

## Coverage of the Ebola Virus Disease Epidemic in Three Widely Circulated United States Newspapers: Implications for Preparedness and Prevention

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### ABSTRACT

**Background:**Widespread media attention about Ebola influences public awareness and interest, yet there is limited research on what aspects of Ebola have and have not been communicated through the media.

**Methods:**We examined the nature and extent of coverage about Ebola in the three most widely circulated United States (U.S.) daily newspapers. Between September 17, 2014 and October 17, 2014, 301 articles about Ebola in The New York Times, USA Today, and The Wall Street Journal were identified and coded.

**Results:**The most common topic was coverage of cases in the United States (39%), followed by the outbreak in Africa (33.6%).

**Conclusion:**This is the first study to describe coverage of the Ebola epidemic in widely circulated U.S. newspapers. A substantial portion of the American public is concerned about being infected with Ebola virus disease (EVD). In this study, a large emphasis was placed on death tolls and the cases in the United States. Much more can be done to educate readers about relevant aspects of the Ebola epidemic, including how Ebola is and is not transmitted.

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## Introduction

Ebola virus disease (EVD) epidemic in Guinea, Sierra Leone and Liberia is the largest in history,<sup>1</sup> with 9,911 cases (5,477 laboratory confirmed) and 4,868 deaths as of October 19, 2014.<sup>2</sup> Incidence and mortality will be dramatically affected by the extent and timeliness of international assistance provided to West Africa, which to date has been insufficient.<sup>3-5</sup> In the United States, two health care workers that provided care for the index case in Dallas subsequently tested positive<sup>6</sup> and, on October 23, 2014, the first

case in New York City was reported in a volunteer international aid worker.<sup>7</sup> There has been widespread media attention about Ebola, which influences public awareness and interest, yet there is limited research on what aspects of Ebola have and have not been communicated through the media. Press coverage of a complex crisis like Ebola may not only influence public awareness—and public anxiety—but policy development as well.

We examined the nature and extent of coverage about Ebola in the three most widely circulated U.S. daily newspapers.

## Materials and Methods

Between September 17, 2014 and October 17, 2014, articles about Ebola in The New York Times, USA Today, and The Wall Street Journal, which had a combined average circulation of 5,918,451 in 2013,<sup>8</sup> were identified by entering the keywords “Ebola, Ebola outbreak and Ebola virus disease” into two search engines, ProQuest Newsstand® and LexisNexis Academic®. Letters to the editor and articles whose content merely contained the word Ebola, but did not focus on the recent EVD outbreak, were excluded. A coding sheet with topics was created inductively by reviewing 25 articles from a different newspaper. Coding involved first recording descriptive information, including length of the article, date of publication, and title of newspaper. To

assess specific content areas, a dichotomous coding scheme (yes or no) was used. There were 436 articles located within the three newspapers. A total of 135 were excluded leaving a total of 301 articles. Reasons for exclusion revolved around content that was irrelevant (i.e., pricing of goods, impact on stock market, sports delays), quotes, corrections, headlines with no article, captions, television listings, and book recommendations. The specific content areas are listed in Table 1. Frequencies and percentages were used to describe the topics that were covered (word counts for each article were noted). The Institutional Review Boards at William Paterson University and Teachers College, Columbia University deemed this research exempt.

### **Ethical Issues**

The study was deemed not human subjects research by review board of William Paterson University.

**Table 1:** Content of 301 articles from widely read newspapers, September and October 2014

	<b>n (%)</b>
<b>Cases in the US</b> ( <i>Those who have contracted EVD in the United States or those who are being treated in the US</i> ).	117(39.0)
<b>Outbreak in Africa</b> ( <i>EVD outbreak in Africa</i> ).	101 (33.6)
<b>Death rates</b> ( <i>Number and rate of death from the current EVD epidemic</i> ).	60 (20.0)
<b>Precautions being taken by institutions</b> ( <i>Precautions or measures put into place at varied institutions to prevent further spread of EVD</i> ).	52 (17.3)
<b>Travel issues</b> ( <i>Travel and the risks involved, potential for a travel ban, and increase in screening at airports</i> ).	51 (17.0)
<b>Poor handling of cases</b> ( <i>How cases, mainly in the U.S., have been poorly handled or how miscommunication has contributed to disease transmission</i> ).	47 (15.6)
<b>Preparedness</b> ( <i>Primarily focused on the lack of preparedness among the workforce and varied institutions</i> ).	46 (15.3)
<b>Panic, fear, anxiety</b> ( <i>Emotional responses that EVD is causing across populations</i> ).	35 (11.6)
<b>Delayed response</b> ( <i>Response to EVD has largely been delayed and the effect of this delayed response</i> ).	35 (11.6)
<b>Need for a global response</b> ( <i>How a global response to combat the EVD outbreak in West Africa is needed to prevent EVD transmission</i> ).	34 (11.3)
<b>Risk of treating patients</b> ( <i>Risk to health care workers</i> ).	26 (8.6)
<b>Cases in other countries</b> ( <i>Incidence or prevalence of EVD in other countries</i> ).	25 (8.3)
<b>Funding/Cost for Fighting Ebola</b> ( <i>Funding needed or provided and/or cost thus far to combat EVD</i> ).	24 (8.0)
<b>Politics</b> ( <i>How politics has affected current political campaigning and the politics of combating EVD</i> ).	18 (6.0)
<b>Precautions for the public can take</b> ( <i>Precautions that the public can take to reduce chances of EVD exposure</i> ).	12 (4.0)
<b>Helpers/Volunteers</b> ( <i>Need for additional help, particularly from volunteers in Africa</i> ).	10 (3.3)
<b>Ethics</b> ( <i>Ethics of treating those with EVD, and measures to reduce EVD transmission (e.g., quarantine, euthanizing animals)</i> ).	9 (3.0)
<b>Ruling out a case</b> ( <i>A person thought to have EVD was found to be incorrect</i> ).	6 (2.0)
<b>Discrimination</b> ( <i>Those who are facing discrimination related to the possibility of having EVD</i> ).	6 (2.0)
<b>Governmental Oversight</b> ( <i>Appointment by the Obama administration an individual ('czar') to provide oversight regarding Ebola</i> ).	5 (1.7)
<b>Possibility for virus mutation</b> ( <i>Consideration of virus mutation and associated impact</i> ).	5 (1.7)

## Results

As mentioned, 301 articles were identified. The most common topic was coverage of cases in the United States (39%), followed by the outbreak in Africa (33.6%) (Table 1). One-fifth of the articles focused on the rising death toll. Precautions the public can take were mentioned infrequently (4.0%), role of volunteers (3.3%), ethical issues (3.0%), ruling out a case (2.0%), discrimination (2.0%), U.S. governmental oversight

(1.7%), and possibility of virus mutation (1.7%). Approximately 25% (n = 75) addressed only one topic and ~ 35% (n = 106) addressed two topics, while 65 articles addressed 3 topics, 39 addressed 4 topics, and the remaining 16 articles addressing five to seven topics. The mean word count was 767 words with a range of 67 to 1,745 words. Table 2 indicates a sample of quotations to illustrate the five most popular content areas.

**Table 2:** Illustrative quotes from the five most common themes

Theme	Illustrative Quotes
<b>Cases in the US</b> ( <i>Those who have contracted EVD in the United States or those who are being treated in the US</i> ).	“The first Ebola patient diagnosed in the USA was mourned Wednesday by close friends and family in Texas...” <sup>9</sup>
<b>Outbreak in Africa</b> ( <i>EVD outbreak in Africa</i> ).	“New cases are multiplying in Liberia, Guinea and Sierra Leone, and the disease has spread as far as Nigeria and Senegal.” <sup>10</sup>
<b>Death rates</b> ( <i>Number and rate of death from the current EVD epidemic</i> ).	The unfolding epidemic has killed more than 4,400 people, mostly in West Africa. <sup>11</sup>
<b>Precautions being taken by institutions</b> ( <i>Precautions or measures put into place at varied institutions to prevent further spread of EVD</i> ).	“Hospitals in cities with large West African populations are bracing for the first patients with Ebola, a prospect that no longer seems so far-fetched, ramping up screening, protections for hospital staff, and efforts to encourage people to report symptoms and take precautions.” <sup>12</sup>
<b>Travel issues</b> ( <i>Travel and the risks involved, potential for a travel ban, and increase in screening at airports</i> ).	“As Ebola continues to ravage West Africa and fears grow that the virus will spread around the globe, enhanced screenings began on Saturday at Kennedy Airport in New York.” <sup>13</sup>

## Discussion

When infectious disease agents with high pathogenicity and virulence threaten to occur at epidemic levels, the media has a crucial role.<sup>14</sup> Widely accessed communication channels can help disseminate useful information, reduce unwarranted fear, and facilitate decision making to reduce exposure and susceptibility. In contrast, to the extent that media coverage of urgent public health issues addresses them in a way that sensationalizes news, an important opportunity for disease prevention and health promotion has been lost.

A substantial portion of the American public is concerned about being infected with EVD.<sup>15-17</sup> This is not surprising considering that, based on the articles reviewed for this study, a large emphasis has been placed on death tolls and the cases in the U.S. Much

more can be done to educate readers about relevant aspects of the Ebola epidemic.

Confidence in the Government’s ability to handle Ebola has declined.<sup>16</sup> While this topic was not widely covered in the articles reviewed, it is consistent with declining investments in disaster preparedness infrastructure, which has occurred in recent years.<sup>6</sup> Coverage of this topic in widely circulated U.S. newspapers can help build public support for such investments, and help inform the public about what U.S. governmental agencies are and are not doing domestically and abroad, and about the need to restore substantial cuts in resources related to preparedness.

Loss of public confidence in government may have a number of negative consequences. First, messengers may become less credible, and recommendations may be disregarded. Second, the public and elected officials may not focus on strategies to im-

prove capacity for planning, prevention and response to the Ebola or similar crises. Such strategies are needed to restore funding for badly depleted hospital and public health preparedness programs. Third, confusion and public anxiety may lead to adoption of practices and protocols that can be deterrents to attracting health worker volunteers willing and able to work in West Africa.

This study was limited by the cross-sectional design and the limited time frame reviewed. Additionally, coding was only completed by a single coder with experience in media analysis (CHB). Future studies of this nature could be strengthened by adding an additional coder. Coverage about Ebola is changing on a daily basis and results from this study cannot be generalized over time. Nevertheless, this is the first study to describe coverage of the Ebola epidemic in widely circulated U.S. newspapers. Building on this work, future studies can assess the extent to which widely circulated newspapers and other media channels are helping to ensure that readers are well informed about Ebola and emerging urgent public health issues.

## Competing Interests

The authors declare that there is no conflict of interests

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