Original Article

KOME

KOME − An International Journal of Pure Communication Inquiry
Volume 6 Issue 1, p. 32-62.
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kome@komejournal.com
Published by the Hungarian Communication Studies Association
DOI: 10.17646/KOME.2018.13

Hospital Tweets on H1N1 and Death Panels: Text Mining the Situational Crisis Communication Response to Health Crises and Controversies

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Abstract: This thematic and text mining analysis interrogates hospital tweets about H1N1 flu and healthcare reform in 2009 using the situational crisis communication theory (SCCT) and manufactured controversies, or casting doubt on scientific and medical consensus to delay or thwart public policy. Hospitals minimally responded to both issues and situated themselves as neutral, ambivalent agents separate from the government and skeptics. Tweets that recycled links to news sources inherited limitations that plagued media coverage in their incapacity for quick response. To handle controversies, an adapted SCCT might require more direct and dialogic strategies, as well as defensive and offensive tactics, such as increasing hosted events, outreach, and statements of expert opinion.

Keywords: social media, crisis communication, Twitter, controversies, health communication

Introduction

This thematic and text mining analysis of recent history in health communication examines hospital responses to two simultaneously emerging medical issues during the summer of 2009 in the United States—the H1N1 outbreak and public concerns about death panels in healthcare reform legislation—in the context of two models of crisis communication: the situational crisis communication theory (SCCT), a framework for how organizations should respond as crises emerge, and manufactured controversies where actors initiate or sustain suspicion and fear about scientific consensus when it is in their interest to do so.

Controversies have the potential to shape public behavior and organizational action. They are at the crux of many contemporary debates over public and environmental health such as suspicions about vaccines causing autism despite experts proclaiming otherwise, skepticism about climate change and global warming, scandals about abortion clinics selling fetus parts, and a host of other issues facing contemporary society. Hospitals can play a vital role in negotiating both crises and controversies, because they provide health services to the public, and they set standards of healthcare and outreach. An analysis of the H1N1 crisis and healthcare reform controversy in recent history is warranted because it is a high-profile example of an emerging and very pervasive rhetorical phenomena in health and science communication—namely, manufactured controversies. This study sought to characterize

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Article received on the 20th November, 2017. Article accepted on the 17th June, 2018.
Conflict of Interest: The author declares no conflict of interests.

organizational responses to the healthcare reform controversy by comparing it to the response to a crisis that developed in tandem, through the lens of a common response model —the situational crisis communication theory.

The following research article presents a literature review of Twitter use in healthcare settings and of the theories that inform the analysis. Next, the methods section describes how the sample was gathered and analyzed. The results section shares the main findings—namely, that the overall sentiment communicated in the tweets was typically positive, but tentative rather than certain. Furthermore, only a few hospitals used Twitter to promote offline events and answered community-specific questions. Hospitals also retweeted and reshared pre-existing media coverage of events rather than disseminated original content or opinions about emerging events in their communities. Overall, they only minimally used tactics outlined in the situational crisis communication theory. Finally, the article offers recommendations for organizational communication in crisis and controversy scenarios.

Ultimately, the paper finds that hospitals employ a more robust set of situational crisis strategies for communicating about the flu crisis than resolving questions and worries about insurance reform controversy. Furthermore, the situational crisis communication model may require adaptations and additions of emerging strategies used, such as demonstrating present effort and relying on others' expertise.

Literature Review

Twitter has become a preferred medium of responsiveness in crisis communication. Organizations use it for its capacity for immediate, timely response (Yin, et al. 2012; Veil, Buehner, & Palenchar, 2011; Xu & Wu, 2015). They post general advice, time-sensitive info, and organizational response efforts—both theirs and others (Bowdon, 2014). They use Twitter to discover public fears and trending topics and to provide timely information in response to these concerns, such timely responses to help build community trust in organizational competency (Brengarth & Mujkic, 2016; Lachlan, Spence, & Lin, 2014; Wendling, Radisch, & Jacobzone, 2013). To engage the public, they typically tweet original posts and hyperlinks (Park, Reber, & Chon, 2015). Relevant information on Twitter dwindles the more protracted the crisis; therefore, immediate responses are important to handle with best practices (Spence, Lachlan, Lin, & del Greco, 2015).

Organizations and the public use Twitter during crises to post time-specific storm advice, to share and re-tweet response efforts of organizations, and to provide post-storm updates; however, misspellings, inconsistent terminology, and word ordering have been known to prevent the public and organizations from coalescing around consistent hashtags during recent crises such as New Zealand earthquakes (Bowdon, 2014; Potts, Seitzinger, Jones, & Harrison, 2011). Organizations and the public favor traditional over social media during crises, but the participatory nature of social media can augment and complement traditional interactions (Takahashi, Tandoc, & Carmichael, 2015). Combinations of data streams, analytical tools, bots, and dashboards can help trace and respond to evolving events (Tegtmeyer, Potts, & Hart- Davidson, 2012).

Twitter also tends to proliferate rumors and misinformation. Crowdsourcing potentially serves as a filter that can correct and contain misinformation (Mendoza, Poblete, & Castillo, 2011). But misinformation propagates at a rate too wide and fast for effective filtering (Hill, 2012; Starbird, Maddock, Orand, Achterman, & Mason, 2014). Rumors and lies can spread as fast as facts on Twitter (Jin et al., 2014). Therefore, organizations who do not both provide facts and address rumors may damage their credibility and invite suspicion (Dalrymple, Young, & Tully, 2016).

Social media can serve as an interstitial space between official and unofficial modes of communication for accomplishing important communicative work such as catalyzing conversations and cultivating relationships with a broader audience (McNely, 2011). They can help organizations shape self-consciousness, self-reflection, and public perception through sharing timely content that humanizes the organization with employee narratives, that interacts with comments, and that orients the public with pictures of organizational landmarks and artifacts (McNely, 2012). In turn, social media might help shape perceptions of events as they emerge (Roundtree, Dorsten, & Reif, 2011). However, in order to make an impact, organizations can use more dialogical approaches to engage the public, who may be reluctant and less engaged with the organization online than organizations expect or hope; more interaction and attending to the public's expectations and patterns of social media use are required (Roundtree 2018, Roundtree 2016).

Thus far, studies on the online response to H1N1 (a.k.a., swine) flu pandemic of 2009 have described factors impacting public messaging on the event. Organizations tended to use traditional rather than social media to address public emotions about H1N1 (Liu & Kim, 2011). Media coverage sensationalized reports of H1N1-related deaths and embedded overtones of skepticism when reporting prevention methods (Goodall, Sabo, Cline, & Egbert, 2012). In the U.S., the general public used Delicious, an online bookmarking system, to check the CDC website (Freberg, Palenchar, & Veil, 2013). Independent media and whistleblowers in China used unofficial and extra-institutional risk communication venues such as alternative newspapers to end-run government censorship of information (Ding, 2009). Internet coverage in China tended to fixate on travelers as carriers whose personal mistakes put them at risk (Ding, 2013). Online news outlets used headlines to shape public opinion about the flu; coverage shifted from replacing the use of the term "swine flu" to using the term H1N1 and framing the disease as a medical concern, a battle, a disaster, a visitor, a war, and a victimizer (Angeli, 2012).

Similarly, studies on the online response to healthcare reform legislation have evaluated the quality of coverage. The White House website published community discussions on healthcare reform, including comments about changes to healthcare payment, insurance coverage, and quality of care (Abroms & Craig Lefebvre, 2009). Official messaging from the government and policy makers was similar (Kiousis, Park, Kim, & Go, 2013). Newspaper coverage of the 2009 reforms improved over coverage of the Clinton Era proposal by providing equal numbers of articles for and against reform (S. Adams & Cozma, 2011). But, the media was slow to moderate the disagreements between conservatives and progressives, and they failed to challenge overstatements such as the reforms being "socialist" (Skinner, 2012). Misinformation was a major tactic used against both Clinton's and Obama's proposed reforms (Nyhan, 2010). Finally, the public tended to use hashtags for connecting to trusted sources, thereby sharing information through and between otherwise disconnected networks (Jones, 2014).

Defining Crises

Crises are defined as a threat or hazard that can have negative ramifications if not handled properly (Coombs, 2007a). Crises are risk manifested (Heath & O'Hair, 2010). Risk is the likelihood of a hazard, and a crisis is the expression and experience of the hazard. Negative ramifications can include threats to financial profit and public safety and loss of organizational reputation (Coombs, 2007b; Dilenschneider, 2000). For organizations, crises

can allow for corrections and revisions to public perception of their brand (Bechler, 2004; Seeger, Sellnow, & Ulmer, 2003).

Risk is the likelihood that a harmful, painful or otherwise bad outcome will occur in a certain period of time (Deakin, Alexander, & Kerridge, 2009; Kaplan & Garrick, 1981). Risk is a newer and different concept than hazard; hazards are the harmful circumstances that emerge, and risks involve making systematic calculations that measure and express those hazards (Beck, 1992). Advances in science and technology spawn new hazards and tools such as computers and high-end statistics to calculate their risk (J. Adams, 1999; Bernstein & Bernstein, 1996).

Subjective factors influence risk. The public tends to view risk with fear and anxiety about loss of control (Tulloch & Lupton, 2003). Socio-demographic factors such as age, race, education and culture or political views can affect how people perceive risk as it pertains to their lives (Slimak & Dietz, 2006; Slovic, Fischhoff, & Lichtenstein, 1980). Different people perceive the same hazard differently (Slovic, 2016). Therefore, risk is a social construct, not only because societal advancements breed new hazards and new methods for assessing them, but also because personal and psychological factors influence risk calculations.

Timing is also an important feature of crises. Typically, crises happen suddenly, call for a sudden response, and affect an organization's' performance and reputation (Heath, 2004). Crises will happen at unpredictable times and inopportune moments (Coombs, 2014). Also, how and when they are managed makes a difference in whether events evolve into a crisis and how long crises endure (Cohn, 2000; Coombs, 2014). If crisis messaging is timed properly and if organizations give objective information about the crisis, it may reduce the need for restoring reputation with apologies (Claeys & Cauberghe, 2012; Palen, Vieweg, Liu, & Hughes, 2009). Small changes in message timing can make a difference in stabilizing the situation versus causing more confusion and chaos around the crisis (Seeger, 2002). Fast timing can also help garner media coverage given their interest in news scoops (Arpan & Pompper, 2003).

Defining Controversies

By comparison, manufactured controversies also involve assessments of crises and risks. Per Leah Ceccarelli, manufactured controversies occur when, for political and ideological reasons, organizations and other agents use appeals to fairness to open debates in the public arena about findings with large consensuses in the scientific community (Ceccarelli, 2011, 2013; Fuller, 2013). Ceccarelli cites three cases —HIV-AIDS skeptics in Africa, global warming deniers and intelligent design advocates in the US—to explain controversies.

In controversies, stakeholders cast suspicion on consensus assessments of risk. Political parties, industry lobbyists, and other partisans have vested interests in the depiction of scientific findings, so they capitalize on postmodern rhetorical strategies and position themselves as actors marginalized by an establishment who excludes their ideas to maintain power and status. Controversy manufacturers denigrate peer and grant application review as mechanisms by which the scientific orthodoxy protects itself from legitimate challenges and paradigm shifts. Furthermore, they inflate or deflate their calculations of risks and harm in order to debunk the opposition's claims or emphasize their own.

Steven Fuller agrees that entities use rhetorical maneuvering to manufacture controversies, but he interprets these efforts—even allegedly craven, self-interested ones—as natural extensions of scientific inquiry (Fuller, 2013). "If science is ultimately about following the truth wherever it may lead, then one should expect inquirers to diverge in their

paths, as they extend the same knowledge base in various directions, only some of which will bear substantial fruit, sway colleagues, and have other positive outcomes" (p. 754). According to Fuller, both manufactured controversies and scientific consensus are achieved for political, personal and subjective motivations: "[T]here is no reason to presume either that consensus is normal in science or that whatever consensus exists in science is anything more than an institutionally sanctioned opinion about theories whose ultimate prospects are still up for grabs" (p. 754). For Fuller, "manufactured controversy" is a redundant term—any controversy involves manufacturing, as does scientific consensus, too.

For Cecarrelli and Fuller, actual hazards and risks are at stake. Genuine concerns about the serious consequences and penalties of delayed adoption of scientific consensus underpin this debate. However, for those who oppose the consensus position, seemingly unfounded skepticism, fear and risk assessments also count as immediate hazards. Per Fuller, orthodox positions are themselves steeped in subjectivity—namely, "American 'liberal' sensibility that recoils at the thought of HIV-AIDS denial, global warming skepticism, and antievolution" (p. 754). The debate tests science's disciplinary capacity for establishing truth. In public debates, scientific consensus should outweigh pseudo-science and special interest funded counter studies, but it often does not. Whether scientific consensus should be re-litigated in the court of public opinion, it often is. For practical purposes, then, it usually falls on social media and communication managers to help uphold the value of scientific consensus when controversies are being manufactured.

I argue that manufactured controversies are merely a phase of crisis development and risk assessment where estimations of risks and hazards might have achieved scientific unanimity, but not wide public consensus. In this stage, risks and hazards are subjected to contention and debate, particularly when they seemingly threaten political, personal, cultural and similar closely-held stakes. The more polar the estimations of risk and harm, the greater the controversy. Advances in science enable manufactured controversies. The methods for predicting and making an assertion of scientific and medical fact about the efficacy of drugs, the inevitability of climate action, and the integrity of science curriculum sans intelligent design are themselves prospective and calculated with modest degrees of uncertainty (Roundtree, 2013).

Timing plays an important role in manufactured controversies, as in crises. With crises, organizations cannot necessarily control the timing of crises events. However, people can initiate controversies by painting the details of an event in dramatic and frightening ways, and they can influence the pace of crises by regulating and standardizing their messaging about how harmful the repercussions of the event are. Timely response is crucial to managing manufactured controversies because time and subjectivity influence them, as they do risk.

Manufactured controversies are imagined, or prospective threats or hazards stoked by entities with subjective stakes in calculating risk. If risk is the likelihood of harm, then manufacturing controversy is a process by which risks are evaluated and misevaluated. Manufacturing controversies involves early, frequent calculation and recalculation of risk-based often on bias or emotion, not evidence. Crises can emerge when, through the process of raising questions and stoking controversy, the experts and the public fail to effectively negotiate the terms of risk upon which to base decision making and policy writing. Therefore, timing is important to engaging the public during the period when controversies are manufactured.

Controversy studies have found that the traditional practices of scientific hedging (e.g., understating the epistemological status of scientific claims) enable alternative interpretations of scientific findings otherwise accepted by scientific consensus (Kolodziejski, 2014). Some events such as the Food and Drug Administration's fraught bid

to regulate ephedra, a dietary supplement, are not controversies because the burden of proof within the scientific community had not been established (Paroske, 2012). The current study extends this research by examining controversies from official and organizational responses to them, rather than from the rhetorical perspective of the scientific community or the general public.

Responding to Crises and Controversies: The Situational Crisis Communication Theory (SCCT)

Ceccarelli catalogs the failings of the scientific community's responses to intelligent design advocates and AIDS and global warming skeptics. They ignore the counterarguments lobbed at them by the controversy manufacturers. Scientists consider manufactured counterarguments so incredulous that they do not respond to them point by point, even when the public sides with the controversy manufacturers. Scientists also come across as closed-minded or defensive by reverting to appeals to the authority and credibility of scientific findings rather than contextualizing and historicizing those findings as legitimate products of scientific debate and, ultimately, consensus. Furthermore, based on the two additional strategies for manufacturing crises—stoking suspicions and shifting the focus away from risk—rebuttals to counter-arguments should also refocus the discourse on direct risks and demonstrate the fallacies, overstatements, and comparable value of indirect risks.

Ceccarelli prescribes response strategies very similar to those outlined in the situational crisis communication theory (SCCT). The SCCT is a popular model of best practices for organizational response to a crisis (Coombs 2007a). The SCCT outlines both a model for understanding a crisis from an organization's perspective, as well as strategies to protect their reputation from blame or negative attribution when a crisis emerges.

The way that a crisis is framed can affect how people assess the cause of a crisis and how they attribute blame. Crisis response in the SCCT model includes primary denial strategies (such as attacking the accuser, scapegoating, justifying the organization's position, compensating and apologizing) and secondary counteracting strategies (such as reminding people about past good works, focusing on past praise, praising stakeholders, or showing the organization's own vulnerabilities or victimization in the crisis) (Coombs 2007a). In the case of manufactured controversies, stakeholders who want to perpetuate a crisis might use the same self-protective strategies—i.e., attacking opponents, justifying their position, focusing on past praise or publications, etc.—to initiate or sustain a crisis. However, per Ceccarelli, some of the tactics outlined by the SCCT would be ineffective for tamping down or unraveling manufactured controversies if you are part of the establishment or the orthodoxy; denying and scapegoating in specific would only make an organization look further defensive and, therefore, guilty as charged by the crisis manufacturers.

Research Questions

Two practical questions grounded in prior research underpin the current study:

(1) What were the similarities and differences between how hospitals communicated about a health crisis such as H1N1 versus a controversy of alleged "death panels" authorized by the healthcare reform bill?

(2) Can the situational crisis communication theory (SCCT) address controversies?

Methods

I conducted an inductive and deductive thematic analysis to identify SCCT strategies employed in hospitals' tweets during that summer. The process was modeled after guidelines from Lindlof and Taylor (2010) and Fereday and Muir-Cochrane (2006). Common threads of analytical framework throughout these guidelines include reading the data, noting common themes and dimensions of these themes. Fereday and Muir-Cochrane also allow for developing codes from a theoretical framework through which to read the data.

The dataset included 5138 tweets from 50 hospitals (one from each state in the U.S.) purposively chosen from the Social Media Healthcare List currently kept by the Mayo Clinic. The list represents hospitals interested in sharing social media best practices. Data collection was restricted to publicly available Twitter posts for the time period between May 2009 and April 2010. Twitter Advanced Search was used to collect these tweets. I limited the investigation to the months when new coverage began and peaked for both topics, then when the legislation and pandemic passed (Hopkins, 2013; Meirick & Bessarabova, 2016).

Text mining software identified frequencies of main terms used. Linguistic Inquiry and Word Count (LIWC), a natural language processor, calculated percentages of words that reflect different emotions and tones using a group of dictionaries tested and validated by linguistic research for psychologically-relevant categories (Pennebaker, Francis, & Booth, 2001; Tausczik & Pennebaker, 2010).

From the larger set of tweets, I identified those pertaining to healthcare reform and the flu. I used keyword search in Excel, Twitter Advanced Search, and Adobe Acrobat to isolate tweets with the following keywords and root words: flu, H1N1, vaccine, insurance, reform, death panel and Obamacare, healthcare, health care, bill, and law. In total, 523 tweets discussed these topics—361 tweets regarding the flu and 162 regarding healthcare reform.

I performed a second stage of coding on the 523 tweets pertaining to H1N1 and healthcare reform. NVivo, Microsoft Word and Excel (a qualitative data analysis software) were used to systematize the coding process. The tweets were open coded by the author to broad themes and patterns of activity pertaining to healthcare reform and the H1N1 using inductive reasoning, first by reading and re-reading all tweets to identify recurring content topics (Aronson, 1995). I used deductive coding to apply SCCT strategies to themes from open coding (Fereday & Muir-Cochrane, 2006). I used a template analytic technique, wherein I developed code definitions and a coding template from key readings on the SCCT, used to read and re-read the tweets for their relevance to the SCCT. I labeled tweets as either an attempt at denying or counteracting, as well as the particular applicable maneuver (attacking the accuser, scapegoating, justifying the organization's position, compensating and apologizing, reminding people about past good works, focusing on past praise, praising stakeholders, or showing the organization's own vulnerability or victimization). Each qualitatively coded tweet could reflect several topics, so the frequencies of codes do not correspond to the number of tweets.

To explore and organize the case background, I used rhetorical situation theory, comprised of an exigence (or the social problem or circumstances surrounding the rhetorical act or response), an audience (or the people to whom the response is directed), and constraints (or pressures from the audience or circumstances that limit the response) (Biesecker, 1989; Bitzer, 1968; Vatz, 1973). The framework facilitates triangulation of data to capture and represent with more rich, layered data the circumstances and stakes of the case (Meyer 2001).

About the Case

The two healthcare issues that emerged during the summer of 2009 — the HINI epidemic and "socialist" healthcare reforms that would yield government-sponsored death panels — demonstrate similarities and differences between a traditional crisis and a manufactured controversy. Both involved external pressures pertaining to financial cost and public safety.

Exigence

In June 2009, the World Health Organization declared that an outbreak of a new strain of the flu—H1N1 or swine flu—first diagnosed in Mexico had spread globally and become a pandemic (WHO, 2009). The U.S. Department of Health and Human Services declared a public health emergency in response to the outbreak. By June, there were over 17,000 cases of H1N1 in the United States and the pandemic had affected over 70 countries (CDC, 2010; Flu.gov, 2014; WHO, 2010). During the first two weeks of the crisis, over 60 articles in the U.S. news media covered the pandemic (Liu & Kim, 2011). HINI had emerged as an external threat to public safety and financial profit. Millions were lost by the pork and travel industry, and millions were spent by the U.S. government to respond to the pandemic (Johnson, 2009).

That same summer, the U.S. was engaged in a debate over healthcare reform. The number of uninsured had only exacerbated an already weak economy; 46.3 million Americans went uninsured in 2009 (DeNavas-Walt, Proctor, & Smith, 2010). Providing health services to the uninsured in the U.S. costs an estimated $86 billion, only $30 billion of which the uninsured pay out of pocket (Institute of Medicine, 2009). About $1,100 a year of insured families' healthcare premiums went to paying the difference (Harbage & Furnas, 2009). In June 2009, Speaker of the House Nancy Pelosi released a discussion draft of the legislation. The draft evolved into House Bill 3200, the Affordable Health Choice Act (AHCA) of 2009, introduced on July 14, 2009.

For both issues, public safety and financial stakes were high. Cases of H1N1 were on the rise and travel and hog industry profits were on the decline. Also, the uninsured were unable to afford preventative care, which financially cost governmental agencies and increased insurance premiums (KFF, 2009; NCSL, 2011).

Audience

The general public and the providers who would administer their healthcare were both very interested in events surrounding H1N1 and healthcare reform. Cultural differences played a part in how different countries responded to H1N1 and how much info they needed—the more vulnerable the population, the more they needed information (Galarce, Minsky, & Viswanath, 2011; Wong & Sam, 2010). Demographics influenced the venues where vulnerable populations seek information—older populations on TV and younger, on social media (Galarce, Minsky, & Viswanath, 2011). The public sought information on Twitter when the crisis affects them personally; they seek out time- and location-sensitive information to address their needs (Yun et al., 2016). Providers wanted timely information from national and international agencies and by email or short message services (SMS), depending on their age, and the information that agencies provided information tailored for technical audiences (Lagassé et al., 2011; Revere, Painter, Oberle, & Baseman, 2014). There

were no major arguments about H1N1 hazards. Audiences primarily sought information to make decisions.

In contrast, the general public and healthcare providers held different suspicions about healthcare reform policies, particularly those around end-of-life coverage. Legislators on session break hosted raucous town hall meetings in several states that became shouting matches over the proposed changes. Persistent rumors about death panels and "government-sponsored euthanasia" emerged as early as July when Rush Limbaugh and other conservative pundits repeated the suspicions of former lieutenant governor of New York and opponent of federal healthcare legislation Betsy McCaughey that the AHCA would require Medicare patients to have counseling to "tell them how to end their life sooner" (Richert, 2009). By August 1, Michele Bachman, John Boehner and other politicians were repeating claims about "government sponsored euthanasia" in press releases and on the floor of the House of Representatives (Nyhan, 2010). The "death panels" idea originated as a misreading or exaggeration of a particular provision of the AHCA that would reimburse health consumers for optional counseling about end-of-life decisions—a provision that was ultimately removed from the bill in mid-August. These ideas percolated and intensified over social media such as Twitter and Facebook, particularly when people in positions of authority such as Sarah Palin used social media to renounce the veracity of mainstream coverage (Lawrence & Schafer, 2012; Veenstra, Hong, & Liu, 2010). Other debatable characterizations of the AHCA emerged during this summer of heated town hall meetings—including notions that the AHCA as tyranny and a rationing of healthcare services.

To be clear, the AHCA inspired legitimate fears about prospective hazards. For example, in 2009 several companies, trade associations and other organizations—including the American Wind Energy Association, Comcast, Yahoo, the Gap, the National Rifle Association, the Knights of Columbus, the office of the governor of Indiana, 1-800 Contacts and Hormel Foods, among others—lobbied that the bill not be written in a way that puts an onerous burden on employers for healthcare coverage (Beckel, 2010). In June 2009, the American Medical Association opposed creating any government-sponsored insurance plan that would permit "government control of healthcare decisions or mandatory physician participation in any insurance plan" (Pear, 2009). A smaller group, Physicians for a National Health Program, supported the idea of a single-payer program for the U.S. (Remsen, 2009). Critics from across the political spectrum asked lingering questions about controlling medical costs. However, suspicions about "socialist" healthcare reforms that would institute government-sanctioned death panels were based on speculation, not evidence.

Constraints

Both events were constrained by the timing and the timeline of emerging evidence and events. Because the events surrounding the H1N1 event were familiar, given the perennial nature of flu season, the terms of hazard and potential harm associated with H1N1 were more established and enjoyed more consensus of belief than did the terms of the AHCA legislation in general, and the fears about death panels in specific. Organizations and media outlets shared ample information, often to the point of overwhelming, and media outlets change the metaphors they used to describe the pandemic—from H1N1 as a scientific and medical concern, to a battle, to a natural disaster and ultimately a visitor from foreign lands—in response and reflection to public concerns and anxieties (Angeli, 2012; Locatelli, LaVela, Hogan, Kerr, & Weaver, 2012). Furthermore, the consequences of H1N1 (i.e., illness and potential death) were evident in cases reported around the country. Regarding the AHCA legislation, the hazards were more prospective or future-oriented than H1N1.

Several confirmed cases of H1N1 were diagnosed, but the AHCA legislation had yet to be finalized or take effect. Public outcry over the AHCA stoked high before any actual policies were enacted. Even fears about death panels were unfounded in the summer of 2009, because the provision that inspired those fears had been eliminated from drafts of the legislation. Furthermore, suspicions concerning death panels were political and emotional and, therefore, more difficult to assuage with evidence or appeals to logic such as the removal of the so-called "death panel" clause (Nyhan, 2010). Distrust of the government, lack of expertise to understand the complicated legislation, and unfamiliarity about end-of-life terminology in the general public propelled death panel suspicions (Frankford, 2015). Therefore, any presentation of the facts would have to accommodate this wide range of concerns. Furthermore, organizations would have to respond to misperceptions covered in some politicized media outlets. These misperceptions were opinions, but were being treated as equal to the fact that the legislation no longer included end-of-life provisions (Lawrence & Schafer, 2012; Meirick & Bessarabova, 2016).

Perceived financial and health ramifications were at stake in both the H1N1 crisis and the debate over death panels. However, audiences of the H1N1 outbreak were global and were witnessing real-time updates about diagnosed cases in their communities. Hospitals were the first line of response in the case of H1N1. For example, when the vaccine took slower than expected to produce and distribute, and the delay raised public fear and suspicion, hospitals had info from official sources to share with the public. In contrast, hospitals were learning about details of the healthcare reform legislation in tandem with the public. The terms of reform were changing, and stakeholders (i.e., legislators, healthcare consumers, healthcare providers, etc.) shared no consensus. In the case of the flu crisis, the antagonist—H1N1 virus—was clear. But several antagonists presented themselves in the reform controversy (i.e., rising costs, the government, lack of single-payer care, a broken employer-based system, etc.)

Results

Overall, the hospitals published 5138 tweets between May 2009 and April 2010. LIWC analysis revealed that the overall tone remained positive during the time frame in question. See Figure 1. Tweets overall were less tentative as events progresses. Overall, they used few hedges and qualifications or other indications of uncertainty and tentativeness. See Figure 2.

Only 523 of the 5138 total tweets (10.18%) specifically mentioned flu or H1N1 (n=162, 3.15%) or healthcare reform (n=361, 7.03%). No tweets mentioned “death panels” in specific. Hospitals tweeted over two times more about the flu than healthcare reform.

The positive sentiment for flu tweets crested and remained relatively consistent between July 2009 and February 2010. The negative sentiment of flu tweets was consistently lower throughout. In contrast, the tweets about reform achieved higher but more inconsistent and in flux positivity throughout. Negative tweets about reform were consistently lower than positive tweets, but were equally inconsistent and in flux. Flu and reform tweets were mostly present-oriented. Reform posts were more past-orientated in late 2009, then more future-focused in 2010. See Figures 3, 4 and 5.

Events as Exigence Response

To respond to emerging events, hospitals used Twitter to promote their own **events** (all n=81, 16.8%; flu 77, 21.3%; reform n=4, 2.4%) where they engage the public. Hospitals made more efforts to engage the public in events about HINI than healthcare reform. For example, hospitals hosted call-in and tweet-in **radio** events (all n=9, 1.7%; flu n=4, 1.1%; reform n=5, 3.1%) for interacting with the public: "Radio on health reform! Call 507-282-1234 for next 25 mins or tweet questions to #mayoradio." Hospitals invited local health professional to assist them in flu response and outreach through **volunteerism** (all n=2, 0.4%). For example, Alaska DHSS attempted to recruit public and provider volunteers in vaccination efforts: "Alaska healthcare providers & facilities that intend to receive and give novel H1N1 vaccinations can pre-register at http://tiny.cc/K4RAt."

Figure 1. Overall Sentiment of 50 Hospital Tweets

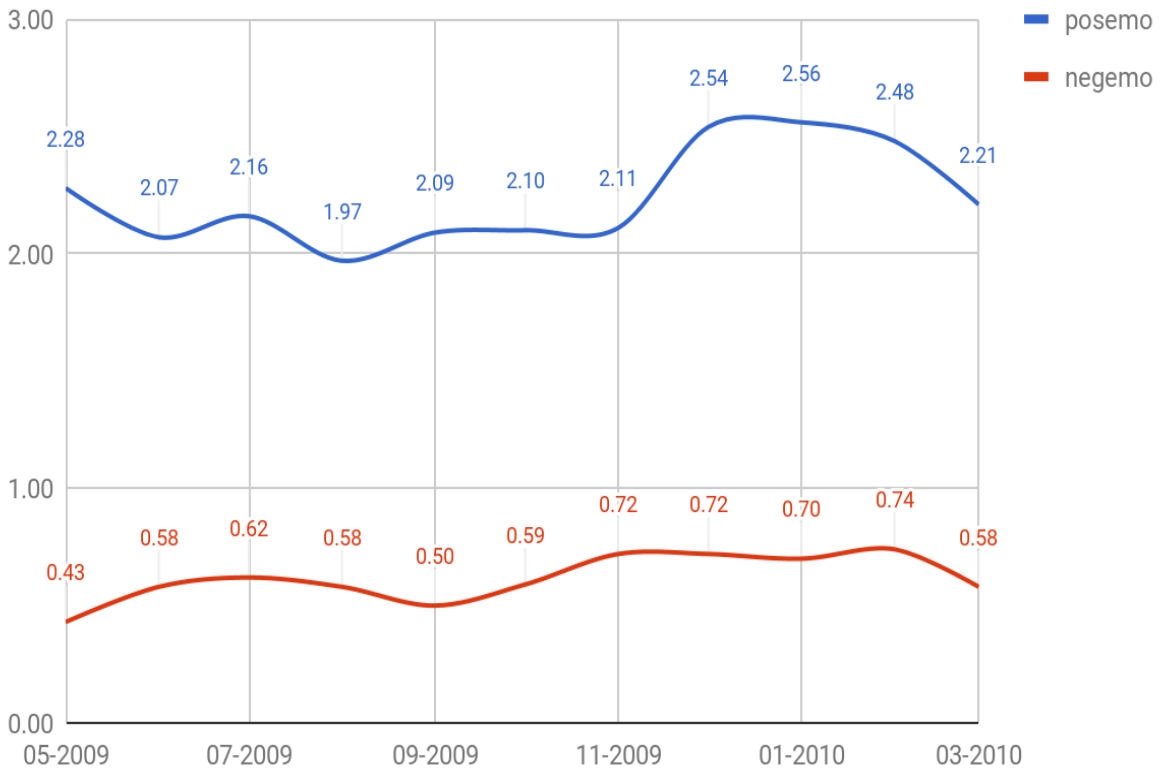


Figure 2. Overall Certainty of 50 Hospital Tweets

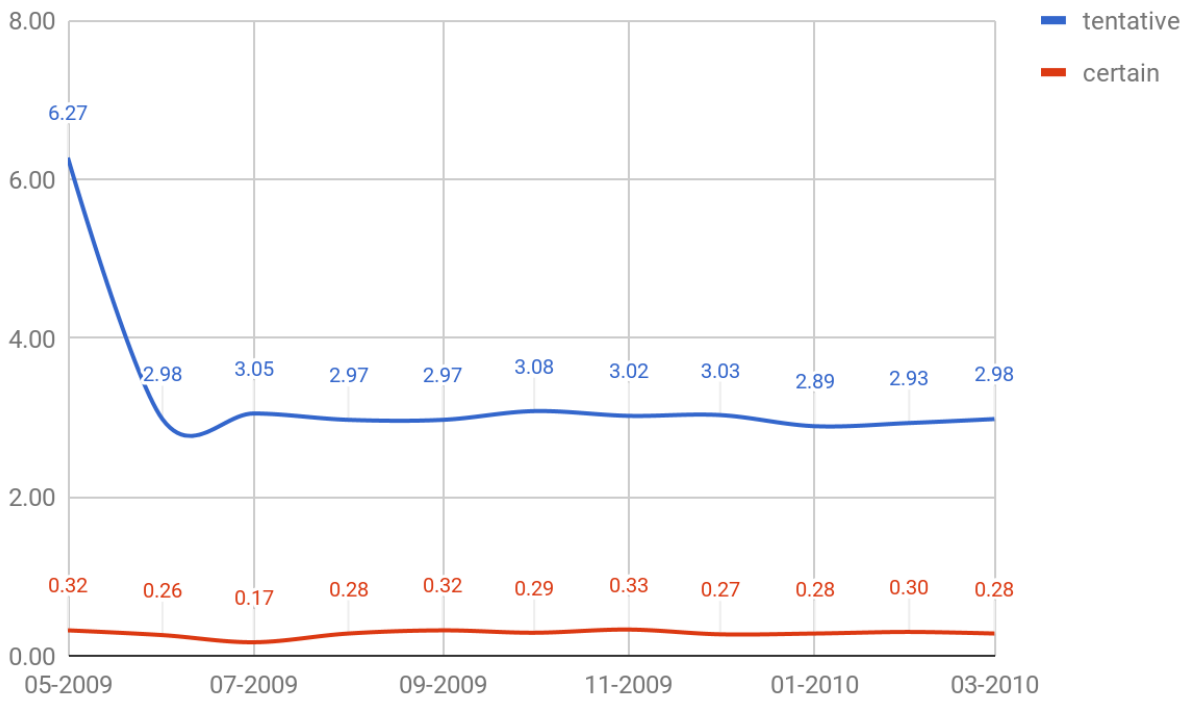


Figure 3. Sentiment of Flu Crisis and Reform Controversy Tweets

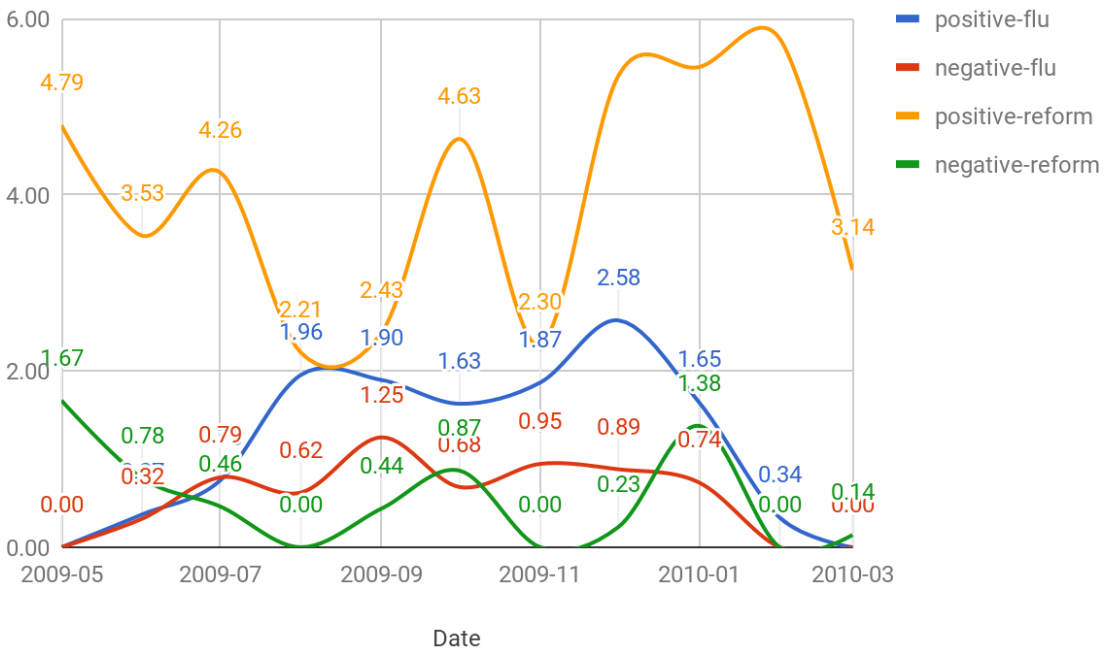


Figure 4. Certainty of Flu Crisis and Reform Controversy Tweets

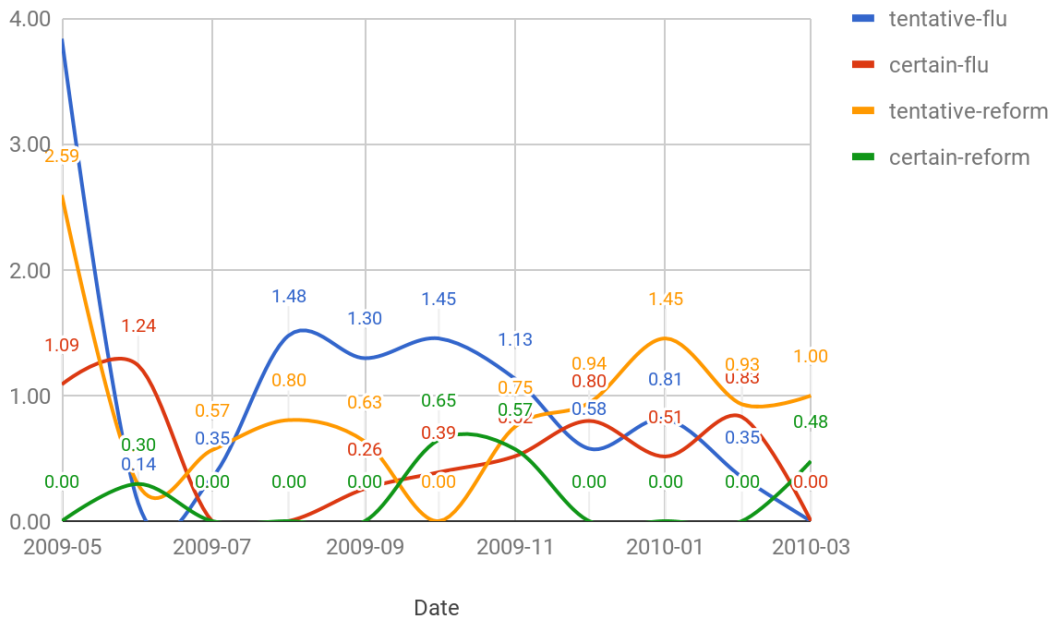
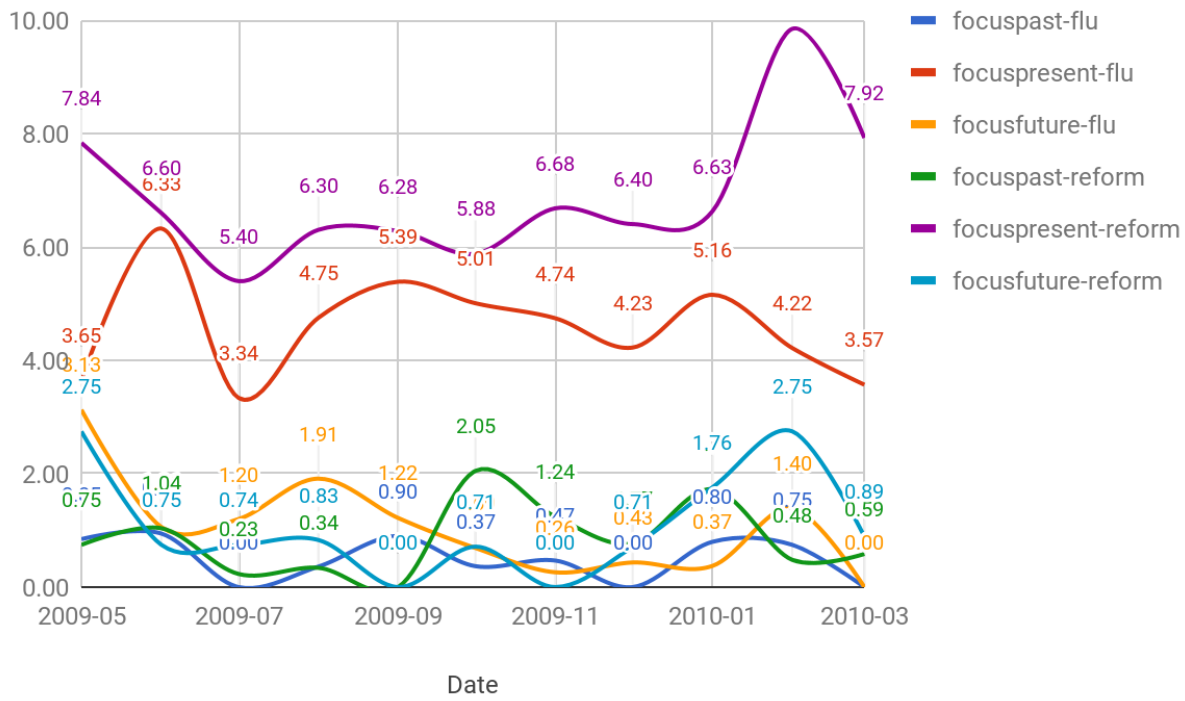


Figure 5. Tense of Flu Crisis and Reform Controversy Tweets



Hospitals also drew attention to national public health **campaigns** (all n=16, 3.1%; flu n=15, 4.2%; reform n=1, 0.6%) for public involvement. For example, Veteran's Health drew attention to an event for H1N1 awareness: "August is National Immunization Month. Read up on H1N1 flu and what you can do to prevent it."

Hospitals also offered **clinics** (all n=29, 5.50%; flu n=28, 7.80%; reform n=1, 0.60%), **discussions** (all n=11, 2.10%; reform n=11, 6.80%) and **summits** (all n=2, 0.40%; reform n=2, 1.20%). However, they were less frequent and often pre-recorded or one-directional. For example, Swedish Health provided a link to their CEO discussing the topic over the weekend: "Swedish CEO Dr Rod Hochman took part in good discussion on health-care costs, reform on KUOW Radio's Weekday program." On the other hand, hospitals provided interactive events and opportunities for the community to get involved in efforts to combat H1N1. Hospitals offered events and activities to address the crisis and the controversy, but events around the H1N1 crisis were more interactive and proactive.

Community Focus as Audience Response

To respond to their audience, hospitals attempted to answer the public's **questions** (all n=47, 9.0%; flu n=31, 8.6%; reform n=16, 9.9%). Mayo Clinic's radio and podcast events to answer questions from the public are a good example, here, too. They gathered tweets and emails from the public about healthcare reform to direct the discussion for the regular radio program that they hosted. Mayo Clinic tried to give information and respond to public questions. Pen Bay Medical arranged for experts to answer flu questions at live events: "Special Flu Expert Panel Discussion - Bring your flu questions & concerns to the PBH Health Fair." In contrast, healthcare reform queries often assumed the form of rhetorical questions used as catchy leads to news stories about the legislation: "Want to know how health care reform will ACTUALLY affect you this year? http://bit.ly/b0hegM #HCR." These links lead to pre-scripted lists of answers to frequently asked questions, rather than to live event information. Some hospitals collected questions through **social** media (all n=26, 5.00%; flu n=21, 5.80%; reform n=5, 3.10%) such as Twitter. CHI Health requested "Let's Chat About the Flu: Our docs answer your questions tomorrow. Submit your questions today. (tag with #flualegent) http://bit.ly/3tXI2s."

Hospitals also emphasized the importance of the **local** angle (all n=120, 22.9%; flu=97, 26.9%; reform n=23, 14.2%) in hospital response. Community tweets included messages demonstrating how important the hospitals' state or city community were to them. For example, Alegent Health assured their community how the hospital was keeping the state's public health interests in mind: "For Omaha schools, H1N1 prevention is top priority." Hospitals tried to put the public first and open lines of communication. They stressed their resources and efforts at the community, local level. Hospitals covered H1N1 from a local angle, such as Alegent Health contextualizing flu deaths in the state: "Alegent Health Clinic doc puts the first Nebraska death from swine flu into perspective." Alaska DHSS also reported local efforts to prepare for H1N1: "Municipality of Anchorage health officials discuss with KTVA Channel 11 plans for the city's H1N1 preparations." However, fewer hospitals offered a local spin on reform matters.

Furthermore, hospitals attempted to assuage public fears by reporting on their current services provided such as ongoing community **actions** (all n=25, 4.80%; reform n=25, 15.40%) and **involvement** (all n=2, 0.40%; reform n=2, 1.20%). Alegent Health shared how it was already using electronic medical records successfully, a stipulation of the new healthcare reforms: "Nebraska electronic medical records a success! The first statewide system to share medical information among hospitals. "They also foreshadowed how technology would enable many changes proposed by healthcare reform: "New IT is transforming healthcare in America." Hospitals attempted to show their technological preparedness mostly for the reform

controversy. They focused on the community to demonstrate how much the hospitals prioritized public safety, health and good.

Information as Constraints Response

Hospitals made some attempts to frame the conversation and address limitations of time and evidence regarding the controversy and crisis by curating and recirculating pre-existing sources of information.

For H1N1, hospitals provided more **education** (all n=88, 16.80%; flu n=76, 21.10%; reform n=12, 7.40%), **tips** (all n=30, 5.70%; flu n=30, 8.30%) and **info** (all n=14, 2.70%; reform n=14, 8.60%) about the emerging crises (such as epidemiological statistics and clarifications about emerging issues) than events and overall more than for reform. Pen Bay Med. Center shared an NPR story on H1N1: "NPR talks about the Swine Flu vs. Seasonal Flu vaccination situation. Please take note." Similarly, Alaska DHSS provided 60 similar, regular updates about the prevalence of H1N1 in the state: "Total now 57 confirmed cases of H1N1 (Swine) flu in Alaska, including 37 in Anchorage\Mat-Su." Health education tweets invited the public to gain information and tips offered by the hospitals. Henry Ford promoted an article where doctors answer questions about H1N1: "H1N1 and Seasonal Flu Experts." Hospitals posted more education and tips about flu than reform. They posted info such as news updates and public announcements about healthcare reform. For example, Baton Rouge General referred to a news feature about the reforms: "John Stossel--an interesting perspective on the debate about healthcare reform." Hospitals shared external and internal information sources with the public as the information and events emerged. They attempted to keep the public abreast of changing events and dynamics of the controversy and crisis.

Tweets included **citations** (all n=28, 5.40%; flu n=16, 4.40%; reform n=12, 7.40%), **news** (all n=94, 18.00%; flu n=60, 16.60%; reform n=34, 21.00%), **research** (all n=9, 1.70%; flu n=7, 1.90%; reform n=2, 1.20%) and **statistics** (all n=43, 8.20%; flu n=39, 10.80%; reform n=4, 2.50%) from secondary sources. They used the news more heavily to cover reform than the flu. Hospitals embedded links to news coverage of the event, including tweets publicizing hospital experts who were interviewed by the media regarding the crises ("Mayo Clinic CEO Denis Cortese, MD, talked health reform with @charlierose this week") and tweets sharing reports from official health organizations about the crises ("@WHO says H1N1 is 'spreading with unprecedented speed.' Get answers to protect your family here"). Hospitals demonstrated expertise by not only employing experts, but also sharing expert sources.

Hospitals also published **resources** (all n=49, 9.40%; flu n=39, 10.80%; reform n=10, 6.20%) such as blog postings about proposed healthcare reforms in order to provide their perspective on the reforms: "Mayo Clinic Health Policy Blog: Mayo's perspective on current health reform efforts http://bit.ly/3laIEJ." Furthermore, hospitals shared links to websites that served as resources St. Jude kept a website with up -to-date information about swine flu: "St. Jude is closely monitoring the H1N1 pandemic http://kl.am/1Z0x." They did this almost twice as much for the flu than reform. Hospital tweets directed the public to other online and multimedia resources where they posted links to original resources, but also links to external sources worth highlighting. Unfortunately, recirculating media coverage meant that those tweets were subject to the limitations of the media outlets that created the content.

Finally, hospitals offered **opinions** (all n= 23, 4.40%; reform n=23, 14.20%) and **statements** (all n=10, 1.90%; reform n=10, 6.20%) of organizational perspectives on the

emerging controversy. Alegent Health tweeted axioms and words of wisdom aimed at tempering and refocusing the debate, but that could be interpreted different ways. "Providers, consumers are key to reform," they said, which could be construed as a progressive position meant to challenge the pharmaceutical and health insurance company hyper-vigilance and involvement in crafting the language of the law. On the other hand, it could also be seen as an affirmation of conservative ambitions to protect the sanctity of the patient-provider relationship from governmental overreach. Furthermore, reform law supporters might read another quotation—"If we want to reform healthcare, we need to drive personal and individual responsibility"—as justification for the proposed law assessing a tax fee on those who would not buy health insurance once the reform law lowered if not eliminated barriers to coverage. However, the same language about "personal responsibility" could be perceived as a nod to conservative principles that rejected the proposed law on the grounds that it extended the "nanny state" that would require insurance coverage and, thereby, infringe on individual rights to handle healthcare in one's own way.

The Mayo Clinic, on the other hand, left more direct opinions. For example, they write a blog post touting what they see as the virtues of the healthcare reform law draft: "Mayo Clinic sees potential in IMAC health reform proposal http://bit.ly/QeXRo." IMAC stands for the Independent Medicare Advisory Panel, a group of legislators specifically tasked by the President to find savings in the Medicare system without jeopardizing coverage or benefits. They also publish a letter to lawmakers about the need for reform and their ideas about the core principles essential for reform: "Mayo Clinic's Open Letter to US Congress on Healthcare Reform http://bit.ly/6Rbmq." In this case, Mayo Clinic distances itself from the lawmakers by writing a letter of appeal to them, requesting that they proceed with reforms and put quality of care over quantity of medical procedures.

Hospitals offered statements from representatives of the hospital and area leaders on reform such as **experts** (all n=50, 9.60%; flu n=30, 8.30%; reform n=20, 12.30%) and **physicians** (all=59, 11.30%; flu n=40, 11.10%; reform n=19, 11.70%). Mercy Cedar Rapids posted recordings of their local forum: "Mercy President and CEO, Tim Charles, participates in a forum on healthcare reform with area leaders." Such tweets demonstrate the hospitals' community focus.

Hospitals Use SCCT Sparingly and With a Difference

Table 2 lists the SCCT strategies that hospitals used and revised as they addressed the flu crisis and reform controversy. Please also note that the percentages exceed 100% when the code totals exceed the tweet numbers. The code numbers exceed tweet numbers because one tweet could encompass several different codes.

Regarding primary **denial** strategies (all n=487, 93.14%; flu n=313, 86.66%; reform=174, >100.00%), no tweets mentioned death panels or socialized medicine directly. They did, however, address vaccine shortages and delays (all n=69, 13.2%; flu n=69, 19.1%; reform n=0, 0%). No hospitals attacked accusers.

They also used primary denial strategies slightly different than traditional SCCT outlines. For example, rather than blame scapegoats, they **externalized** the issues (all n=292, 55.9%; flu n=203, 56.2%; reform n=89, 55.0%). When providing an explanation of events and their response, they cited **government** involvement (all n=115, 22.00%; flu n=83, 23.00%; reform n=32, 19.80%) and external **guidance** (all n=24, 4.60%; flu n=24, 6.60%) such as

regulations and practical standards that bore upon hospital decision making. For example, Pen Bay Medical Center retweeted governmental recommendations about how they were required to administer the very scarce H1N1 vaccine: "@FluGov: ACIP Provisional Recommendations for the Use of Influenza Vaccines. http://bit.ly/9IaCq5 #H1N1." Furthermore, CHI Health tweeted a call to put politics aside when dealing with reform: "The importance of setting politics aside in order to pass meaningful health reform - a provider's perspective." In these cases, the government and guidance on hospital action are portrayed as hemming in or impacting the hospital's power or control over the crises and controversy.

They also externalized information shared. They tweeted and retweeted crisis and controversy updates from outside sources such as **news** outlets (all n=94, 18.00%; flu n=60, 16.60%; reform n=34, 21.00%), **media** (all n=10, 1.90%; flu n=7, 1.90%; reform n=3, 1.90%) outlets, **TV** (all n=12, 2.30%; flu n=6, 1.70%; reform n=6, 3.70%), **research** (all n=9, 1.70%; flu n=7, 1.90%; reform n=2, 1.20%) and other external **citations** (all n=28, 5.40%; flu n=16, 4.40%; reform n=12, 7.40%). For example, Henry Ford posted a link to an article discussing the reasons for healthcare system problems that plague hospitals and patients alike: "BusinessWeek: Healthcare in Crisis: How We Got into This Mess." Hospitals externalized information and facts about the crisis and controversy as they unfolded, merely recirculating what external sources reported much more than creating their own statements and news stories.

The hospitals did offer **opinions** (all n=23, 4.40%; reform n=23, 14.20%), **statements** (all n=10, 1.90%; reform n=10, 6.20%), **letters** (all n=2, 0.40%; flu n=1, 0.30%; reform n=1, 0.60%), **speeches** (all n=2, 0.40%; reform n=2, 1.20%), and **testimonies** (all n=2, 0.40%; reform n=2, 1.20%) to explain and justify their position. However, to justify the organizations' position, they often also **externalized their opinions** (all n=109, 20.8%; flu n=70, 19.4%; reform n=39, 24.1%) by couching them as the opinions of **experts** (all n=50, 9.60%; flu n=30, 8.30%; reform n=20, 12.30%) and **physicians** (all n=59, 11.30%; flu n=40, 11.10%; reform n=19, 11.70%) who work for the hospital organizations. For example, a Henry Ford physician stated his opinion about preserving the progress they are making on reform: "Dr. Mark Kelley on Healthcare Reform: Keep our best features." Also, Aurora Health offered its chief operating officer to answer the public's questions about healthcare reform: "Sue Ela, chief operating officer, discusses Aurora's 'reform in action'." Hospitals positioned themselves as perpetual champions of the public, but through the individual perspectives of employees from whom they could easily disclaim alliance.

Resources (all n=49, 9.4%; flu n=39, 10.8%; reform n=10, 6.2%) served as compensation for hospitals' inability to control the circumstances of the crisis and controversy. For example, Alegent Health could not stop either threat, but it promised to stay on top of the latest news: "You can now follow breaking health news."

Secondary **counteracting** strategies (all n=515,98.5%; flu n=380, >100%; reform n=135, 83.4%) also included sharing information to alleviate worries and confusion about the crises. Traditionally, the SCCT frames counteracting strategies in past tense, such as organizations sharing past good works and past praise. However, in the case of the flu crisis and reform controversy, hospitals shared **current good works** (all n=155,29.6%; flu n=120, 33.2%; reform n=35, 21.6%) such as **events** (all n=81, 15.50%; flu n=77, 21.30%; reform n=4, 2.50%), **clinics** (all n=29, 5.50%; flu n=28, 7.80%; reform n=1, 0.60%), community **action** (all n=25, 4.80%; reform n=25, 15.40%), **campaigns** (all n=16, 3.10%; flu n=15, 4.20%; reform n=1, 0.60%), **summits** (all n=2, 0.40%; reform n=2, 1.20%) and other community **involvement**

(all n=2, 0.40%; reform n=2, 1.20%) as good works the hospital currently performed for the community.

They also shared **current praise** about their high rankings on national list comparing **quality** (all n=6, 1.10%; reform n=6, 3.70%) of care and other external acknowledgements that the hospitals were considered **models** (all n=6, 1.10%; reform n=6, 3.70%) among peer institutions. For example, Roper St. Francis tweeted an update on their status on a list of top hospitals in the country: "Modern Healthcare Announces Nation's Top 100 Health Networks http://ow.ly/16q2CM." Furthermore, Mayo Clinic and other hospitals, including this tweet from Intermountain Health, touted how they were recognized as being a model for healthcare reform: "Deseret News article on Obama's speech Wednesday where he pointed out #Intermountain as a national model - http://tinyurl.com/q6346a."

Rather than praise stakeholders, as is traditionally prescribed by the SCCT, hospitals **engaged stakeholders** a bit by answering their **questions** (all n=47, 9.00%; flu n=31, 8.60%; reform n=16, 9.90%), hosting **chats** (all n=5, 1.00%; flu n=4, 1.10%; reform n=1, 0.60%) and **discussions** (all n=11, 2.10%; reform n=11, 6.80%) about the issues with them, invited them onto **social** media to engage (all n=26, 5.00%; flu n=21, 5.80%; reform n=5, 3.10%), and framed and presented stories from a **local** angle (all n=120, 22.90%; flu n=97, 26.90%; reform n=23, 14.20%). For example, Alegent Health provided a news alert about a swine flu death in the state. However, they framed the news as an opportunity to explain its significance from a public health perspective and, thereby, to diminish the fear that the news might inspire: "Alegent Health Clinic doc puts the first Nebraska death from swine flu into perspective: http://bit.ly/2OTwou." Furthermore, Alegent Health covered efforts in school districts to teach about the flu: "Schools teach ABCs of swine flu." Hospitals tried to act to neutralize the crisis and controversy by enlisting their experts and highlighting work-in-progress.

In some ways, hospitals gestured toward showing their vulnerability—namely, they describe **government** (all n=115, 22.00%; flu n=83, 23.00%; reform n=32, 19.80%) action (and inaction) as well as national **guidance** (all n=24, 4.60%; flu n=24, 6.60%) and guidelines that informed and constrained their agency and authority in the crisis and controversy. For example, Henry Ford raised suspicion about marketing drugs and insurance plans to consumers: "Direct-to-consumer marketing: A sore subject for physicians." They also very infrequently discussed the general **risks** (all n=2, 0.40%; reform n=2, 1.20%) associated with the problems, thereby demonstrating both their and the public's vulnerability to harm, for example, this ominous tweet from LRGHealthcare about potential problems with reform: "Your Healthcare at Risk! http://www.lrgh.org/news.aspx?id=2064." In these ways, hospitals depicted themselves in a similar, vulnerable boat as the public in managing both issues.

Overall, hospitals used denial strategies more for the reform controversy than the flu crisis. They used counteracting strategies more for the flu crisis than the reform controversy. They used externalized justification more than direct, organizational justifications. They also reported external factors that made them vulnerable more so for the flu crisis than the reform controversy. Furthermore, they focused on present compensation and praise rather than past, and they offered services, resources and dialogue rather than explicit apologies or praise.

Discussion

Compared to overall tweets, hospitals made modest efforts on Twitter to respond the crisis and controversy. The messaging about the flu crisis and reform controversy amounted to only 10.17% of total tweets posted during the timeframe under consideration. Twitter could have enabled hospitals to provide immediate redress regarding death panels, but the hospitals did not use it accordingly. Hospitals are often slow to change and adopt new or emerging communication methods and technologies, and they tend to use traditional media more (Lammers & Barbour, 2006; Rice & Katz, 2000; Schein, Wilson, & Keelan, 2010). These tendencies could explain the findings. During the summer of 2009, using social media for health communication and crisis communication was in its infancy (Veil et al., 2011), so hospitals themselves many not have been not fully in command of Twitter's capacity for responding to fast-moving events.

Most of the tweets were counteracting measures such as answering questions about healthcare reform in general rather than addressing the controversy of death panels particularly. These practices are relatively conservative compared to the normative and prospective best practices for using social media in crisis communication that the literature suggests, such as mobilizing local volunteers and surveying and monitoring the discourse to provide situation awareness and response (Schein et al., 2010; Wendling et al., 2013). Furthermore, when tweets simply recycled emerging links to television and print news sources, the response may have inherited the limitations of accuracy and sensitivity that plagued the media coverage. Wading in early and aggressively into the emerging controversies might have helped elevate the discourse or temper the fears and anger around the subject matter. Controversies might require more rigorous vetting and curating of media coverage prior to distribution on organizational social media accounts. They might also call for the creation of original content tailored to the specific fears, concerns and needs of the communities that the hospital serves.

Hospitals situated themselves as neutral or tertiary agents in the mix. They did not align themselves with official government representatives and messaging on the matter, nor did they explicitly side with more radical factions of skeptics spreading fear and stoking emotions about death panels. For example, Alegent Health published ambiguous messages about healthcare reform from which audiences could have derived double meanings. On the other hand, Mayo Clinic provided a letter of petition to Congress, thereby distancing themselves from the political volley over the subject matter. Still, Mayo Clinic system was cited by the President and legislators drafting the reform bill as being a model for the reforms they would propose (MacGillis & Stein, 2009). This difference suggests that political pressures may have contributed to hospitals' muted response to the emerging crises, insofar as hospitals chose not state opinion at all, do so in an ambivalent way, or weigh in forcefully only as a defensive mechanism to avoid the government or the public framing them and their reputation in a negative light.

The lack of stronger messaging on healthcare reform might have permitted if not stoked the crisis. In manufactured controversies, key stakeholders can be asked to respond early and often to misinformation and mischaracterizations intentionally planted by those who would benefit from prolonged crises. The hospitals minimally participated in the fray, perhaps to avoid pushing the debate one way or the other. Mayo Clinic had more skin in the game, having been mentioned as the model for the reform law. But their letter distanced the organization from the government's proposal. Similarly, Alegent Health responded with open-ended ambivalent opinions about core principles necessary for healthcare reform. The distance that hospitals

achieved from the subject matter might have opened more space for public fears to heighten and those interested in stoking the controversy to stir confusion.

No hospital used denial. Furthermore, tweets about the crisis and controversy were generally more tentative than the tone of the overall tweets. Only occasionally did they convey more certainty than tentativeness. Hospitals might be reluctant to deny or state claims definitively, because the public might perceive those strategies as hostile or antagonistic. However, in the case of emerging controversies such as fears about death panels inspired by a section removed from legislation, strong strategies such as outright denial may be in order to help quell suspicion. Instead, hospitals used compensation. Tweets offered opinions that positioned them as vulnerable rather than responsible in terms of making healthcare reform changes. They used precedent and pointed to past best practices (such as instituting electronic health records and preventing illness by washing hands) to establish credibility. They even shared vaccine status updates. However, they did not use these measures to address the death panel controversy. Hospitals were capable of addressing such emerging issues, as they did by addressing the vaccine shortages and distribution delays. It could be the case that reluctance to wade into politics or uncertainty about their own positions during the emerging controversy may have delayed them.

Therefore, a situational *controversy* communication theory may require a dialogic approach, or an assessment of not only the crisis and the organization itself, but also other entities with stakes in the controversy (Anderson & Cissna, 2012; Buber, 1970; Kent & Taylor, 2002; Marwick & Boyd, 2011). As a corrective, hospitals' responses could include an assessment of not only public perception of an organization's responsibility for threat and their role in response, but also the reputation and role of external entities with counterclaims and counterarguments. Responding to controversy may require dialogical strategies between several stakeholders who do not share a consensus on estimations of harm, including both defensive and offensive tactics. Given these findings, possible offensive tactics could include more direct and frequent engagement with the public such as events, education and outreach efforts, and more statements of opinion.

Hospitals used events, a local focus, and third-party information rather than offering proactive answers, apologies or justifications. Hospitals also remained positive and present-focused about the reform controversy, even more so than in response to the flu crisis. These strategies may have only minimally tamped down fears and suspicions about healthcare reform. Comparing crisis to controversy, flu crisis response included more tweets that drew attention to externalized factors; reform controversy tweets included more tweets that drew upon external information from secondary sources. Hospitals did spend more time justifying their position about healthcare reform than the flu; however, they also were more likely to frame those positions as opinions from physicians and experts, than an official statement from the hospital system itself. They engaged stakeholders less often on the reform controversy than the flu crisis, but they also framed the flu crisis in terms of external factors more so than the reform controversy. These findings suggest that hospitals themselves may have been making up their minds and coming to conclusions about the reform controversy in the middle of the action, because they were more inclined to offer others' information and opinions in aggregate as an emerging representation of their own positions.

A *controversy* communication strategy might also require more sensitivity to the parameters of time and public reception or penetration. Attitudes about risk evolve as controversies are created and sustained. Therefore, communication strategies could be more

responsive and resilient in volatile rhetorical situations. For example, in this case, hospitals and other credible organizations could have offered immediate counter-evidence as suspicions about death panels festered on social media—a highly contentious controversy may require a more immediate and strong response.

Limitations of this study include the fact that only 50 of several thousand hospitals were included in the sample and only Twitter was examined, rather than other social media. It may be the case that more activity and response were offered in different venues. Also, this content analysis only reports the themes that emerged; an interview study or survey of social media content managers could better explain motivations and explanations of why the strategies were chosen or modified. Nevertheless, the limitations do not diminish the value of the current findings in better understanding the similarities and differences between crisis versus controversy response, and in helping expand the situational crisis communication model with revised strategies.

Conclusion

In comparison, hospitals handled the flu crisis and reform controversies by tweeting overall positive and present-oriented tweets. In contrast, there were fewer events to engage the public about the reform controversy than the flu crisis, and more ambiguous and third-party statements. Hospitals describe their current, local impact to discuss both the flu crisis and reform controversy, but they often externalized the information they shared with their community. Rather than offer original content, they tweeted and retweeted info from news outlets and opinions on reform from the perspective of experts and physicians more so than from the organization or hospital system overall. Regarding the situational crisis communication theory, the hospitals focused on the present rather than the past, offered services rather than apologies or compensation, and used secondary sources more so than their own statements of justification.

These findings also suggest that timing did not encourage hospitals to take a more aggressive approach to handling the crisis and controversies on Twitter. The immediate nature of communication on Twitter did not inspire quick response to rising public concerns about death panels and other related healthcare conspiracies. They also suggest that the SCCT could be expanded to include a spectrum of more conservative approaches to crisis and controversy response, as well as more guidance regarding the timing, precision and accuracy of deployment of the approaches.

The main contribution of this study to the academic field is to serve as an object lesson for using social media to address crises and controversies. Hospitals could improve their handling of emerging controversies by modeling their more forward and consistent handling of crises. Furthermore, this study extends the field by illustrating additional strategies to consider for expanding the SCCT. Finally, the study helps extend the scholarly characterizations of controversies by offering a definition by example—namely the case of the healthcare reform controversy—and an insight that controversies are the risk assessment phase of crises.

Revisions to the SCCT framework might be necessary to address manufactured controversies, given how precarious that time and subjectivity make them. These findings can also help social media managers and communicators embroiled in manufactured controversies respond more effectively. This study was limited to a relatively small, but representative sample

size and a summer's worth of hospitals' messaging and interaction online for the sake of characterizing their immediate response to crisis and controversy. Future studies should include longitudinal analyses of tweets over a longer period of time responding to several manufactured controversies in order to identify additional rhetorical strategies and topics used. Furthermore, a future survey study of practitioners might also reveal additional parameters of manufactured controversies that can help researchers develop a model for best practices during such events.

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Table 1. All Code Totals

Topic	all (523)	all %	flu (361)	flu %	reform (162)	reform %
local	120	22.9%	97	26.9%	23	14.2%
government	115	22.0%	83	23.0%	32	19.8%
news	94	18.0%	60	16.6%	34	21.0%
education	88	16.8%	76	21.1%	12	7.4%
event	81	15.5%	77	21.3%	4	2.5%
vaccine	69	13.2%	69	19.1%	0	0%
physician	59	11.3%	40	11.1%	19	11.7%
expert	50	9.6%	30	8.3%	20	12.3%
resource	49	9.4%	39	10.8%	10	6.2%
question	47	9.0%	31	8.6%	16	9.9%
stats	43	8.2%	39	10.8%	4	2.5%
tips	30	5.7%	30	8.3%	0	0.0%
clinic	29	5.5%	28	7.8%	1	0.6%
cite	28	5.4%	16	4.4%	12	7.4%
social media	26	5.0%	21	5.8%	5	3.1%
action	25	4.8%	0	0.0%	25	15.4%
guidance	24	4.6%	24	6.6%	0	0.0%
opinion	23	4.4%	0	0.0%	23	14.2%
campaign	16	3.1%	15	4.2%	1	0.6%
video	15	2.9%	8	2.2%	7	4.3%
information	14	2.7%	0	0.0%	14	8.6%
TV	12	2.3%	6	1.7%	6	3.7%
discussion	11	2.1%	0	0.0%	11	6.8%
media	10	1.9%	7	1.9%	3	1.9%
statement	10	1.9%	0	0.0%	10	6.2%
radio	9	1.7%	4	1.1%	5	3.1%
research	9	1.7%	7	1.9%	2	1.2%
model	6	1.1%	0	0.0%	6	3.7%
quality	6	1.1%	0	0.0%	6	3.7%
chat	5	1.0%	4	1.1%	1	0.6%
involvement	2	0.4%	0	0.0%	2	1.2%
letter	2	0.4%	1	0.3%	1	0.6%
org	2	0.4%	0	0.0%	2	1.2%
risk	2	0.4%	0	0.0%	2	1.2%
speech	2	0.4%	0	0.0%	2	1.2%
summit	2	0.4%	0	0.0%	2	1.2%
testimony	2	0.4%	0	0.0%	2	1.2%
volunteer	2	0.4%	2	0.6%	0	0.0%

Table 2. SCCT Strategy Totals

SCCT Category	SCCT Strategy	Hospital Strategy	Code	all (523)	all %	flu (361)	flu %	reform (162)	reform %
denial	**attack the accuser**	**n/a**	**n/a**	**0**	**0**	**0**	**0**	**0**	**0**
	scapegoating	**externalizing factors**	government	115	22.00%	83	23.00%	32	19.80%
			guidance	24	4.60%	24	6.60%	0	0.00%
			subtotal	**139**	**26.60%**	**107**	**29.60%**	**32**	**19.80%**
		externalized info	news	94	18.0%	60	16.6%	34	21.0%
			media	10	1.9%	7	1.9%	3	1.9%
			TV	12	2.3%	6	1.7%	6	3.7%
			research	9	1.7%	7	1.9%	2	1.2%
			citations	28	5.4%	16	4.4%	12	7.4%
			subtotal	**153**	**29.3%**	**96**	**26.6%**	**57**	**35.2%**
	justify position	**justifying position**	opinions	23	4.4%	0	0.0%	23	14.2%
			statements	10	1.9%	0	0.0%	10	6.2%
			letters	2	0.4%	1	0.3%	1	0.6%
			speeches	2	0.4%	0	0.0%	2	1.2%
			subtotal	**37**	**7.1%**	**1**	**0.3%**	**36**	**22.2%**
		externalized opinions	physician	59	11.3%	40	11.1%	19	11.7%
			expert	50	9.6%	30	8.3%	20	12.3%
			subtotal	**109**	**20.8%**	**70**	**19.4%**	**39**	**24.1%**
	compensate, apologize	**offering resources**	**resources**	**49**	**9.4%**	**39**	**10.8%**	**10**	**6.2%**
			total	**487**	**93.14%**	**313**	**86.66%**	**174**	**107.45%**
counteracting	**past good works**	**current good works**	events	81	15.5%	77	21.3%	4	2.5%
			clinics	29	5.5%	28	7.8%	1	0.6%
			action	25	4.8%	0	0.0%	25	15.4%
			campaigns	16	3.1%	15	4.2%	1	0.6%
			summits	2	0.4%	0	0.0%	2	1.2%
			involvement	2	0.4%	0	0.0%	2	1.2%
			subtotal	**155**	**29.6%**	**120**	**33.2%**	**35**	**21.6%**
	past praise	**current praise**	quality	6	1.1%	0	0.0%	6	3.7%
			models	6	1.1%	0	0.0%	6	3.7%
			subtotal	**12**	**2.3%**	**0**	**0.0%**	**12**	**7.4%**
	praise stakeholders	**engage stakeholders**	questions	47	9.0%	31	8.6%	16	9.9%
			chats	5	1.0%	4	1.1%	1	0.6%
			discussions	11	2.1%	0	0.0%	11	6.8%
			social media	26	5.0%	21	5.8%	5	3.1%
			local	120	22.9%	97	26.9%	23	14.2%
			subtotal	**209**	**40.0%**	**153**	**42.4%**	**56**	**34.6%**
	vulnerability	**externalizing factors**	government	115	22.00%	83	23.00%	32	19.80%

			guidance	24	4.60%	24	6.60%	0	0.00%
			subtotal	**139**	**26.60%**	**107**	**29.60%**	**32**	**19.80%**
		discussing risk	**risk**	**2**	**0.4%**	**0**	**0.0%**	**2**	**1.2%**
			total	**517**	**98.9%**	**380**	**105.2%**	**137**	**84.6%**

NOTE: The percentages exceed 100% when the code totals exceed the tweet numbers. The code numbers exceed tweet numbers because one tweet could encompass several different codes.