

## Zika Virus on YouTube: an analysis of English language video contents by source

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## **Abstract (201 words)**

**Objective:** The purpose of this study was to describe source, length, number of views and content of the most widely viewed Zika Virus (ZIKV)-related YouTube videos. We hypothesized that ZIKV-related videos uploaded by different sources contain different content.

**Methods:** The 100 most viewed English ZIKV-related videos were manually coded and analyzed statistically.

**Results:** Among the 100 videos, there were 43 consumer-generated videos, 38 internet-based news videos, 15 TV-based news videos and 4 professional videos. Internet news sources captured over two-thirds of the total 8,894,505 views. Compared with consumer-generated videos, internet-based news videos were more likely to mention ZIKV's impact on babies (Odds ratio, 6.25; 95% CI, 1.64, 23.76), the number of cases in Latin America (OR, 5.63; 95% CI, 1.47, 21.52); and ZIKV in Africa (OR, 2.56; 95% CI, 1.04, 6.31). Compared with consumer-generated videos, TV-based news videos were more likely to express anxiety or fear of catching ZIKV (OR, 6.67; 95% CI, 1.36, 32.70); to highlight that the public was afraid of ZIKV (OR, 7.45; 95% CI, 1.20, 46.16); and to discuss avoiding pregnancy (OR, 3.88; 95% CI, 1.13, 13.25).

**Conclusions:** Public health agencies should establish a larger presence on YouTube to reach more people with evidence-based information about ZIKV.

**Key Words:** Zika Virus, Health Communication, YouTube, Social Media

## Introduction

Zika Virus (ZIKV) is known to cause microcephaly among some neonates born to ZIKV-infected women and is associated with the onset of Guillain-Barre Syndrome among some infected patients.<sup>1,2</sup> As no vaccine or treatment is available, health communication becomes a key intervention apart from mosquito control.

Social media is an emerging tool for health communication during outbreak responses.<sup>3</sup> Recent research on ZIKV-related social media health communication focuses on Twitter<sup>4-6</sup> and Facebook.<sup>7</sup> [Previous research has highlighted the importance of visual images in health communication.](#)<sup>8</sup> Accounting for 22% of social media traffic, YouTube is the second most popular social media in the United States.<sup>9</sup> Previous studies found that YouTube videos about outbreaks can attract thousands, even millions, of views, but many of these videos are created and uploaded by non-professionals.<sup>10</sup> News videos uploaded online draw considerable attention from social media users and stimulate ‘traffic’ between sites. For example, a study suggested that Ebola-related online videos released by two major news channels drove up Ebola-related Twitter traffic in 2014.<sup>11</sup>

While health agencies endeavor to communicate a core set of messages about infectious disease to the public, people also acquire health information from non-professional sources, including videos posted by consumers, which sometimes contain content that is inconsistent with the best available scientific evidence.<sup>12</sup> This runs the risk of confusing the general public and undermining the effectiveness of public health communication campaigns. [Content analysis of YouTube videos provides public health professionals with an overview of the information that the populations they serve are most likely to receive.](#)

We present a cross-sectional study of English language ZIKV-related YouTube videos in which their source, length, number of views and contents were manually coded. Our hypothesis is that ZIKV-related YouTube videos created and uploaded by different sources contain different content. More specifically, the contents of internet-based news videos, TV-based news videos, and videos created by medical professionals or government agencies are different from those of videos uploaded by individual lay consumers.

## **Methods**

*Data retrieval.* We searched for “Zika virus” on YouTube.com with default “content location” (United States). Popularity was determined by total view count, which was determined by sorting videos according to how many times they had been viewed. In order to reach the study goal of watching the 100 most popular videos, a total of 253 videos were viewed; 153 videos were excluded because they were not in English. One of the primary sources of information used to create categories was the main ZIKV webpage from the Centers for Disease Control and Prevention (CDC).<sup>13</sup> At the time the categories were made, information on the page was last reviewed February 11, 2016 and all updates until March 14, 2016 were included. A sample of 15 videos, that were not included in the sample of 100 videos due to low viewership, was used to inductively generate additional content categories. Categories for the source, length, and date that the video was uploaded were also parts of the coding instrument.

*Manual coding.* One author coded the entire sample of 100 videos. First, the source of the uploaded video was determined. Consumer videos were delineated as those posted by a member of the lay public. Professional videos were those posted by an individual with the qualifications to be working in a medical profession. Network television was distinguished as shows that were focused on entertainment, whereas television-based news clips were focused on providing news and information to the viewer. Internet-based news was considered the provision of news and information on a website that was not affiliated with a

television station. A government source was defined as anything with a tag from a government agency. Finally, print or radio sources were videos created by a conventional print or radio source. For each video, the following information was documented: its source, its year uploaded, its length in minutes, and its total number of views as of May 9, 2016.

Content categories were coded dichotomously as “yes” or “no” per mention of the topic of each category: general and specific modes of disease transmission (mosquito, male sex partner, transfusion, other avenues); impact on infants; ZIKV treatment; anxiety and fear of catching ZIKV; modes of prevention; number of cases overall, in Latin America, and in the U.S., respectively; public fear of ZIKV; avoiding pregnancy; lack of preparedness in the U.S.; highlights of specific ZIKV cases in the U.S.; need for financial aid in non-U.S. countries; need for medical help/medical resources in Latin America; need for the U.S. to allocate additional funds for disaster preparedness; need for international cooperation/response; need for training of healthcare personnel; need for coordination between local, state, and federal government; danger for healthcare personnel; Olympics in Brazil; ZIKV is a hoax, is intentional population control, or other conspiracy theories; and the video is a part of a comedy skit/parody or prank about ZIKV.

To demonstrate high inter-rater reliability, 15 of the 100 video samples were randomly chosen and double-coded by a second researcher. There was 100% agreement between two coders for all content variables. The two coders agreed on the category of the source for 14 of the 15 videos, reconciling the one disagreement.

*Statistical analysis.* Analysis was conducted in R 3.3.0.<sup>14</sup> For the sources of videos, we merged the “Government” category (n=3) and the “Professional” category (n=1) as a combined “Professional” category (n=4). For the length of videos, given that the distribution was not normal, we performed

Kruskal-Wallis  $H$  Test across the four source categories and Wilcoxon rank sum test between the categories in a pairwise manner. We performed univariate logistic regression with the source of the video as the predictor variable and the manually coded content variables as outcome variables. We calculated the odds ratio of a specific type of videos (professional, internet-based news and television-based news) showing a specific type of content as compared with the reference category (consumers' videos).

*Ethical approval.* This study was determined not to be human subject research by the institutional review board at William Paterson University.

## Results

Among the 100 manually coded ZIKV-related YouTube videos, there were 43 consumer-generated videos, 38 internet-based news videos, 15 TV-based news videos and 4 professional videos (Table 1).

Collectively, these videos were viewed 8,894,505 times. Internet-based news videos and consumer videos accounted for 67.7% and 22.4% of the total 8,894,505 views respectively. The distributions of video lengths are significantly different across the four source categories (Kruskal-Wallis  $\chi^2=12.215$ ,  $p=0.007$ ). Pairwise comparison found that there were statistically significant differences between consumer-generated videos and television-based news videos ( $W=511$ ,  $p=0.0008424$ ), and between television-based news videos and internet-based news videos ( $W=175$ ,  $p=0.03061$ ). Likewise, the distributions of number of views are significantly different across the four source categories (Kruskal-Wallis  $\chi^2=9.4735$ ,  $p=0.02$ ). Pairwise comparison found that there was a statistically significant difference between consumer-generated videos and internet-based news videos ( $W=529$ ,  $p=0.006$ ). Across the 100 videos, a small positive correlation existed between the lengths and the number of views of videos (Spearman's  $\rho=0.24$ ,  $S=127160$ ,  $p=0.02$ ).

Table 2 presents the frequency of ZIKV-related YouTube videos by their content and source categories. Odds ratios for each content category covered by source, using consumer-generated videos as a reference category, are presented in Table 3. Compared with consumer-generated videos, internet-based news videos were 6.25 times more likely to mention ZIKV's impact on babies (95% confidence interval, CI, 1.64, 23.76); 5.63 times more likely to mention the number of cases in Latin America (95% CI, 1.47, 21.52); and 2.56 times more likely to mention ZIKV in Africa (95% CI, 1.04, 6.31). In contrast, compared with consumer-generated videos, TV-based news videos were 6.67 times more likely to express anxiety or fear of catching ZIKV (95% CI, 1.36, 32.70); 7.45 times more likely to highlight that the public was afraid of ZIKV (95% CI, 1.20, 46.16); and 3.88 times more likely to discuss not becoming pregnant (95% CI, 1.13, 13.25). Professional videos were much more likely to highlight ZIKV cases in the US (OR = 20.5, 95% CI, 1.82, 230.51), when compared with consumer-generated videos, but there was a very small sample of professional videos (n=4), representing only 1.3% of total views.

## Discussion

This cross-sectional study categorized information circulated by the 100 most popular ZIKV-related YouTube videos in English, and their respective sources. Of the 100 videos, the four created by medical professionals or government public health agencies captured only 1.3% of total views, while the 43 consumer-generated videos captured 22.4%. In total, these videos were viewed 8,894,505 times. Compared with the consumer-generated videos, internet-based news videos (which captured over two-thirds of total views) were more likely to mention ZIKV's impact on babies, ZIKV cases in Latin America, and Africa. In sharp contrast, television-based news videos, which captured 8.6% of total views, were

more likely to express anxiety or fear of catching ZIKV, to highlight that the public was afraid of ZIKV, and to discuss avoiding pregnancy.

Social media poses both opportunities and challenges in the ZIKV response. Social media are popular sources of health information related to pregnancy and children's health.<sup>15, 16</sup> The interactive nature of social media and their high penetration in industrialized countries may allow for more effective communication of health information than traditional media.<sup>17</sup> In fact, social media interacts with traditional media and amplifies its impact. Previous research found that Ebola-related videos released online by news channels drove up Ebola-related Twitter traffic.<sup>11</sup> Both social media and traditional media can become part of health communication strategies deployed by public health agencies to achieve greater effects. However, social media also has the potential to amplify unnecessary anxiety during critical time periods of infectious disease outbreaks.<sup>18</sup> Emerging reports of fetal microcephaly, a potential indicator of impaired fetal brain development, in ZIKV-infected pregnant women,<sup>2</sup> may cause anxiety and may lead to unnecessary abortions among pregnant women with potential exposure to ZIKV. Our findings indicate that some of the most widely viewed YouTube videos mention anxiety and fear associated with 'catching' ZIKV and include discussions about avoiding pregnancy due to the potential risk of ZIKV infection during pregnancy. While they may be legitimate television news reports, the extended coverage on this uncertain risk and exaggerated anxiety may lead to adverse effects on public health, because witnessing others' fear may actually induce one's own anxiety and lead to misinformed pregnancy decisions,<sup>19</sup> as well as stress during pregnancy, which would be detrimental to the health of both pregnant women and their fetus. While reading about others' personal health experience on social media may enhance feelings of identification, social support, and in some cases may improve health literacy about ZIKV, distinguishing accurate information from misinformation or communications that evoke excessive fear

remains a challenge. Little is known about how these YouTube videos may affect users' mental health or health-related behaviors, and these topics warrant further research.

*Policy implications.* Engaging non-professional users is critical to developing ZIKV-related health communication that is not only accurate but actually reaches its intended audience. A top-down and “knowledge-deficient” model of health communications during crisis situations remains pervasive among public health practitioners,<sup>20</sup> wherein the general public is assumed to be “deficient” in understanding essential health knowledge and making informed risk-related decisions, while health communicators known to be sufficiently knowledgeable aim to fill the information “gap”. This view is challenged by Hulme,<sup>21</sup> who argued that risk communications must involve both non-experts and experts and there should be two-way interactions. The development of social media further reinforces a discussion-based environment in which a mixture of professional- and layman-led health information is present. Therefore, health communicators should establish a better understanding of widely ~~views~~viewed social media posts and videos generated by consumers, and the rationale upon which it is based. This will help inform health authorities responsible for developing a public engagement policy embracing bidirectional communication.

*Limitations.* This is a cross-sectional study design and we do not have longitudinal data on how the number of views of YouTube videos changes over time. We limited our study to English language videos. Spanish and Portuguese videos will be an interesting subject for future studies. We did not have data on the viewers. We did not evaluate the production or scientific quality of the videos. These analyses were beyond the scope for this paper and will be fruitful directions for future research.

To conclude, we observed statistically significant differences in informational content between consumer-generated ZIKV-related videos and videos from other sources. Public health agencies should consider establishing a larger presence on YouTube to reach more people with evidence-based information about ZIKV.

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## **Contributions**

CHB and ICHF conceived and designed the study. CHB created the codebook. CHB and RH manually coded the YouTube videos. ICHF and EBB did the statistical analysis. CHB, ICHF, KWF, PI, ZTHT and CEB wrote the first draft of the paper. All authors edited the manuscript with intellectual inputs. CHB and ICHF are the guarantors of this paper.

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**Table 2. Frequency count of 100 Zika Virus-related videos in English by their sources and contents**

Content category†	Source category of videos				Total (N = 100) n (%)
	Consumer (N = 43) n (%)	Internet- based news (N = 38) n (%)	Professional (N = 4) n (%)	TV-based news (N = 15) n (%)	
Transmission: mentioned how Zika is transmitted					
No	9 (21)	4 (11)	0 (0)	0 (0)	13 (13)
Yes	34 (79)	34 (89)	4 (100)	15 (100)	87 (87)
Mosquito: mentioned that Zika is transmitted by mosquitoes					
No	9 (21)	4 (11)	0 (0)	0 (0)	13 (13)
Yes	34 (79)	34 (89)	4 (100)	15 (100)	87 (87)
Sex: mentioned Zika transmission through male sex partners					
No	27 (63)	25 (66)	3 (75)	11 (73)	66 (66)
Yes	16 (37)	13 (34)	1 (25)	4 (27)	34 (34)
Transfusion: mentioned Zika transmission through transfusion					

	No	41 (95)	37 (97)	4 (100)	15 (100)	97 (97)
	Yes	2 (5)	1 (3)	0 (0)	0 (0)	3 (3)
Baby: mentioned Zika's impact on babies						
	No	15 (35)	3 (8)	0 (0)	0 (0)	18 (18)
	Yes	28 (65)	35 (92)	4 (100)	15 (100)	82 (82)
Treatment: mentioned treatment on Zika						
	No	43 (100)	37 (97)	4 (100)	15 (100)	99 (99)
	Yes	0 (0)	1 (3)	0 (0)	0 (0)	1 (1)
Anxiety: mentioned anxiety/fear of catching Zika						
	No	40 (93)	33 (87)	3 (75)	10 (67)	86 (86)
	Yes	3 (7)	5 (13)	1 (25)	5 (33)	14 (14)
Prevention: mentioned (any) prevention						
	No	29 (67)	31 (82)	0 (0)	6 (40)	66 (66)
	Yes	14 (33)	7 (18)	4 (100)	9 (60)	34 (34)
Case: mentioned number of cases						
	No	38 (88)	30 (79)	3 (75)	10 (67)	81 (81)
	Yes	5 (12)	8 (21)	1 (25)	5 (33)	19 (19)
Latin America: mentioned number of cases in Latin America						
	No	14 (33)	3 (8)	0 (0)	0 (0)	17 (17)

	Yes	29 (67)	35 (92)	4 (100)	15 (100)	83 (83)
US: mentioned number of cases in the US						
	No	35 (81)	31 (82)	2 (50)	10 (67)	78 (78)
	Yes	8 (19)	7 (18)	2 (50)	5 (33)	22 (22)
Public fear: highlighted that the public is/was afraid						
	No	41 (95)	37 (97)	4 (100)	11 (73)	93 (93)
	Yes	2 (5)	1 (3)	0 (0)	4 (27)	7 (7)
Not pregnant: discussed not becoming pregnant						
	No	31 (72)	21 (55)	4 (100)	6 (40)	62 (62)
	Yes	12 (28)	17 (45)	0 (0)	9 (60)	38 (38)
US cases: highlighted cases in the US						
	No	41 (95)	36 (95)	2 (50)	12 (80)	91 (91)
	Yes	2 (5)	2 (5)	2 (50)	3 (20)	9 (9)
Olympics: discussed the 2016 Olympics in Brazil						
	No	38 (88)	30 (79)	4 (100)	13 (87)	85 (85)
	Yes	5 (12)	8 (21)	0 (0)	2 (13)	15 (15)
Hoax: mentioned that people felt that Zika is a hoax or there is no such thing or cases are staged						
	No	40 (93)	33 (87)	4 (100)	15 (100)	92 (92)

	Yes	3 (7)	5 (13)	0 (0)	0 (0)	8 (8)
Conspiracy: mentioned that Zika is intentional, population control, conspiracy theory, etc.						
	No	31 (72)	27 (71)	4 (100)	15 (100)	77 (77)
	Yes	12 (28)	11 (29)	0 (0)	0 (0)	23 (23)
Comedy: part of a comedy skit/parody						
	No	42 (98)	38 (100)	4 (100)	15 (100)	99 (99)
	Yes	1 (2)	0 (0)	0 (0)	0 (0)	1 (1)
Prank: pranking somebody about Zika						
	No	42 (98)	38 (100)	4 (100)	15 (100)	99 (99)
	Yes	1 (2)	0 (0)	0 (0)	0 (0)	1 (1)
Africa: mentioned Zika in Africa						
	No	29 (67)	17 (45)	4 (100)	12 (80)	62 (62)
	Yes	14 (33)	21 (55)	0 (0)	3 (20)	38 (38)
Asia: mentioned Zika in South-East Asia						
	No	34 (79)	26 (68)	4 (100)	12 (80)	76 (76)
	Yes	9 (21)	12 (32)	0 (0)	3 (20)	24 (24)
Pacific: mentioned Zika in Pacific Islands						
	No	34 (79)	25 (66)	4 (100)	12 (80)	75 (75)

	Yes	9 (21)	13 (34)	0 (0)	3 (20)	25 (25)
Content categories that have no						
entries†						
	No	43 (100)	38 (100)	4 (100)	15 (100)	100 (100)
	Yes	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

†Content categories that all entries were “no” (0): US not prepared, aid, medical help, preparedness, cooperation, training, coordination, and danger.

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**Table 3. Odds ratios of categories of sources of English Language Zika Virus-related YouTube videos as compared to consumer-generated videos, for each content category.**

<b>Content category*†</b>	<b>Odds ratio† (95% CI)</b>	<b>p-value</b>
<b>Transmission: mentioned how Zika is transmitted</b>		
<b>Internet</b>	2.25 (0.63, 8.01)	0.21
<b>Professional</b>	†	†
<b>TV news</b>	†	†
<b>Mosquito: mentioned that Zika is transmitted by mosquitos</b>		
<b>Internet</b>	2.25 (0.63, 8.01)	0.21
<b>Professional</b>	†	†
<b>TV news</b>	†	†
<b>Sex: mentioned Zika transmission through male sex partners</b>		
<b>Internet</b>	0.88 (0.35, 2.18)	0.78
<b>Professional</b>	0.56 (0.05, 5.88)	0.63
<b>TV news</b>	0.61 (0.17, 2.25)	0.46
<b>Transfusion: mentioned Zika transmission through transfusion</b>		
<b>Internet</b>	0.54 (0.048, 6.36)	0.64
<b>Professional</b>	†	†
<b>TV news</b>	†	†
<b>Other: mentioned Zika transmission through</b>		

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<b>other avenues</b>			
	<b>Internet</b>	3.11 (0.57, 17.05)	0.192
	<b>Professional</b>	†	†
	<b>TV news</b>	†	†
<b>Baby: mentioned Zika's impact on babies</b>			
	<b>Internet</b>	6.25 (1.64, 23.76)	0.0072
	<b>Professional</b>	†	†
	<b>TV news</b>	†	†
<b>Anxiety: mentioned anxiety/fear of catching Zika</b>			
	<b>Internet</b>	2.02 (0.45, 9.09)	0.36
	<b>Professional</b>	4.44 (0.35, 56.88)	0.25
	<b>TV News</b>	6.67 (1.36, 32.70)	0.02
<b>Prevention: mentioned (any) prevention</b>			
	<b>Internet</b>	0.47 (0.17, 1.32)	0.15
	<b>Professional</b>	†	†
	<b>TV News</b>	3.11 (0.92, 10.46)	0.07
<b>Case: mentioned number of cases</b>			
	<b>Internet</b>	2.03 (0.60, 6.83)	0.25
	<b>Professional</b>	2.53 (0.22, 29.29)	0.46
	<b>TV News</b>	3.8 (0.92, 15.75)	0.07
<b>Latin America: mentioned number of cases in</b>			
<b>Latin America</b>			
	<b>Internet</b>	5.63 (1.47, 21.52)	0.01
	<b>Professional</b>	†	†

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	<b>TV News</b>	†	†
<b>US: mentioned number of cases in the US</b>			
	<b>Internet</b>	0.99 (0.32, 3.04)	0.98
	<b>Professional</b>	4.38 (0.53, 35.91)	0.17
	<b>TV News</b>	2.19 (0.58, 8.19)	0.25
<b>Public fear: highlighted that the public is/was afraid</b>			
	<b>Internet</b>	0.55 (0.05, 6.36)	0.64
	<b>Professional</b>	†	†
	<b>TV News</b>	7.45 (1.20, 46.16)	0.03
<b>Not pregnant: discussed not becoming pregnant</b>			
	<b>Internet</b>	2.09 (0.83, 5.27)	0.12
	<b>Professional</b>	†	†
	<b>TV News</b>	3.88 (1.13, 13.25)	0.03
<b>US cases: highlighted cases in the US</b>			
	<b>Internet</b>	1.14 (0.15, 8.50)	0.90
	<b>Professional</b>	20.50 (1.82, 230.51)	0.01
	<b>TV News</b>	5.12 (0.77, 34.31)	0.09
<b>Olympics: discussed the 2016 Olympics in Brazil</b>			
	<b>Internet</b>	2.03 (0.60, 6.83)	0.26
	<b>Professional</b>	†	†
	<b>TV News</b>	1.17 (0.20, 6.77)	0.86
<b>Hoax: mentioned that people felt that Zika is a hoax or there is no such thing or cases are staged</b>			

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	<b>Internet</b>	2.02 (0.45, 9.09)	0.36
	<b>Professional</b>	†	†
	<b>TV News</b>	†	†
<b>Conspiracy: mentioned that Zika is intentional, population control, conspiracy theory, etc.</b>			
	<b>Internet</b>	1.05 (0.40, 2.77)	0.92
	<b>Professional</b>	†	†
	<b>TV News</b>	†	†
<b>Africa: mentioned Zika in Africa</b>			
	<b>Internet</b>	2.56 (1.04, 6.31)	0.04
	<b>Professional</b>	†	†
	<b>TV News</b>	0.52 (0.13, 2.14)	0.36
<b>Asia: mentioned Zika in South-East Asia</b>			
	<b>Internet</b>	1.74 (0.64, 4.76)	0.28
	<b>Professional</b>	†	†
	<b>TV News</b>	9.44 (0.22, 4.08)	0.94
<b>Pacific: mentioned Zika in Pacific Islands</b>			
	<b>Internet</b>	1.96 (0.73, 5.31)	0.18
	<b>Professional</b>	†	†
	<b>TV News</b>	0.94 (0.22,4.08)	0.94

\* The category of “consumer” videos was used as the reference category for the other three categories of sources of YouTube videos (“internet-based news”, “professional” and “TV news”) † If all videos belong to a particular category of source of video, then we cannot calculate the odds ratio and the standard error will not be meaningful. We omitted the content category “Treatment”, as there was only one internet-

based news video that mentioned treatment, and no meaningful odds ratio could be calculated. Likewise, we omit the content categories “comedy” and “prank” as there was only one consumer video that contained such contents.

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**Table 1. Length and Number of Views of 100 Popular English Language Zika Virus-related Videos Posted on YouTube**

	n	Video Length (in minutes)				Number of Views				
		Mean [SE]	Median	Range	95% CI	Mean [SE]	Median	Range	95% CI	Total (%)
<b>Consumer</b>	43	7.623 [1.058]	5.817	0.15 – 37.25	5.487 – 9.758	46,311 [7,453]	26,260	11,910 – 216,700	31,269 – 61,352	1,991,358 (22.4)
<b>Internet- based news</b>	38	6.767 [1.095]	4.833	0.867 – 28.12	4.549 – 8.986	158,500 [39,886]	51,680	12,300 – 1,224,000	77,684 – 239,317	6,023,012 (67.7)
<b>Professional</b>	4	3.267 [0.378]	3.358	2.4 – 3.95	2.062 – 4.471	28,821 [10,483]	22,200	11,600 – 59,290	-4,540 – 62,182	115,284 (1.3)
<b>TV-based news</b>	15	3.190 [0.660]	2.267	1.4 – 10.32	1.774 – 4.606	50,990 [16,344]	24,120	12,230 – 264,400	15,936 – 86,044	764,851 (8.6)
<b>Overall</b>	100	6.459 [0.641]	4.583	0.15 – 37.25	5.187 – 7.730	88,945 [16,492]	31,120	11,600 – 1,224,000	56,222 – 121,668	8,894,505 (100.0)

CI, confidence interval; SE, standard error.