters, therefore, had no accurate information before 1982. Health organizations, such as the World Health Organization (WHO), are likely to disseminate statistics about the disease to journalists where there is credibility about the information.

Second, the potential immediate economic loss for bird flu is much greater than AIDS. The process of contracting bird flu to illness to death is brief and more dramatic than the long period required for the HIV-virus to act in an AIDS death. Scenarios for bird flu pandemic deaths estimate a week from contraction of the disease to death. The same scenarios show mass amounts of deaths in single areas at the same time.

Third, the news media has changed since the early days of the AIDS pandemic. The possibility of a new wave of death sweeping across the U.S. contains the drama that draws readership.

DATA SEARCH RESULTS

The bird flu search on the LEXIS-NEXIS major newspaper database returned all articles written in the thirty-four major newspapers as originally used by Adelman and Verbrugge (see Appendix II). These totals were summed, then divided by thirty-four to obtain the number of articles per newspaper for each year. The database search found the first articles on bird flu to be printed in 2002; although minimal, I started the comparison at that point to an equivalent period of time on AIDS reporting.

DATA ANALYSIS

Major newspapers first reported on avian H5N1 influenza in 2002. There was not an appreciable difference in 2003, with an average of two articles per major

newspaper. However, in 2004, southeast Asian countries announced the first deaths attributed to bird flu. Major newspaper coverage rose at an exponential rate as bird flu fatalities increased, to a level of 47 articles on bird flu that year (see Appendix II). Major newspaper coverage increased in 2005, to 56.4 articles per major newspaper in 2005.

A comparison to the major newspaper coverage for the AIDS pandemic show remarkable similarities. The increased coverage of the AIDS pandemic also had exponential growths after the first deaths due to the illness were reported. In 1982, the average major newspaper published one article on AIDS. The average article count rose to 46.8 in 1983, and to 50.0 in 1984, as more AIDS deaths were reported. However, during those years, the mortality rate remained under one per hundred-thousand of the U.S. population. The bird flu deaths have occurred in foreign countries, and are minimal in terms of the foreign population (the bird flu death rate in Vietnam would be 1 in 4,000,000 in 2005, forty times less than the U.S. AIDS mortality rate when an equal amount of major newspaper coverage occurred).

The prevalence and incidence rates for bird flu show even less of a correlation between bird flu rates and major newspaper coverage. As the prevalence and incidence rates of bird flu in the U.S. are zero; one would expect less major newspaper coverage. Internationally, also, the prevalence and incidence level would be equal to the mortality level as avian H5N1 influenza is usually short-lived with fatal results. AIDS patients, on the other hand, may live for decades after infection, which leads to a higher prevalence and incidence rate.

BIRD FLU HYPOTHESES TESTING

Based on the Adelman and Verbrugge study, I made three hypotheses about major newspaper coverage of bird flu, noted previously. All three of my hypotheses turned out to be correct, although parts of individual hypotheses did not follow the logic used in the initial study.

Analysis of Bird Flu Hypothesis #1

I expected to find major newspaper coverage of bird flu in the emerging stage. I conclude that this hypothesis is correct. As with the health organization's initial reporting of AIDS deaths in the early and mid-1980s, major newspaper coverage on bird flu went from minimal amounts in 2002 and 2003 to over fifty articles per newspaper in 2005. In comparison with all six diseases in the initial study, similar newspaper coverage increases were found only with the initial AIDS deaths. Adelman and Verbrugge (2000) labeled AIDS coverage at that time to be in the emerging stage. Therefore, I conclude that major newspaper coverage of bird flu also is in the emerging stage.

Analysis of Bird Flu Hypothesis #2

I postulated that major newspaper coverage would begin once the initial reported deaths. I conclude that this hypothesis is correct. The initial deaths due to bird flu were reported in late 2003 and early 2004. At that time, major newspaper coverage dramatically increased. As bird flu deaths increased in 2005, the amount of major newspaper coverage also increased.

Further, my second hypothesis postulated that major newspaper coverage on bird flu would be greater than occurred at the beginning of the AIDS pandemic. I also

conclude this part of the hypothesis to be correct. At the AIDS mortality levels in 1982 and 1983, roughly three thousand AIDS patients died to receive similar newspaper coverage than has been received recently by bird flu. However, the avian H5N1 influenza strain that is expected to reach the U.S. has not led to any deaths in the U.S., and does not have a significant level of deaths per population level in the countries where it has caused fatalities.

Analysis of Bird Flu Hypothesis #3

I postulated that the level of major newspaper coverage for bird flu would be greater than AIDS coverage at a similar mortality rate. I conclude that this hypothesis is correct, although this assumption does not follow the logic of newspaper coverage from the initial study. I based this hypothesis on my observation that I perceived that there was a large amount media space and time devoted to the developments on bird flu, but there had been relatively few deaths worldwide, and none in the U.S. My data gathering proved that there was substantially more major newspaper coverage per bird flu death in the U.S. than an equal period during the emergence of the AIDS pandemic. For example, the average number of articles on AIDS in the major newspapers that were studied was fifty. The mortality rate from AIDS during that year was 0.6 per one-hundred thousand, or roughly eighteen hundred deaths in the three hundred million U.S. population. In 2005, the average number of articles on bird flu is over fifty, but no deaths have occurred. The logic from the initial study would have predicted approximately similar mortality rates for similar average number of newspaper articles in newspapers.

Therefore, journalists are more likely to report on the bird flu pandemic without

the anticipated requirement of disease deaths as stated by Adelman and Verbrugge (2000).

THEORIES TO DISPARITIES BETWEEN BIRD FLU AND AIDS COVERAGE

There are questions as to why journalists report on bird flu without an corresponding death rate, as seems to have been required during the AIDS pandemic, and for the other five diseases tracked in the initial study. Is there an undue emphasis on reporting the potential for losses, both human and economic, for bird flu? Or was major newspaper and media coverage lacking during the emergence of the AIDS pandemic?

Newspaper coverage has an uneven record in the conveyance of accurate political information to readers. Ansolabehere, Snowberg, and Snyder (2005) reported that the misplaced emphasis of newspaper reporting on isolated incidences of corporate campaign contributions and “soft money” contributions attributed to voter over-estimation of money spent in House of Representatives political races by over five hundred per cent.. Sorauf (1987) also found that the press misreports financial campaign finance information. By choosing to over-emphasize exceptional events over the more mundane workings of individuals in the political process, the author concludes that the press presents unbalanced reporting skewed toward the scandalous. However, Ansolabehere, Snowberg, and Snyder (2005) note that this may be a public service to report on extreme behavior, as that is where the most illegal and unethical behavior is found, although those reporting practices often lead to misperceptions by the public.

Rogers and Dearing (1989) reported that media coverage was slow to cover the AIDS emergence due to pervasive homophobia in news organizations and among media

professionals. The reporters conclude that the mass media failed to inform the country about AIDS in the early 1980s through negligence due to homophobia.

Shilts (1988) stated that homophobia and general disinterest among the American public on AIDS issues suppressed knowledge of the AIDS epidemic. He concluded that the failure of the mass media and the federal government exacerbated a national health crisis that was unnecessary. Other studies noted that the lack of interest by the media and other groups stemmed from the association of AIDS with a marginalized group outside the general public (Sherill, Somerville and Bailey, 1992).

Mass media has been the primary method for disseminating AIDS messages across the country and the world (Myhre and Flora, 2000). A combination of lack of interest by the general public during the 1980s and disinterest by a news-making government could indicate that the AIDS pandemic was under-reported.

Therefore, is bird flu in 2005 over-reported? A few observations indicate that this may be a factor. Countries in Southeast Asia, where the current bird flu outbreaks are currently localized, are much greater trading partners with the U.S. than in the 1980s. As news media tended to specialize, international beats became more prevalent. Agricultural trade and American investment in agricultural businesses in Southeast Asia has increased. As a possible eradication of avian H5N1 influenza may entail the destruction of millions, possibly hundreds of millions of birds, the economic impact in a globalized society will be felt in the U.S.

Other considerations may be that journalists now have experience in the coverage of a potential health crisis. Media as a whole fielded many complaints as to the poor and

late coverage of the AIDS crisis (Rogers and Dearing, 1989). As a potential bird flu pandemic looms, it is doubtful that reporters want to be left out again on a major news-making event.

Another potential cause for the possible shift in pandemic disease reporting may be due to a new openness among the governments of certain Asian governments in reporting a health crisis. China, notably, covered up past avian influenza outbreaks so it would not lose trade and tourism dollars. However, recent Chinese government actions indicate that it has moved toward a greater transparency in reporting potential international health and environmental problems (Mukwai, 2004).

Further, it may no longer be necessary that “Death Makes News,” as stated by Adelman and Verbrugge (2000). The author’s statement may have evolved into “the mere specter of massive death makes news.” Some media outlets caution that a possible worldwide avian H5N1 influenza outbreak, spread through modern forms of international transportation, could ultimately kill fifty million people, equaling the death to of the 1918 influenza pandemic (Mukwai, 2004).

EXTRAPOLATIONS AND CONCLUSIONS

It no longer appears necessary in the modern media to require a significant amount of deaths before major newspapers and other mass media will report extensively on a disease. The reasons for this change in journalistic ethic may be found in several professional, historical, societal and economic factors. As the world grows smaller due to globalization and more countries develop shared economic and cultural interests, it seems likely that reporting on new potential pandemics will be quickly reported .

The massive media restructuring and consumption segmentation that has occurred since the onset of the AIDS pandemic may also play a role. The explosion in media outlets through the development and maturation in the cable television medium and the electronic media, for example, greatly increased the amounts of “content” required to make a media product available for consumer consumption. Topics such as the bird flu are readily pertinent to media consumers and will continue to grab interest until the threat dissipates or disproved.

It may also be that the American media-consuming public responds to accounts of potential mass death emanating from exotic locales. It may play into the certain sections of American society that may have a subconscious desire to further distrust Asians.

Overall, however, it looks as if some lessons from the AIDS pandemic have been learned. The print media, after realizing its failure in its role of public service advocate during the AIDS pandemic, may now make amends for that error. Through effective and efficient reporting American public on potential pandemic diseases, the national media has the opportunity to bolster its role in public advocacy.

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APPENDIX

APPENDIX I

MAJOR NEWSPAPER ARTICLES ON AIDS, 1982-1997

LEXIS-NEXIS MAJOR NEWSPAPER DATABASE

SELECTED DATA FROM ADELMAN AND VERBRUGGE (2000), PG. 353-355

<u>Year</u>	<u>No. of Articles</u>	<u>-----Per 100,000 People in U.S.-----</u>		
		<u>Mortality</u>	<u>Prevalence</u>	<u>Incidence</u>
1982	1.0	0.2	N/A	0.13
1983	46.8	0.2	N/A	0.85
1984	50.0	0.6	N/A	1.50
1985	245.7	2.0	N/A	2.75
1986	286.0	3.1	N/A	5.2
1987	486.1	6.3	N/A	8.8
1988	324.2	7.2	0.11	10.0
1989	221.9	8.5	0.20	10.6
1990	214.7	9.9	0.25	10.7
1991	281.1	10.2	0.33	10.9
1992	327.2	10.4	0.51	11.0
1993	341.5	10.5	0.73	11.2
1994	259.7	10.6	0.82	10.9
1995	268.5	10.6	0.86	11.2
1996	299.7	10.2	0.90	10.8
1997	246.4	9.6	1.05	10.6

APPENDIX II

MAJOR NEWSPAPER ARTICLES ON BIRD FLU, 2002-2005

LEXIS-NEXIS MAJOR NEWSPAPER DATABASE

JANUARY 1, 2002 THROUGH DECEMBER 31, 2005

<u>Newspaper</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>
Los Angeles Times	1	4	175	119
Miami Herald		2	147	100
San Diego Union-Times		1	12	9
St. Petersburg Times			92	61
Atlanta Journal-Constitution	2	4	120	84
Boston Globe		4	53	35
Christian Science Monitor			11	10
New York Times	2	19	249	162
Washington Post		9	237	172
Wall Street Journal		3	130	99
Chicago Sun-Times			34	77
St. Louis Post-Dispatch		7	47	113
Buffalo News			1	63
Columbus Dispatch			2	18
Louisville Courier-Journal			7	11
Houston Chronicle		5	89	94
Philadelphia Inquirer		2	49	78
Cleveland Plain Dealer			7	19

APPENDIX II (cont.)

<u>Newspaper</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>
San Francisco Chronicle			6	44
Seattle Times		3	73	117
USA Today		3	14	62
New York Daily News			16	36
Indianapolis Star			1	9
Omaha World-Herald			3	20
Minneapolis Star			12	24
Boston Herald			4	25
Denver Post			5	23
Kansas City Star		2	68	106
New Orleans Times-Picayune			5	8
Detroit News				3
Indianapolis News			4	89
Rocky Mountain News		1	5	32
Tampa Tribune			1	1
Totals	5	69	1598	1952
Avg. per Newspaper	0.1	2.0	47.0	56.4

