

Running head: SOCIAL MEDIA & PUBLIC HEALTH COMMUNICATION

Social Media Networking Strategies for the Yale New Haven Health Center for Emergency  
Preparedness and Disaster Response (YNH-CEPDR) / Yale New Haven Health System  
Center for Healthcare Solutions (YNHHS-CHS)

Presented to the Faculty of  
Liberty University  
School of Communication Studies

In Partial Fulfillment of the Requirements for the  
Master of Arts  
In Communication Studies

By  
Amanda Smith

15 March 2012

**Thesis Committee**

---

Stuart H. Schwartz, Ph.D., Chairperson

---

Carey Martin, Ph.D.

---

Angela Widgeon, Ph.D.

Copyright © 2012

Amanda J. Smith

All Rights Reserved

This Project is Dedicated to My Family—

Stewart, Loren, and Alexa Smith

Whose love and support have given me the momentum and confidence to pursue my goals

### ACKNOWLEDGEMENTS

First, I would like to thank the Yale New Haven Center for Emergency Preparedness and Disaster Response/Center for Healthcare Solutions (YNH-CEPDR/CHS) for allowing me to interact with and survey its staff. It is my hope that this thesis project will provide valuable insights that will add to the activities of YNH-CEPDR/CHS' and its already esteemed role in the emergency preparedness and disaster response community.

I would also like to express my gratitude to my thesis committee, with whom I have been honored to have worked with and learned from, during my graduate studies. Dr. Schwartz, my thesis chair, has guided me in both my undergraduate communication degree and master communication process. Thank you for sharing your wealth of experience, humor, and support. Your teaching style and courses have not only helped me find my niche and molded my approach to projects, but also provided me with the practical support and tools for success in both my classes and in my future endeavors. I would also like to thank my readers, Dr. Carey Martin and Dr. Angela Widgeon. Dr. Martin is not only exceptionally knowledgeable about his subject, but also passionate about his students. Thank you for encouraging creative thinking and open dialogue in your classes. Dr. Widgeon's genuine excitement for research and encouragement inspired me to continue onto graduate school. Thank you for support and involvement in my undergraduate and graduate studies, and this project.

I would also like to thank my fellow graduate students and friends who have become a second family to me. These last two years have stretched us, brought light to new opportunities, and carved foreseeable paths for each our futures. I am grateful to have learned, studied, and laughed (and consumed too much coffee) with each of you! My hope for each of you is that you will simply do what you love, and, in doing so, fulfill the greater purpose for your lives.

**ABSTRACT**

This paper investigates the uses and gratification of social media for both personal and organizational usage among employees at the Yale New Haven Center for Emergency Preparedness and Disaster Response/Center for Healthcare Solutions in New Haven, Connecticut. The purpose of this thesis is to assess and evaluate the relationship between YNH-CEPDR/CHS' usage of social media tools and the organization's employees' personal attitudes, beliefs and usage of Facebook, Twitter, LinkedIn, and YouTube. Employees of YNH-CEPDR/CHS were surveyed regarding the function of social media for emergency management communication and the promotion of products and services. Results suggest that while employees generally agree that social media is a valuable tool for both personal use and professional purposes, there is no current social media strategy being employed by the organization. Future research should investigate and measure the effects of specific social media strategies employed by emergency preparedness and disaster response organizations.

*Keywords:* Social Media, Public Health, Emergency Preparedness and Disaster Response, Facebook, Twitter, LinkedIn, YouTube

## TABLE OF CONTENTS

<b>INTRODUCTION</b> .....	9
Rise of Crisis Communication and the Use of Tools.....	12
Purpose Statement.....	13
<b>CHAPTER 1 – LITERATURE REVIEW</b> .....	15
Uses and Gratification Theory.....	15
Social Media’s Implications for Public Health Professionals.....	22
Nature of Social Media & Social Networks.....	23
Social Networking: A Multiplatform Approach.....	26
Growth & Advancement of Social Networks.....	29
Web-based Social Media.....	32
Social Media via Mobile Technology.....	35
Conclusion.....	38
<b>CHAPTER 2 – METHODOLOGY</b> .....	39
Purpose and Significance .....	40
Research Design.....	41
Participants.....	43
Data Collection.....	43
Ethical Considerations.....	46
Validity.....	47
Summary.....	47
<b>CHAPTER 3 - RESULTS</b> .....	49
Organizational Content Analysis.....	50
Frequency of Usage for Clientele.....	51
Accessing Social Media.....	53
Research Questions Answered.....	53
<b>CHAPTER 4 – DISCUSSION</b> .....	67
Participants.....	67
Facebook.....	67
Twitter.....	68
LinkedIn.....	68

YouTube.....	69
Study Limitations.....	69
Future Research.....	70
<b>CHAPTER 5 - RECOMMENDATIONS.....</b>	<b>72</b>
Step 1: Determine Your Social Media Strategy.....	72
Step 2: Implementing a Social Media Strategy.....	73
Step 3: Branding.....	73
Step 4: Increasing Engagement.....	75
Step 5: Measuring Results of Social Media Analytics.....	75
Twitter.....	76
Facebook.....	77
LinkedIn.....	78
YouTube.....	79
<b>REFERENCES CITED.....</b>	<b>81</b>
<b>APPENDIX 1 – Survey Tool.....</b>	<b>92</b>
<b>APPENDIX 2 – Survey Results.....</b>	<b>100</b>
<b>APPENDIX 3 – YNH-CEPDR/CHS Capabilities.....</b>	<b>113</b>



## INTRODUCTION

Digital venues of social networks continue to revolutionize the way communication is conducted. What began as a way to connect with others has catapulted information dissemination, business, commerce and relationship building. Social media has enabled businesses and organizations to connect with others and promote products and services through free marketing, free advertising, and free networking. “In the U.S., social networks and blogs reach nearly 80 percent of active U.S. Internet users and represent the majority of Americans’ time online” (Nielsen, 2011). As social media’s influence grows, it will become crucial for companies and organizations that have been heavily rooted in traditional media to decidedly engage and develop strategies for effective social media implementation.

The way in which Americans now relate to and communicate through social networking has direct and immediate implications in the fields of emergency preparedness and disaster response, public health, and communication. Consequently, medical systems (meaning direct medical treatment delivery networks) and public health organizations (meaning entities that conduct mass disease surveillance activities to prevent the spread of the potential adverse effects) find themselves being impacted by the speed at which information is communicated to colleagues, patients, and the public at large, through the various social media venues. These entities have entered an age in which they must develop strategies to leverage social media to facilitate a continuous conversation with target audiences in order to leverage the aforementioned, in addition to advertising the diverse products and services offered by these organizations. For example, the death of Osama Bin Laden, on May 1, 2011, sparked a record of 12.4 million tweets per hour (Smith et al., 2012). “Unconfirmed reports made by social media alerts are what crafted the news stories that informed millions of one of the most significant

events in the last decade. This event reflects the reality of the current media culture in America; that being that citizens are constantly connected and communicating through social media” (Smith, et al., 2012).

This dramatic shift has taken place in the broad field of mass communication in the last five years. According to the Pew Research Center, 79 percent of American adults reported using the Internet and 47 percent of those reporting using at least one social network in 2011 (Smith, et al 2012). Social networks have progressed from a role of virtual option to a becoming one of the most critical tools of connection, second to the face-to-face interaction. More than ever, businesses are tapping into the multi-faceted resource that is new media (social networks, blogs, websites, smartphone technology). New social media options have changed the way that users select and perceive satisfaction from media. From personal computers to smartphones, these entities are using more communicative devices and mediums to gratify organizational needs and goals.

It has become evident that traditional “top-down” methods of disseminating information have been traded for the quick and easy information sharing methods of social media. (Smith, et al., 2012). Individuals, not organizations, have become the primary disseminators and information sharers for news and entertainment. Through a stroke of a key, text message, or picture taken on a smartphone, citizens are moving from the role of observer to active reporter and information sharer. “Frequently, ‘citizen reporters’ are on the scene of an incident long before members of the traditional news media arrive. Sometimes, they are there even before the first emergency responders” (Tobias, 2011, p. 215). For example, the number of tweets, or 140 character Twitter posts, during the August 2011 East Coast Earthquake actually surpassed the ‘tweets’ alerting Osama Bin Laden’s death. Twitter reported 5,500 tweets per second (TPS) for

the earthquake and also stated, “For context, this TPS was more than Osama Bin Laden’s death and on par with the Japanese quake” (Golijan, 2011).

Concurrently, public health organizations are not the only entities to share information or be the first to spot a disease outbreak or natural disaster event. A health communicator’s mediated communication is becoming the most vital tool used for effectively implementing policy and communicating information to its targeted audiences. Public health organizations must assess how they use media to connect to and reach their technology-savvy and saturated target audiences. These audiences desire to be constantly connected, and exchange information using an integrated platform approach. These recent advances of social media, most specifically social networking websites, are both affecting and altering the way that public health organizations will select and use media to quickly and effectively communicate their products, services and vital information to the public at large.

Recent advances and adoption of social media tools among public health professionals have sparked research interest in the efficiency of new and social media to obtain organizational goals. Bulmer, and DiMauro (2009), in their Executive Summary from the Society for New Communications Research Study: *The New Symbiosis of Professional Networks: Social Media’s Impact on Business and Decision Making*,” discuss the large shift from traditional marketing strategies to an integrated, social media approach. The authors investigate social media and its implications for validity and reliability as a new tool for professionals to rely on for decision-making. Liu, Liston-Heyes, and Ko (2010) pioneered research focusing on the specific role of employees in the creation and implementation of a cause-related campaign’s social media strategy. The researchers found that the size and reach of the marketing campaign, along with

overall campaign success, was directly affected to the varying levels of internal employee involvement.

### **Rise of Crisis Communication and Use of Tools**

Public health emergency managers, in particular, are now either experiencing or observing this shift in information sharing from a centralized to a decentralized process led by social media networks such as, Facebook, Twitter, YouTube, and LinkedIn. These professionals and people are now seeking out and sharing information regarding crisis events on social networks. It is apparent that public health professionals must be equipped with the new and increasingly vital media skills to best reach target markets and communicate products and services, particularly through social media. While there is currently a lack of equal, across-the-board social media integration into many public health entity's best practices, it can be inferred that public health professionals are most likely using social media for personal use, even if not for their employing organizations. The statistics surrounding social media usage in the United States further validates the critical need for streamlined social media integration and training for public health professionals. In order to quickly and effectively disseminate critical public health information and updated, audiences must be reached through the venues which they are connected to most.

“In 2011, 63.7% of U.S. internet users will use social networks on a regular basis, amounting to nearly 148 million people. Social media usage will remain strong and shows no sign of declining. Marketers and businesses know that in order to reach their audience, they absolutely must have a presence on social networks” (Williamson, 2011). As public health organizations and risk assessment center develop and tailor their communications strategies for

social media savvy target audiences, it will be important to understand why audiences are using their specific chosen media to achieve needs and goals.

With nearly 75 percent of adults and 50 percent of public health workers using some form of social networking, as accessed through new media tools, it is evident that public health entities must be equipped with advanced skills and understanding of the tools with which they can use to communicate and disseminate information to target audiences (Gevertz & Greenwood, 2010, p. 28). While interest and research in the area of public health communication and new and social media integration are on the rise, there is a large gap of case studies focusing on public health organizations' integration, and usage of social media to communicate products and services. In addition to this, there is a shortage of streamlined social media training in terms of strategy and tactics for employees.

### **Purpose Statement**

The purpose of this case study is to assess and evaluate the relationship between an individual public health risk and assessment center's utilization of social media and its internal employees' personal attitudes, beliefs, and usage of new and social media tools. The link between internal employee social media usage and gratification, and the overall external social media strategy of the organization will be assessed to determine how internal employee perspective on social media shapes the dissemination of information (via social media) to targeted audiences. This case study will specifically focus on the Yale New Haven (YNH) Center for Emergency Preparedness and Disaster Response (CEPDR) and its direct affiliate, Yale New Haven Health System's Center for Healthcare Solutions (YNHHS-CHS), a health risk assessment center, which assists organizations with a cycle of preparedness through assessment, planning, education and training, and drills and exercises. This case study will take an in-depth

look at how YNH-CEPDR/CHS, at the organizational and employee levels, is using social media to support its defined capabilities, products and services. This study will employ a comparative analysis of YNH-CEPDR/CHS' employees' uses and opinions of social media for personal use, and in the context of their job positions with how social media strategies are being employed by the organization at large.

Chapter 2, Review of the Literature, will define the nature of new media social networks, while examining the Uses and Gratification pioneered by Lazarsfeld (1942) and further advanced by Blumler and Katz (1970). The Uses and Gratification Theory, which conjectures that a media user will select and consume various, individualistic combinations of media to attain personal needs and goals, will work as a lens and framework for this case study. Social media's integrated platform approach in relation to Uses and Gratification will be discussed while focusing on direct implications for public health professionals. Chapter 3, Methodology, will provide a detailed case study methodological approach assessing the link between media usage and gratification and the overall organizational social media strategy to disseminate organizational information from YNH-CEPDR to its target markets.

## CHAPTER 1 - LITERATURE REVIEW

This literature review is divided into seven sections. Section one discusses the research and support for the Uses and Gratification theory. The second section describes social media's implications for public health professionals. Section three outlines the nature of social networks. Section four outlines the multiplatform approach of social media. The fifth section discusses the growth and advancement of social networks, and sections six and seven discuss web and smartphone technology based new media tools for social networking.

### **Uses and Gratification Theory**

Uses and Gratification theory, originated in the 1970s, opposes the traditional focus on the sender and message of the communication model. Rather than focusing on how the sender communicates a message, the Uses and Gratification Approach focuses on how the receivers (individuals, groups, and society) choose, use, and consume media messages. The core conjecture of the theory is that a particular audience will deliberately seek out the media options that will satisfy needs and desires. The theory also states that frequency of media usage will increase in tandem with user satisfaction of the media.

The researcher best known for the supportive research and original development of the uses and Gratification Approach is Lazarsfeld. In his text, "Radio and the Printed Page," Lazarsfeld took an interest in the way that new forms of media affected the communicative trends of 1940s culture and society. This text outlines a brief history of radio, its effectiveness and how information is disseminated to broad masses. The study analyzed how people chose the content they listened to on the radio, their accessibility to the content and preference to content (Lazarsfeld, 1940). Lazarsfeld did not focus on the leisurely aspects of radio, but rather its 'talk radio' aspect. A stronger focus on the psychological aspect of needs, uses and gratification of

radio and print usage is reflected in this primary work of Lazarsfeld. An analysis of listening preference as tied to reading preferences was conducted to draw relationships between chosen content that satisfied the media user (Lazarsfeld 1940, p. 133-198). “Radio and print are compared insofar as different population groups prefer the one or the other for the communication of ideas” (p. 135). Lazarsfeld connected his research on varied radio usage among different populations to the preference for print communication. Lazarsfeld stated that the comparison between the two communicative mediums can take two forms: (1) “Who are the people who prefer radio and who are those who prefer print?; and (2) What are those comparative advantages in reading and listening that determine medium preferences?” (p. 135). By comparing radio and print usage, Lazarsfeld was able to examine observable and measurable changes as media progressed from print to the incorporation of radio as an additional media option.

Lazarsfeld later conducted further radio-centered research with Stanton. Lazarsfeld and Stanton (1942-1943) noted that World War II made it difficult to conduct research, in that research began in 1941; yet, the War was greatly responsible for, “highlighting radio’s importance and strengthened demands for its continued development” (p. v.). Radio’s necessity and usage as a tool, rather than a mere entertainment vessel, during this time provided more opportunities for Lazarsfeld to conduct comparative case studies that examined the uses and gratification of print and radio.

Lazarsfeld and Stanton’s collaborative work, *Radio Research* is broken into five sections: 1) Daytime Serials; 2) Radio in Wartime (German propaganda is examined); 3) Radio in Operation; 4) Progress in Listener Research; and 5) The Good Neighbors (program analysis tests). The two researchers’ goal was to conduct individual case studies of individual listeners in



order to determine the effects of specific programs on specific listeners (p. vi). Interestingly, Lazarsfeld and Stanton predicted that, “As time goes on, it will become evident that the field of radio research will ultimately merge with the study of magazines, newspapers, films, and television into one broader discipline of communications research” (p. vii). This media unification is seen today in the ‘melting pot’ of the Internet, where magazines, journals, newspapers, and television exist and are interacted with. The two men’s foundational research led to both the theorization of Uses and Gratification, as well as the current application and implications for social media and new media.

While Lazarsfeld did not specifically name the theory of Uses and Gratification, his preliminary research on radio and the framework of ideas with which he examines the use of radio to fulfill specific, differentiated needs set the groundwork for the future study that would coin the term/theory: Uses and Gratification.

In the 1970’s, researcher Jay G. Katz built upon the foundational research conducted by Lazarsfeld and developed what is known as Gratification Theory. “Elihu Katz, previously a Professor of Communication and Sociology at the Hebrew University of Jerusalem and Director of its Communications Institute, explained, through his theory that media users turn to a single medium or combination of various media to fill individualistic needs” (Katz and Blumler 1973, p. 9). Blumler directed his personal research focus toward audience uses and gratifications in the area of political communication. “Within his political research Blumler focused on the role of the mass media in election campaigns as well as their part in processes of political socialization, participation, and information transmission” (p. 9). Blumler and Katz (1973) teamed up to further the early research of Lazarsfeld and Stanton in their text, “Uses of Mass Communication: Current Perspectives on Gratifications Research,” in which the two researchers compiled essays

focusing on uses and gratification in the context of mass media and took a more current, as compared to the 1940's, evaluation and assessment of Lazarsfeld's radio research.

Blumler and Katz (1974) clearly identified the gaps in Lazarsfeld and Stanton's preceding research as stating that, "Uses and Gratification research emerged because of the discovered inadequacy of the older tradition of campaign or effects studies" (p. 227). Blumler and Katz went on to discuss how the campaign studies mainly reflected the, "limited incidence of direct effects and adduced a range of intervening factors, such as selective exposure and selective perception that mediated direct effects" (p. 227). The campaign studies pointed out the lack of short-term effects and persuasive power of the media.

In contrast to Lazarsfeld's research, Blumler and Katz, "sought experiences by the audience as intervening variables standing between mass-communicated messages and their impact upon the audience. Uses and Gratifications recognized two kinds of influence that shaped the intervening variables: (1) Media depend upon the structure of groups within specific, varying contexts, (2) Uses and Gratification research relies upon the psychological principle that human perception is not passive, but rather an active structuring process (Blumler & Katz, 1974). "Thus, gratifications sought by the audience are assumed to result from active psychological processes of constructing lines of action" (p. 227). This framework by which to view the audience's role in the media communicative process is quite opposite, and viewed as more progressive, from the Hypodermic Needle theory from the 1940-50's, which placed audiences in a victimized, receiver role by which all mediated messages received were perceived as truth.

Within this same text is the specific conceptual model for the Uses and Gratification approach, developed by Karl Erik Rosengren (1974). Rosengren explained that the preceding research conducted by Lazarsfeld and Katz and Blumler, made it possible to officially outline a

paradigm for uses and gratification research. Rosengren's model outlines the relationships between society/media structure, basic needs, perceived problems/solutions, models, media behavior, basic needs, gratifications/non-gratifications, and individual characteristics, including psychological set up, social position, and life history (p. 271). Rosengren's paradigm outline for uses and gratification approach was the culmination of extensive, preceding research by Lazarsfeld, Blumler and Katz. Rosengren provided a visual model for the internal media consumption and selection process where he illustrated that media consumption is entirely subjective. A media user will select and consume various, individualistic combinations of media to attain personal needs and goals.

In 1973, Katz and Blumler expanded upon their collective research and joined Hass and Gurevitch to further examine audience uses and gratifications, particularly focusing on an individual's affinity toward connectedness with others. The authors collectively noted that, "Interest in the gratifications that media provide their audience goes back to the beginning of empirical mass communication research. Such studies were well represented the Lazarsfeld-Stanton collections" (Katz et al., 1973). The researchers also poignantly noted the gaps of Lazarsfeld early research. "Lazarsfeld's research largely ignored the distribution of the "The mass media process where much initiative in linking need gratification and media choice lies with the audience member. This research places a strong limitation on theorizing about any form of straight-line effect of media content on attitudes and behavior" (Katz et al., 1973, p. 511). The goal of Katz, Blumler, Hass and Gurevitch's collective research was to fill in the gaps of Lazarsfeld's previous study.

The central notion of Katz, Gurevitch and Hass (Katz, et al., 1973) is that, "mass communication is used by individuals to connect (or sometimes disconnect) themselves-via

instrumental, affective, or integrative relations-with different kind of others (self, family, friends, nation etc.)” (p. 509-523). The scheme attempts to comprehend the whole range of individual gratifications of the many facets of the need ‘to be connected.’ Another gap that the authors note in previous uses and gratification research is that the study of mass media use suffers at present (1973) from the absence of relevant theories of social and psychological needs. What made this new research effort with Katz, Hass and Gurevitch unique was the discussion surrounding the audience’s need for connectedness.

This “need for connectedness” is as relevant today, in the year 2011, as in 1973, and is paramount for social media. From the need to be interconnected brings a desire to be incessantly linked via social media and social networks. Currently, new digital media tools are rapidly affecting the way that businesses exchange and disseminate information, particularly public health organizations, where media is the chief connection between public health opinion leaders and targeted audiences. Although new media tools, such as mass distributed personal computers, Ipads and smartphones, were not present in the 1940s to 1970s society, during which the primary uses and gratification research was conducted, the themes remain unchanged. The authors note that audience gratifications can be derived from at least three distinct sources:

Media content, exposure to the media per se, and the social context that typifies the situation of exposure to different media. Each medium seems to offer a unique combination of: (a) characteristic contents (at least stereotypically perceived in the way); (b) typical attributes (print vs. broadcasting modes of transmission, iconic vs. symbolic representation, reading vs. audio or audio-visual modes of reception); and (c) typical exposure situations. The use then, is what

combinations of attributes may render different media more or less adequate for the satisfaction of different needs (Katz, Gurevitch, & Haas, 1973, p. 514).

While many combinations of broadcast television, radio, and print could be combined to fit an individual's desires, the media options in 2011 are seemingly endless. As previously described, and according to Blumler, Katz, Haas, and Gurevitch (1973), mass communication is used for interconnectedness among individuals. An individual, or collective audience will seek out one or many facets of mass communication to fill a social or psychological need.

Following the research of Lazarsfeld, Stanton, Katz, Blumler, Haas Gurevitch, and Rosengren is the exploratory research of Alan M. Rubin. Rubin's work focused on, "clarifying central concepts of Uses and Gratifications in his audience-centered research. Rubin identifies two types of media audiences: 1) information seeking; 2) non-purposive and leisurely (Haridakis and Whitmore, 2006, p. 766, 768). Rubin notes the gaps of earlier research, which focused on the media's indirect effects on audiences. "In uses and gratification studies, people are seen as purposive, goals directed, and motivated in their use of the media to satisfy social and psychological needs and wants" (p. 766-768). Rubin's (1987) Television Viewing Motives Scale pioneered new research regarding audience television use. The study was spurred by Greenberg's (1974) studies, which identified various reasons why British children watched television (habit, learning, arousal, companionship, relaxation, to forget, to pass the time). From Greenberg's study, researchers have been able to correlate television use and other media use to satisfy needs and wants (Rubin, 1987). In Rubin's research, he also cites Baran and Davis (1995) who conceptualized that; "the person follows his or her interest, choosing media content according to his or her needs and synthesized that content to satisfy those needs" (p. 217).

Rubin, Baran and Davis, and all preceding research confirm the purpose and validity for the theorization of the uses and gratification approach.

### **Social Media's Implications for Public Health Professionals**

The field of public health is entirely focused on preparing for and responding to the needs of communities in the United States. As previously discussed, social networks are useful in driving conversation, creating buzz and encouraging consumer-generated content. Among the general public, a new trend is emerging: More information is being discussed and transferred in digital conversations on social networking websites than interpersonally. The blending of technology and information is sparking digital conversations regarding public health policy, literacy, and changes in health care community. "A 2008 report published by the Pew Internet & American Life Project found that 75 percent of adults use the Internet and 35 percent of adults use social networking sites and some healthcare workers speculated that up to 50 percent of employees use some form of social media" (Gevertz & Greenwood, 2010, p. 28). While employee usage is high, employers must work to develop specific social media policies and provide training when implementing social media into a public health facility. There are insurmountable implications and opportunities for the health communication field, and more specifically health risk assessment centers to utilize new media tools to communicate to their target populations.

During an emergency event, the ability to capture a full picture of what is happening in a community. In the age preceding social media, emergency managers and public officials would have had to develop written content in the form of press releases or faxes suitable and translatable for multiple media outlets (Smith et al., 2012). Now, social media tools are providing

emergency managers with instantaneous new ways to lead and participate in online conversations of other industry professionals and state, local and international communities. “Situational awareness is one of the most important pieces of the response for emergency managers and monitoring through social media websites such as, Facebook, Twitter and YouTube can provide information from on the citizens” (Smith et al., 2012). “The combination of text and images, couples with the ability for audiences to interact with their own content for emergency managers to assess, allows events to be tracked and verified” (Smith et al., 2012).

Aside from emergency and disaster events, emergency managers can utilize social media tools to provide organization information and promote products and services to clientele. “Applying social media tactics to corporate and government crisis communication has several advantages. First, it brings credibility to your organization at a time when it is likely to be most needed. This occurs because the use of social media- including, but not limited to blogging and podcasting- is inherently conversational and transparent allowing near real-time information to be disseminated to concerned citizens, employees, and the media” (Prentice & Huffman, 2008). Paul White (2008) discusses the many similarities of social marketing and traditional marketing and the new, natural combination of social media and the healthcare industry. The author highlights the importance of teamwork among social marketing and health communication professionals and social media’s ability to enhance reputation, builds relationships, and has more long-term sustainment as compared to traditional marketing initiatives.

### **Nature of Social Media & Social Networks**

As described by Rubin (1987), people are purposive and goal oriented when seeking out a specific medium or combination of media to satisfy psychological needs and desires. These needs and wants can be fulfilled through, relationship that is created or sustained via social

networks, using social media as a communication channel to share or exchange information, or for observation and entertainment of information that is disseminated via the communication outlet of social media. Social media is the web or mobile-based communication channel through which information is disseminated; whereas, social networks are groups of individuals that utilize the communication of social media to relay and exchange information and engage in an interactive dialogue.

Gevertz and Greenwood (2010) define social media as, “information that is disseminated through highly accessible publishing techniques (web and mobile), that transform people from content consumers into content producers” (p.2). Social networks are defined as, social structures made of individuals or organizations called ‘nodes’ that use social media. In their introductory article, Boyd and Ellison (2008) describe features of social networks and propose a comprehensive definition. Boyd and Ellison define social networks as:

Web-based services that allow individuals to: 1) construct public or semi-public profile within a bounded system; 2) articulate a list of other users with whom they share a connection; and 3) view and traverse their list of connections and those made by others within the system (Boyd and Ellison, 2008).

Within social networks are clusters of similar, likeminded audiences that exchange information. Social media utilizes web-based and mobile technologies to turn one-way conversations into an interactive, continuous dialogue. Also among these clusters of individuals within social networks, are opinion leaders, who drive conversation and disseminate information relevant to the cluster of social network users. “Determining Influential Users in Internet Social Networks, published in the Journal of Marketing Research,” a study conducted by Trusoy et al., examined how the strength and success of social network relies solely upon the number of users and their



corresponding activity levels (Trusoy, et al., 2011). The article discusses that while it is difficult to trace opinion leaders of social networks, it is easier to identify clusters of small groups within a larger social network. The study's authors find that approximately one-fifth of a user's friends actually influence his or her activity level on the site. This can be applied to an organizational structure where internal, employee usage maybe correlated to the organization's external target usage.

In a study entitled, "Reconsidering Models of Influence: The Relationship Between Consumer Social Networks and Word-of-Mouth Effectiveness," Smith et al.. (2007) examined the characteristics of viral marketing messages. The researchers cite a current problem of marketing within any business arena stating, "marketers are faced with the challenge of identifying influential individuals in social networks and connecting with them in ways that encourage WOM (word of mouth) message movement" (Smith et al., 2007, p. 387). While information can be equally shared, discussed and distributed, influence is not widespread. The researchers note that there are opinion leaders within clusters of social networks. The influence process can be best described as a pyramid model. "In the pyramid model of influence there are a few highly influential individuals whom occupy the top layer. The mass of others who consumer but do not advise, make up the larger layers below them" (p. 388). This pyramid model is one of the main reasons that explain the general marketing strategy to capture the attention of the few elite opinion leaders that start the "conversation" regarding products, services, and information for businesses.

The implications for social media and social networks not only serve as a potential means fulfillment for individual needs to converse with other individuals online, but provide marketers, businesses and, especially, public health care entities a prime media outlet with which to

communicate and connect with target markets and affiliate organizations. The very nature of public health concerns communities of people. Effective dissemination of information regarding health policy, change, crisis, preparedness and response is at the very core of a public health entity's communication strategy and process. The creation of new communication devices and networks, such as personal computers, laptops, and smartphones, provide media users with the ability to create numerous combinations of media to connect and communicate through. The combination of cutting edge technology vehicles, through either with the convenient and constant access to online, social communities, through web-based or mobile-based communication devices will be paramount in this study.

### **Social Networking: A Multiplatform Approach**

The United States has experienced more technological changes in mediated-based communication in the last ten years than during an previous decade. Recently, there has been a shift in the way social media is being used to communicate. Businesses are capitalizing on the clusters of networks created by social networking to market products and services through websites such as: Facebook, Twitter, LinkedIn, and YouTube.

Rather than using only one social networking website, the integrated marketing approach, which utilizes various combinations and a suite of social media networks and tools has become the principal means of business marketing and information exchange. New media, the constant access and engagement in social networks via new media tools, allows users to connect socially and or businesses to act as opinion leaders driving conversation, gaining credibility, or building buzz around a specific topic or conference. Smartphones have become one of the primary tools that ensure continual connectedness for any user. Smartphone technology (iPhones, Blackberries, Androids, etc.) provides a user with a new medium to access and engage in all

chosen social networks and communities simultaneously. In addition, applications like Hootsuite allow a user to post an updated to Twitter, Facebook, and a blog of choice in a single click. Since smartphones are essentially the new handheld computer, consumers and social networkers have the unrestricted ability to generate content and engage in conversation.

Li (2007) utilizes information from Forrester's NACTAS Q3 2006 Media & Marketing online survey to conduct a broad overview analysis of Facebook, and MySpace use. In her study, Li discusses how social networking users represent a very attractive audience with which marketers target and interact. Li's 2007 findings showed that, "Nearly 60% of teenagers (12- to 17-year-olds) and 80% of young adults (18- to 21-year-olds) are using them. Li's study also found that more than 53 million and 10 million States visitors each most on MySpace, and Facebook attracted the attention of marketers" (p. 7). Marketing through social networks has since set the trend for every business and trade alike to utilize the online networks and media that millions of users access each day (Li, 2000).

Since 2007, MySpace's primary purpose has shifted from fulfilling social needs and desires to being used by the music industry to promote artists. Facebook has become the leading social connector and advertiser, over MySpace. "Facebook has more than 500 million active users. Entrepreneurs and developers from more than 190 countries utilize the Facebook platform to connect with audiences, and there are over 900 million pages, groups, events and community pages that users interact with" (Facebook.com, 2011). New media vehicles, like smartphone technology provide an opportunity for users to access multiple social network platforms simultaneously.

**Facebook.** Facebook is a social networking site that is available to anyone that has an email address. "Facebook currently has six hundred million users; a third of those users access

Facebook on a mobile phone” (Hepburn, 2011). Facebook’s purpose is to, “help you connect and share with the people in your life” (Facebook.com). Facebook states on its login and sign up pages that the service, “is free and always will be” (Facebook.com). Facebook allows its users to create profiles to include personal, geographic, interests educational, and professional information. Each user’s profile has a “wall” that other Facebook friends (by request only thought the site) can post messages, photos, or videos. “Roughly seventy percent of Facebook users live outside of the United States ad forty-eight percent of Americans obtain news information from friends’ Facebook posts” (Smith et al., 2012).

**Twitter.** Twitter is a social networking website that can be accessed via web or mobile communication devices. Twitter is a micro-blogging website where 140 character maximum messages are posted and responded to through a continual conversation on the Twitter website. According to a study by RJMetrics in January 2010, Twitter users reached over 75 million in 2009. “About 25 billion tweets were sent in 2010. Of particular note to crisis and emergency managers is that 80 percent of the people using Twitter are doing so from a smartphone, or another mobile device” (Tobias, 2011, p. 210). The study also showed that every month 6.2 million Twitter accounts were created (Numberof.net 2011).

**LinkedIn.** LinkedIn is a social networking site, adapted from Facebook, for professional networking. Resumes, goals, experience, summary of qualifications, and customized profiles can be shared, allowing professionals seeking employment to network. “LinkedIn represents a valuable demographic for marketers with an affluent & influential membership. As of August 4, 2011, LinkedIn operates the world’s largest professional network on the Internet with more than 120 million members in over 200 countries and territories” (LinkedIn.com, 2011). In terms of relevance to the emergency preparedness and disaster response communities, LinkedIn has been

used as a collaborative platform for discussion among various health risk assessment organizations. A quick search of similar terms including, “public health,” and “emergency preparedness,” will provide group and discussion forum results on the LinkedIn website.

**YouTube.** YouTube, created in 2005, is currently the largest worldwide video sharing community. YouTube allows its users to create customized channels for personal or organizational use. In October 2009, just four years after its start, YouTube reached one billion views a day (Schroeder, 2009). During the 2009 H1N1 Influenza Pandemic, YouTube’s primary role as an entertainment and music medium shifted to that of a source of H1N1 flu-related information. One study conducted an analysis of 142 H1N1 related YouTube videos and found that while the Center for Disease Control’s videos were found to most credible, 61.3% generated videos were found to useful and has, “an increasing proportion as a course of authentic information about the disease (Pandey et al., 2010, p.1).

Each of the previously described social network websites share the same objectives for businesses and organizations: brand exposure and presence, connecting to and learning about target audiences, building buzz around a brand, topic, cause, or event, driving conversation, and establishing trust and credibility for a business.

### **Growth & Advancement of Social Networks**

Researchers Urista, Dong, and Day (2008) explored young adults’ usage of two social networks, MySpace and Facebook, through a Uses and Gratification Approach. Based upon focus groups, the researchers proposed that, “individuals use social-networking sites to experience selective, efficient and immediate connection with others for their (mediated) interpersonal communication satisfaction. This theory displayed the powerful influence of social networking on its users.” (p. 216). This study discussed how MySpace and Facebook users

experienced gratification in greater frequency and sooner when compared to delayed media such as, television, radio and movies. The researchers note that, “social networks have become a central component of many users lives for the simple reason that members desire to engage in forms of interaction online” (p.217). The results suggest that an immediacy driven tendency motivates young people to use social networks.

Bulmer and DiMauro (2009) synthesized current research into the Executive Summary from the Society for New Communications Research Study, “The New Symbiosis of Professional Networks: Social Media’s Impact on Business and Decision-Making.” Their summary discusses the large shift from traditional marketing strategies to social media and integrated social marketing platforms. The author’s examined social media to the extent which is functioned as a trusted source, the social media tools professionals rely on to make decisions and the resulting changes in best practices from the addition of new media to a businesses’ marketing strategy. Their research supports new tenets regarding social media that validates social media as a valid resource and effective tool in creating relationships internally and externally of a business.

In the study, “Social Media in the Inc. 500: The First Longitudinal Study,” Barnes, Ganim and Mattson (2008) conducted the first statistically significant examination on corporations’ usage of social media. The study examined the “Inc 500,” which comprised the fastest growing companies in the United States. The research showed that when companies became familiar with social media tools and began to implement them, the belief of importance and relevance of social media as a tool grew.

Borreman (2010) discusses, in his article, “Ready for Anything,” how social media tools can and should be utilized in preparation, during, or after a crisis has occurred. This article

describes the use of linking social media platforms and RSS feeds (e-mail alerts) as a way to disseminate critical information to a target audience in the time of a crisis. Boreman discusses how implementing social media strategies for a company, prior to a crisis, is critical in keeping communication channels readily available to target populations. This study provides implications for how emergency preparedness and risk assessment centers can utilize social media as an effective tool in communicating with their given target markets and communities.

Gossieaux and Moran (2010), in their special report entitled, "The Return of the Hyper-Social Organization" discussed how social media can help business leaders and owners embrace the "human," or relational side of their businesses. Businesses that utilize social media realize that the reciprocity aspect creates a two-way communication channel between the business and its target. This article discusses that success is found when a business takes every business process and turns it onto a social conversation.

In the report, "Blogs, Tweets, Social Media and the News Business," Robert Picard (2009) discusses social media's implications for journalism. The article evaluates the level of social media's effectiveness for an organization by asking the following questions: Is each social media tool useful? What are the real costs in staff time and the operating costs to be on the various platforms? What is actually achieved for the new organization? Should all platforms be used? The writer goes on to determine that measurable goals and an in-depth understanding the benefits of the tools must be known for success. Picard's study provides a framework and questions for evaluation the strength and effectiveness of social media as a communication tool for an organization.

The current status of social media is proving to be more than just a "social experience." "As social media becomes part of our cultural fabric, social media is influencing behavior, and

nothing is more important than influencing decisions and ultimately behavior. Social media is more about people connecting and interacting, the result of those digital conversations” (Solis, 2011). Social media is clearly not a flash pan trend.

### **Web-based Social Media**

The Center for Disease and Control Prevention, one of the major operating components of the Department of Health and Human Services, states that its mission is to collaborate to create the expertise, information, and tools that people and communities needs to protect their health-through health promotion, prevention of disease, injury and disability, and preparedness for new health threats. (Centers for Disease Control and Prevention, 2010, p.1).

On October 21, 2010, the CDC released, “The Health Communicator’s Social Media Toolkit” to provide a framework and tips on implementing a social media tactics in a public health entities communication strategy. The Health Communicator’s Social Media Toolkit provides an overview of CDC’s experience with more than a dozen types of social media tools. Ann Alkin, CDC’s social media team leader, stated, “providing information in multiple formats, such as through widgets and Twitter actually increases trust among our customers” (Beizer, 2010, p. 1). With the CDC being one of the top opinion leaders and policy shapers in the field of public health, it is imperative that public health entities seeking to develop and implement social media strategies look to the CDC for direction.

In the article, “Updating Public Health Teaching Methods in the Era of Social Media, “ Kapp et al., describe the value and necessity for new social media tools in both the public health workforce and target markets. The article focuses on how web-based information technologies, like social media, enrich public health practice through the accelerated dissemination of health promotion and disease infection (Kapp et al., 2009). The researchers also cite the Center for



Disease Control's (CDC) and World Health Organization's usage of social media tools to communicate the spread of the H1N1 Virus. World Health Organization's (WHO) used Twitter during the Influenza A (H1N1) outbreak to communicate with 11,700 Twitter followers (McNab, 2009). Social media create the opportunity for health professionals to explore, listen and engage more effectively through new media tools via the Internet. With the rate of Internet use in developing countries continuing to grow, the resulting benefits of quick and effective dialogue via social networks creates the opportunity for health professionals to explore, listen and engage with target audiences (McNab, 2009).

The American Red Cross, an organization which is purposed for helping domestic communities in the events of a natural or manmade disaster, is important public health opinion leader, recognized that the power of social media and connecting with audiences is essential conveying information during an epidemic, outbreak or emergency (American Red Cross, 2011). Similarly, Currie (2009) discusses how The Red Cross integrates social media into its internal employees' daily lives in hopes of a residual effect onto their external media strategies. More specifically, blogs and YouTube videos are being integrated into the public health marketing mix. "Stanford University Hospital has devoted its social media instituting a SCOPE blog called, 'Ask a Stanford Cardiologist.'" The blog and its corresponding YouTube channel allow Stanford doctors and employees to discuss general health interests and topics" (Gevertz & Greenwood, 2010, p. 36). A successful and integrated social media strategy also relies upon the internal knowledge and skills of the public health workforce. The public health workforce must not only be knowledgeable about new social media tools but must be well versed in using and integrating the tools (Kapp et al., 2009).

Bennet, in his article, “Social Media and Hospitals: From Trendy to Essential,” discusses social media’s shift from trendy to essential by focusing on how hospitals are using the most well-known social media services (Facebook, Twitter, YouTube, and discussion forums). “Twitter usage in hospitals spiked from 19 hospitals in May 2008 to 157 hospitals in January 2009. By August 2010, 634 hospitals began to use Twitter and 630 hospitals utilized at least one Facebook account” (Bennett, 2011, p. 43). This article predicts that the implications for social networking in hospitals will be quite pronounced by the year 2016.

Practitioners predict that health care providers will communicate with patients electronically and those organizations that do not will receive lower ratings. Hospitals will need to train clinicians on how to employ social media. It is predicted that by 2016, three out of every four hospital job positions will be filled via social network recruiting (p. 45). Healthcare organizations will need to adopt social media for private, confidential and internal use to maintain a dialogue among professionals on hot topics in the field. Facebook and Twitter will be specifically utilized to educate the community through health literacy campaigns and to learn about patient preferences (Bennett, 2011).

Bennett also specifically outlines emerging trends and applications. Bennett predicts that Facebook and Twitter will continue to grow and be solidified as common communication (Bennett, 2011). The routine employee communication network, Yammer will most likely be adopted across the board in hospitals if not already utilized. Healthcare consumers will reach out to social networks and opinion leader in their information seeking process. “As the e-patient movement grows, consumers will come to hospitals better prepared with questions and expecting clear, direct answer” (p. 47). The Uses and Gratification approach for healthcare organizations is a two-way exchange: hospitals will use the media that satisfy their organizations goals and

consumers will utilize the media that satisfy individual needs for health care information, response, and patient care.

Evans-Lacko and his London-based team conducted an exploratory research entitled, “Evaluation of a Brief Anti-Stigma Campaign in Cambridge: Do Short-Term Campaigns Work,” which sought to determine whether a public health focused, mass media campaign could have a measureable impact on a significant population over a short period of time (Evans-Lacko et al., 2010). The study focused on a 2009, Cambridge, London based campaign entitled, “Time to Change,” which sought to positively influence stigma and discrimination surrounding mental illness. The researchers conducted 410 face-to-face interviews before, during and post campaign activity, to assess campaign awareness. The researchers found that while campaign awareness was not persistent following the campaign’s activity, large shifts occurred in the population’s knowledge of health related terminology (Evans-Lacko, 2010). While this study focuses on mental-health awareness knowledge, its conclusions provide implications for similar research on, aiming to influence outcomes pertaining to knowledge in the short term, planning realistic and targeted outcomes over the short, medium and long term during sustained campaigns; and monitoring indirect campaign effects such as social discourse or other social networking in the evaluation.

### **Social Media via Mobile Technology**

“During the height of a disaster, often one of the first pieces of infrastructure to go down is electricity. Through the use of social media via mobile technology, emergency managers can quickly disseminate information through mobile applications working through 3G, 4G and cellular systems” (Smith et al., 2012; Heighington, 2011). According to Parks and Associates, there will be 1 billion smartphone users by 2014 (Gaudiosi, 2010). An increase in Americans

accessing social networks via handheld mobile devices has, in turn, encouraged the use of social media. Smart phones, or phones that allow web access and application uses, coupled with instant access to social networks have created a new climate for both emergency management and non-emergency management communities to interact” (Smith et al., 2012). As the adoption and usage of smart phones with these capabilities increases, so will the usage of social media for second-by-second coverage of events, emergency and non-public health emergency, as acquired through Facebook posts, tweets on Twitter, YouTube videos, or pictures taken with smart phones (Smith et al., 2012).

Craig Lefebvre (2011) discusses implications of mobile technology for the field of public health. “The use of mobile phones offers public health offers professionals the opportunity to develop and expand their relationships with others (whether patients, audiences, users, constituents, partners, or colleagues)” (Lefebvre, 20011, p. 493). Lefebvre cites that more than three billion people in the world have a mobile telephone and describes the key feature of mobile technology being the allowance of a two-way dialogue. Lefebvre discusses the exciting opportunities of mobile phones for public health, including the use of technology to overcome many psychological and social barriers (costs) people have to engaging in new behaviors; these mobile applications provide social support. One example cited is the San Francisco project, SEXINFO, which targeted 15-to-19 year old African-American Youth. This opt-in-text messaging service provided sexual health and relationship information (p. 293).

The American Physical Therapy Association cites the use of smartphone applications as the new hot topic among healthcare professionals. “There is a sharp increase in consumer use of smartphones (primarily the iPhone) for health-related applications and application use among physicians” (PT Magazine, 2009, p. 33). In addition to this, the Centers for Disease Control and

Prevention (CDC) has created a mobile communication division devoted to disseminating health information and pandemic updates along with sponsoring social media resources such as a text messaging update service and a Twitter account” (Gevertz & Greenwood, 2010, p. 28). The option of integrated social media platforms via mobile technology allows simultaneous Twitter, text-messaging and social network updates to be received and shared.

L.C. Abrams and R.C. Lefebvre (2009) cite lessons for public health campaigning based upon the Obama’s utilization of social media in the 2008 Presidential Election. “Basically, with new media, the Obama campaign was better able to realize the health communication adage that it is best to reach people multiple times, from multiple sources and in multiple settings” (p. 419). By altering message sources (shifting from traditional television and radio to social networks) people were not only sharing content created by the Obama campaign but generating their own in the form of blogs, Facebook postings, YouTube videos, or emails. The takeaway lessons from the campaign are the following:

Consider new media as part of a comprehensive media mix; Encourage horizontal (i.e., peer-to-peer and social network) communications of campaign messages as social influence; Embrace user-generated messages and content, especially in the case where top-down campaign messages are straightforward and translatable to the public; Use small acts of engagement. (p. 420)

Mobile applications and social networking via smartphones will continue to rise. This aspect of social networking must be carefully planned for and incorporate into the social marketing mix of public health entities and opinion leaders (i.e., World Health Organization, The Centers for Disease and Control Prevention, The American Red Cross).

**Conclusion**

With social media being a new and rapidly growing aspect of the public health communication field, there has not yet been a case study examining a public health organization's chronological implementation of social media into the organizations existing communication strategy. As public health organizations and risk assessment center develop and tailor their communication strategies for social media savvy target audiences, it will be important to understand why audiences are using their specific chosen media to achieve needs and goals. Public health organizations will need to leverage their own organizational needs with those of the target by developing a social media strategy that will create a two-way dialogue that encourages user-generated content and participation that will gratify both organization and individual. The link between internal employee social media usage and gratification and the overall external social media strategy of the organization should be assessed to determine how internal employee perspectives on social media both fulfills organizational foals and shapes the dissemination of information (via social media) to targeted audiences.

## CHAPTER 2 - METHODOLOGY

This chapter is divided into four sections. The first section states the purpose and significance of the phenomenon of interest. The second section describes the research design and framework to assess and evaluate the collected data. The third section outlines the data collection strategy and specifies the study's participants, and survey tool. The fourth section discusses validation strategies and ethical considerations.

As previously discussed in the review of the literature, the objectives of Uses and Gratification theory are to determine how individuals use mass media to satisfy needs and wants and why individuals choose the specific media to satisfy and fulfill desires. As established by the research of Lazarsfeld (1940), Katz & Blumler (1973) and Rosengren (1974), Uses and Gratification theory applies a mixed method approach by utilizing both quantitative and qualitative research methods through the use of questionnaires measuring media usage and motivation on Likert scales, ratings, and discussion of media usage and patterns.

The preceding literature review (chapter 2) provides a background to identifying the significance of new media tools and social networks, while also determining the current, existing gaps in social media and public health research. Sufficient research is provided in the literature review illustrating situations and organizations, such as World Health Organization (WHO), The Centers for Disease Control and Prevention (CDC), and The American Red Cross, which engage in digital conversations via social media and social networking tools. The literature suggests that while many leading public health organizations are beginning to incorporate social media tools into communication strategies, there is a lack of streamlined social media best practices and training procedures among these organizations.

## **Purpose and Significance**

The purpose of this case study is to take an in-depth look at how emergency preparedness and disaster response managers use and experience gratification concerning social media for personal and organizational usage. This study will employ a case study approach and will examine one specific emergency preparedness and disaster response organization's internal employees' uses and gratifications regarding social media on a personal level and in the context of their positions of the organizations to reach their target market, and successfully communicate the organization's products and services. The link between internal employee social media usage and gratification, and the overall social media strategy employed by The Yale New Haven Health Center for Emergency Preparedness and Disaster Response/ Yale New Haven Health System's Center for Healthcare Solutions (YNH-CEPDR/YNHHS-CHS) to reach target markets will be assessed to determine how internal employee perspective on new media shapes the dissemination of information (via social media).

This case study will specifically examine and assess YNH-CEPDR/YNHHS-CHS' integration of social media to communicate products and services to selected target audiences. YNH-CEPDR/YNHHS-CHS was specifically chosen as the focus of this case study due to its status as a designated Center for Public Health Preparedness by the Center for Disease Control and Prevention. YNH-CEPDR/CHS has partnered with various leading national and international public health organizations including the American Medical Association, The Joint Commission, U.S. Department of Health and Human Services, U.S. Department of Defense and the Pan American Health Organization (Yale New Haven Health, 2010).

Developed as a result of the September 11, 2001, terrorist attacks, the Yale New Haven Center for Emergency Preparedness and Disaster Response (YNH-



CEPDR) operates around a mission to reduce loss of life, injury and illness by developing and delivering services across the nation and around the world that advance healthcare planning, preparedness, response and recovery” (Yale New Haven Health, 2010).

YNH-CEPDR/CHS is a nonprofit organization under the Yale New Haven Health System and currently has 35 employees and assists organizations through assessments, planning, drills and exercises and education and training in order to combat the challenges that public health and emergency management organizations must address when faced with natural disasters, accidents, hazardous material incidents, severe weather, pandemic influenza or mass casualty events (Yale New Haven Health, 2010). YNH-CEPDR/CHS’ vision is to be recognized as a leader in the field of emergency management for public health emergencies and disaster at a local, national and international level (YNH-CEPDR, n.d., p.1). YNH-CEPDR/CHS is involved in numerous areas of emergency preparedness and disaster management. Accordingly, YNH-CEPDR/CHS designs, develops, publishes, and administers programs and services in the areas of healthcare emergency preparedness, response, and resiliency; healthcare emergency management; medical and public health preparedness; and business continuity planning (YNH-CEPDR, 2011).

### **Research Design**

Zucker (2009) defines case study research based on Bromley’s (1990) working definition. Bromley states that a case study is, “a systematic inquiry into an event or a set of related events which aims to describe and explain a phenomenon of interest” (Bromley, 1990, p. 302). This research analysis will be classified as a quasi-experimental case study, because it will inquire about specific strategies and focus on a convenience sample of participants from a specific organization.

The researcher has created a four-phased approach for conducting this case study. The phases of the study are: Phase One- Environment Assessment (Literature Review); Phase Two – Organizational Content Analysis; Phase Three- Employee Assessment (Survey Tool); and Phase Four - Results and Recommendations. Phase One conducts an extensive analysis of the environment at large, including existing new media and its usage, social networks, and the public health community's employment of new media tools.

Phase Two will entail an organizational content analysis of which social media tools and networks YNH-CEPDR/CHS is currently employing as an organization. A brief description of involvement of each social media tool YNH-CEPDR/CHS is using to market its products and services will be outlined in the Chapter 3- Results.

Phase Three will entail a comprehensive evaluation of how YNH-CEPDR/CHS employees use and perceive social media tools for both personal and job usage contexts. In this phase, the researcher will utilize a survey tool purpose to determine YNH-CEPDR/CHS is marketing their products and services. A detailed description of the YNH-CEPDR/CHS' products and services (Assessments, Planning, Education & Training, and Drills & Exercises) is provided in Appendix One. Phase Three is the data collection phase employing the online survey tool, through SurveyMonkey.com, to ascertain employees' attitudes and beliefs of social media tools for personal use, and also in the context of their roles as employees. Employees will describe which social media tools they use in personal and job contexts. The survey will also seek to determine if any relationships may exist between the tools with which the employees believe would be most valuable to the organization, and the tools that are actually being used to market the products and services of the organization at large.

Phase Four will analyze data acquired from the organizational content analysis (Phase Two) and employee surveys responses (Phase Three). Phase Four will conduct a comparative analysis of the electronic survey results and the findings of the organizational social media and marketing strategy content analysis. The findings of Phase Four will comprise Chapter 5- Recommendations. Chapter 5 will outline a five step process to enhancing social media usage: Step 1- Determining Your Social Media Strategy; Step 2- Implementation a Social Media Strategy; Step 3- Branding; Step 4- Increasing Engagement; Step 5- Measuring Results of Social Media Analytics. Specific tactics for Twitter, Facebook, LinkedIn and YouTube will also be provided in this final chapter.

### **Participants**

The sample for this study will be selected from Yale New Haven Center for Emergency Preparedness and Disaster Response (YNH-CEPDR)/ Yale New Have Health System Center for Healthcare Solutions (YNHHS-CHS) in New Haven, Connecticut. The participants involved in this research study will be mid-level and senior-level employees of YNH-CEPDR/YNHHS-CHS. The type of sample used for this study will be a non-random, purposive, sample, as the researcher will be focusing on a specific, targeted group participants and will be relying on employees to volunteer in their participation of the study. The sample will be taken, gathering information from approximately twenty employees of YNH-CEPRD/YNHHS-CHS. The criteria for selecting the participants includes: 1) employee of YNH-CEPDR/YNHHS-CHS for at least 1 year; and 2) those who are 18 years or older.

### **Data Collection**

The use of surveys for data collection in research possesses both potential positive and negative outcomes. For this case study, the researcher believes that the benefits of a survey will

outweigh any negative outcomes. This case study will use an online survey instrument. Due to the fact that the face-to-face communicative interaction is removed from online surveys, there are potential challenges regarding response rates from participants. Sparrow (2007) conducted research examining the differences in participant motivating in online polls and surveys in two separate studies on, “large scale authoritative research studies conducted in the United Kingdom, such as the British Crime Survey and the British Social Attitudes Survey” (p. 179). Sparrow outlines the cost-effective and timely method of online surveys to generate data and elicit responses from participants. However, Sparrow also points out that quality control can be difficult to monitor due to some participants underlying monetary based motives for participating in online surveys and polls (p.179). Order of questions, question format, and layout of the survey should be aesthetically pleasing; therefore, to elicit meaningful responses from participants (p.182). Sparrow determines that participants must be made aware that quality control procedures will be established.

Evans and Mathur (2005) discuss similar benefits to using an online survey website to conduct research. The researchers note that the use of the Internet and online surveys are beneficial in eliciting responses from respondents living in differing geographic regions in the country (p.197). Online surveys also allow for speed and timeliness in the completion of the surveys. The collection and data analysis timeframe is much shorter in comparison to traditional, paper and self-distributed surveys. Another benefit is the allowance for question diversity. Online surveys, including the SurveyMonkey.com survey that will be administered for this study, “capable of including dichotomous questions, multiple-choice questions, scales, questions in a multimedia format, both single-response and multiple-response questions, and even open-ended questions” (p.199).

While many benefits to online survey uses exist, Evans and Mathur identify the major potential weaknesses that exist. The potential for the survey, or email request to participate, can be perceived as junk mail. A lack of understanding or experience in online experiences may exist, unbeknownst to the researcher when employing a random, convenience sample. Question and instruction ambiguity and the impersonal nature of an online survey also pose as threats to validity in when using an online survey (p. 200-202).

The survey for this case study will be administered electronically through SurveyMonkey.com, which will collect and group all survey results. The survey will contain six demographic questions, sixteen multiple-choice question, two scale measure questions and one essay question. The survey will also include a Personal Involvement Inventory Scale. Zaichkowsky (1985) defined involvement as, “the perceived relevance of an object based on how well a product or service ‘taps-into’ the inherent needs, values, and interests of consumers.” The Personal Involvement Inventory (PII) scale was originally developed to capture the “concept of involvement for products” (Zaichkowsky, 1985). This scale measures twenty items on a semantic differential scale to measure involvement in a product, or in this case study, social medium. The specific results of each participant will not be associated with the participant, providing anonymity. The participants will be asked to electronically sign the informed consent form (to be developed) in order to participate in the survey and study. Participation in this case study will be voluntary.

Again, the researcher believes that the benefits of using an online survey will outweigh any of the previously described, negative outcomes. The following are the research questions for this study:

**RQ1.** (1A) Is YNH-CEPDR/CHS - as an organization - currently employing new social media strategies?; (1B) Do CEPDR/CHS employees use social media in the context of their positions in the organization?

**RQ2.** Do YNH-CEPDR/CHS employees use social media tools for personal use?

**RQ3.** Is there a relationship between the tools which YNH-CEPDR/CHS employees' use on a personal level and the tools with which the organization uses to promote their capabilities/products and services?

**RQ4.** Is there a relationship between the tools that YNH-CEPDR/CHS employees believe would be most valuable and the tools that are being used by the organization?

### **Ethical Considerations**

All of the participants in this case study will be treated in accordance to the ethical guidelines of the American Psychological Association (APA) and the Liberty University Institutional Review Board (IRB). All interaction with participants, via email and through the online survey instrument will be handled within accordance of the IRB's regulations and standards for ethical research. The Liberty University IRB will be made aware of any potential risks to participants in their involvement of the study. The IRB will review all aspects of the study from its purpose, research design, and methodology.

In compliance and adherence with the IRB's ethical standards, the researchers will send an email, outlining and explaining the study's purpose, methods and potential risks to the participants. The direct link to the SurveyMonkey instrument will be provided at the conclusion of the explanatory portion of the email. Proof of the participants' consent will be obtained through their choice to click on the link and complete the survey. If participants decline to participate they will be instructed to disregard the email and survey link.

**Validity**

In order to ensure validity, all participants will be administered the same survey. Identical question format, order, and wording will be used in the online surveys administered. All terms will be defined, using descriptive and concrete terms. Another way that validity will be observed in this study is through use of a peer reviewer to increase the potential for researcher bias.

In order to decrease any likelihood, the researcher has selected a reliable online survey website to employ the survey tool. SurveyMonkey utilizes some of the most advanced technology for Internet security commercially available today. SurveyMonkey requires users to create a unique user name and password that must be entered each time a user logs on. SurveyMonkey issues a session "cookie" only to record encrypted authentication information for the duration of a specific session. The session cookie does not include either the username or password of the user. When a user accesses secured areas of our site, Secure Sockets Layer (SSL) technology protects user information using both server authentication and data encryption, ensuring that user data is safe, secure, and available only to authorized persons. This SSL layer ensures the secured of the participants' responses, as well as login passwords (Surveymonkey.com, 2011).

**Summary**

The researcher has given a detailed summary of the methodology by discussing the purpose and significance of the phenomenon of interest, the research design data collection strategy and data analysis methods, validation strategies and ethical considerations. This case study will be conducted using a four-phased qualitative methodological approach to assess YNH-CEPDR/CHS' integration of new and social media to communicate products and services to

selected target audiences. The phases of the study are: Phase One - Environment Assessment (Literature Review), Phase Two – Organizational Content Analysis, Phase Three - Organizational and Employee Assessment, and Phase Four - Results and Recommendations. As discussed, this case study will attempt to examine and identify potential connections between internal employee social media usage and gratification and the overall external social media strategy of the organization will be assessed to determine how internal employee perspective on new media shapes the dissemination of information (via social media) to targeted audiences. Chapter four will discuss and summarize the researcher’s findings and analysis of the data collected.



### CHAPTER 3 - RESULTS

The purpose of this case study was to assess and evaluate the relationship between an individual public health risk and assessment center's utilization of social media and its internal employees' personal attitudes, beliefs, and usage of social media tools. The link between employees' personal uses and gratification of social media tools and the overall organizational social media usage and strategy of YNH-CEPDR/CHS was assessed to determine how internal employee perspective on social media shapes the dissemination of information (via social media) to target audiences. More specifically, the researcher focused on the social media tools, Facebook, Twitter, LinkedIn and YouTube.

A total of 34 employees engaged in the survey tool. Survey participants that have been employed for three to five years accounted for (44.4%) of the respondents; one to three years (14.8%); five to eight years (25.9 %); and nine or more years (14.8%), and seven participants chose to skip this question. Eleven female participants (42.3%) and fifteen males (57.7%) responded; eight participants chose not to respond to this question. The ages of the participants included 21-34 years of age (4; 15.4%), 34-44 (5; 19.2%), 45-54 (8; 30.8%), and 55-64 (8; 20.8%); eight participants chose not to answer this question. From the twenty-five participants which chose to disclose race/ethnicity information, twenty-four (92.3%) identified themselves as White/Caucasian, one (3.8%) identified as American Indian/Native American, and one (3.8%) identified themselves as Asian.

In terms of education, eleven (40.7%) of the participants have completed a master's degree, three (11.1%) hold a doctorate degree, two (7.4%) completed some graduate work, five (18.5%) have a four-year college degree, four (14.8%) completed some of college, but did not

finish, and two (7.4%) completed high school. Based on the professional background options provided, six (22.4%) selected Public Health Practitioner, four (14.3%) selected Nurse, three (10.7%) chose Administrator. Sixteen respondents (57.1%) also provided the following alternate positions with which they have primary, or background, experience working in: Paramedic, Sales/Marketing, Emergency Manager, Design/Technical, Research and Development Scientist, Emergency Services, Interactive Designer for the web with multi-media, Project Manager, Administration, and Manager.

### **Organizational Content Analysis**

The researcher could not determine the existence of the following types of social media pages for YNH-CEPDR/CHS: Facebook, Twitter, LinkedIn or YouTube. While the larger Yale New Haven Health System employs these types of pages, there were no specific pages for YNH-CEPDR/CHS as an individual organization. While no Company Page on LinkedIn exists for YNH-CEPDR/CHS, many employees list the organization as the primary employer on individual profiles on the site. At the time of research, YNH-CEPDR/CHS employed a website with links to email contact and podcasts. A podcast delivers links to downloadable audio content. Podcasts can be considered social media because while the user is primarily a consumer of the media, many podcasts allow users to comment on the podcast; therefore allowing interactivity with media and categorizing it as “social” media. The only way this can be social if there is an opportunity to provide a means for users, or listeners, to engage and interact with the content. YNH-CEPDR/CHS’ podcasts provide the option for listeners to subscribe to and listen to podcasts, but do not attach a comment or interaction area to each podcast. The researcher for this case study did not study this type of social medium; however, it is important to note the existence and usage of podcasts by YNH-CEPDR/CHS.

**Frequency of Usage for Clientele**

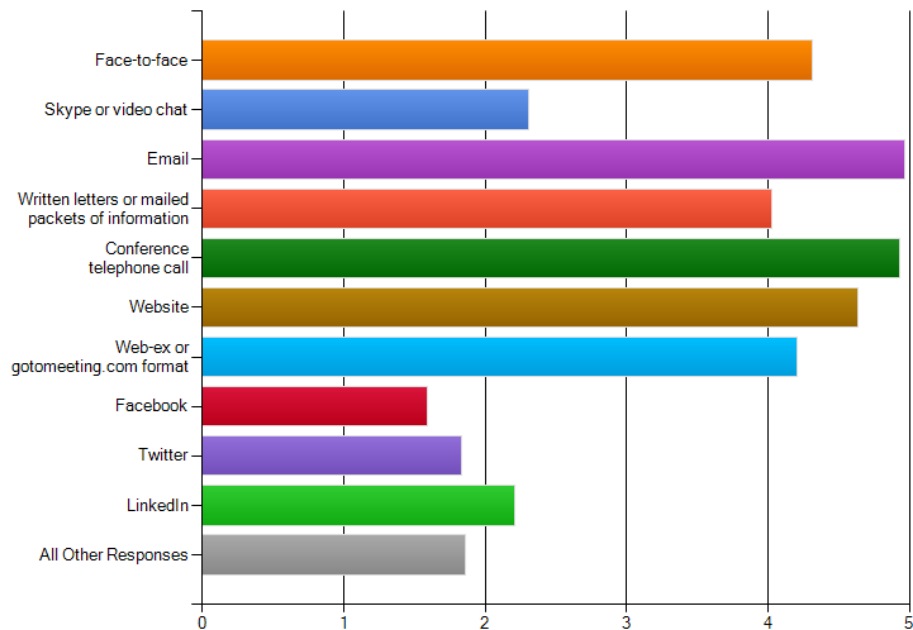
Participants reported frequency of usage regarding various mass and social media venues in relation to CEPDR/CHS’ communication of its products and services to potential clientele. For this personal involvement inventory scale, participants rated the various media on a five point Likert scale.

“Never” “Seldom” “Uncertain” “Occasionally” “Frequently”

1 2 3 4 5

The mass and social media venues provided for participants to response to were: Face-to-Face communication, Skype or video chat, Email, Written letters or mailed packets of information, Conference telephone call, Website, Web-ex or gotomeeting.com format, Facebook, Twitter, LinkedIn, and YouTube.

**Based on your opinion, please rate the frequency of usage for the media venues that CEPDR/CHS uses most to communicate it products and services to potential clientele:**



For Face-to-Face communication venues, two (10.5%) respondents chose “Seldom,” four (21.1%) chose “Occasionally,” and thirteen (68.4%) chose “Frequently.” For Skype or video chat, four (21.1%) chose “Never,” six (31.6%), and four (21.1%) responded as “Uncertain.” For Email, eighteen (94.7%) selected “Frequently,” one (5.3%) chose “Occasionally,” and eighteen (94.7%) responded as “Frequently.” For Written letters of mailed packets of information, eight (42.1%) responded as “Frequently,” six (31.6%) selected “Occasionally,” four (21.1%) chose “Uncertain,” and one (5.3%) selected “Seldom.” The use of Conference telephone calls for promoting products and services was selected by seventeen (89.5%) of participants as being used “Frequently,” and two (10.5%) responded as using conference calling “Occasionally.”

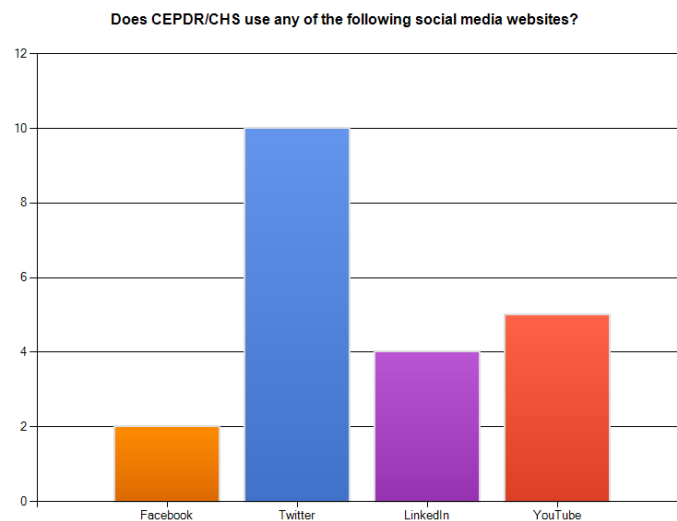
Participants reported using the CEPDR/CHS website (13; 72.2%) and a Web-ex or gotomeeting.com format (8; 44.4%) “Frequently.” In terms of social media venues for communicating YNH-CEPDR/CHS’ products and services to potential clientele, thirteen (68.4%) selected “Never” using Facebook and six (31.6%) were “Uncertain” whether they use Facebook for this purpose. Most participants (11; 57.9%) reported “Never” using Twitter for communicating products and services to clientele; five (27.6%) reported “Uncertain,” five (27.6%) chose “Occasionally,” and one (5.3%) responded as “Seldom.” Regarding LinkedIn, seven (38.9%) of participants reported “Never” using it for promoting CEPDR/CHS’ products and services; five (27.8%) conveyed “Occasionally” using it, and five (27.8%) stated they are “Uncertain” as to whether YNH-CEPDR/CHS uses LinkedIn for this purpose. For the social media venue of YouTube, eleven (61.1%) reported that YNH-CEPDR/CHS never uses it, six (33.3%) participants responded to being “Uncertain,” and one (5.6%) stated that CEPDR/CHS uses to “Occasionally” communicate its products and services.

## Accessing Social Media

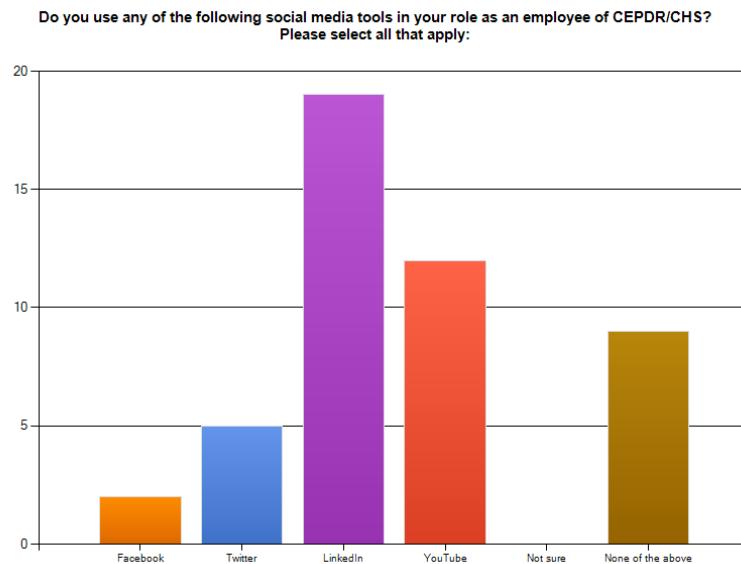
Participants were asked how they access social media. A total of 34 participants answered this question. A total of 34 participants answered that they accessed social media from a personal computer (91.2%) or a smartphone (17 participants; 81%). Eight participants (38.1%) responded to accessing social media from an iPad.

## Research Questions Answered

**RQ 1:** (1A) Is YNH-CEPDR/CHS—as an organization--currently employing new social media strategies?; (1B) Do YNH-CEPDR/CHS employees use social media in the context of their positions in the organization? Results for RQ1 (A) revealed that 77.8% of participants reported that YNH-CEPDR/CHS is using Twitter; however, at the time of the survey, YNH-CEPDR/CHS was not actively employing a Twitter or a Facebook page. When asked how often Twitter was used in YNH-CEPDR/CHS employees' organizational roles, eleven participants (61.1%) responded to “never” using Twitter in their job. Results for RQ (1B) reflected that most participants use LinkedIn and YouTube in the context of their organizational roles at YNH-CEPDR/CHS. YNH-CEPDR does currently employ a YouTube channel and a LinkedIn profile.

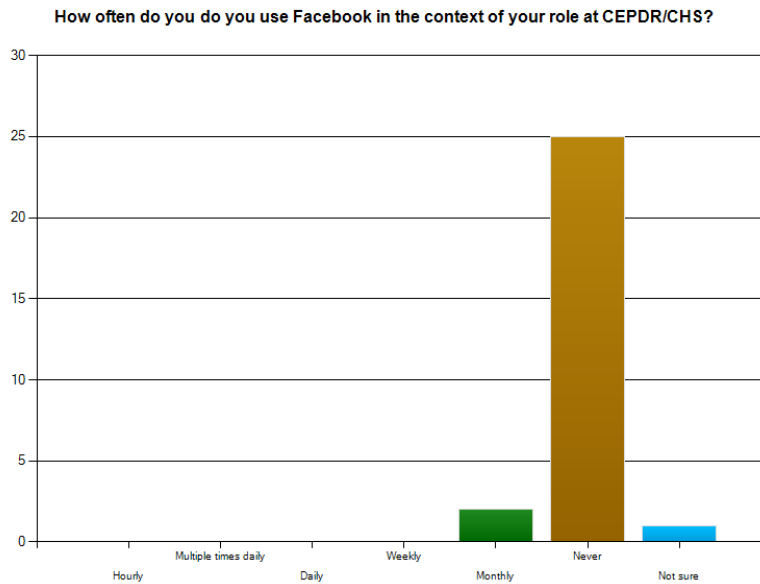


Participants were asked whether YNH-CEPDR/CHS uses the following social media websites: Facebook, Twitter, LinkedIn, and YouTube. While ten (66.7%) of respondents reported Twitter usage, five (33.3%) selected YouTube, four (26.7%) reported LinkedIn, and two (13.3%) participant reported that the organization uses Facebook, several participant provided counter information in the “Other” answer option. One participant stated, “I can’t answer that question.” Another participant reported the organization not remaining updated with “the times,” and stated that periodic posting of an individual video on YouTube does not constitute as “usage or “dissemination.” Another participant described how “None” of the social media websites are used and that; most are “Access Denied.”

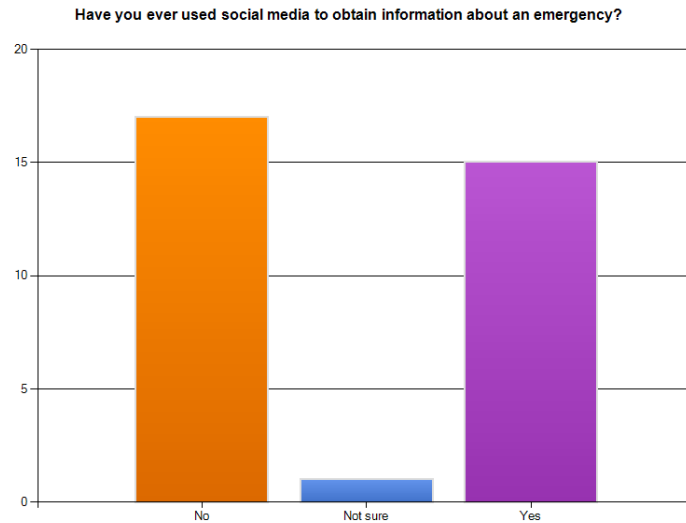


Participants were asked if they engaged in Facebook, Twitter, LinkedIn, or YouTube in their role as an employee of YNH-CEPDR/CHS. Most (19; 57.6%) reported to using LinkedIn, twelve use YouTube (36.4%), and two (6.1%) use Facebook. Nine participants (27.3%) reported

to using “none” of the provided social media options, and one participant reported, “Email” for the “Other” answer option.



Most participants (25; 89.3%) reported “Never,” while two (7.%) reported monthly usage and one (3.6%) reported “Not sure” as to how often her or she uses Facebook in the context of their roles at CEPDR/CHS. Concerning Twitter, eighteen (66.7%) reported “Never,” five (18.5%) reported using Twitter “Monthly,” one (3.7%) reported “Multiple Times Daily,” one (3.7%) reported “Daily,” and two (7.4%) responded as “Not sure” to using Twitter in the context of employee duties. LinkedIn usage responses varied more with ten (35.7%) reporting “Weekly” usage, five (17.9) “Monthly,” eight (28.6%) reported “Never,” three (10.7%) reported “Daily,” and two (7.1%) responded as being “Not sure.” Regarding YouTube usage in the context of employee roles at CEPDR/CHS, eighteen (64.3%) responded as “Never” using YouTube, four (14.3%) were “Not sure,” three (10.7%) reported “Weekly,” and three (10.7%) reported to engaging in YouTube for job in the context of his/her employee role “Monthly.”



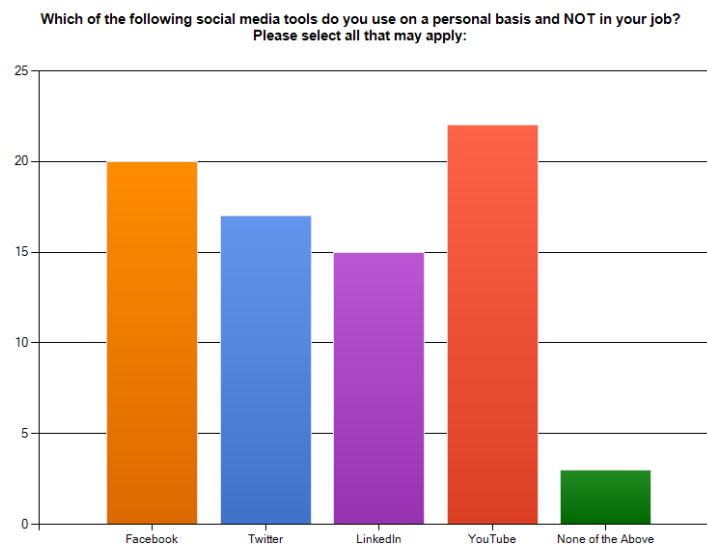
When the participants were asked if they had ever used social media to obtain information during an emergency, seventeen (51.5%) reported “No,” fifteen (45.5%) reported “Yes,” and one (3.0%) responded as being “Not sure.” Thirteen of the fifteen who reported “Yes” to having previously engaged in social media to obtain emergency related information provided the following descriptions: “Power outage information from Facebook friends,” “Power outages in Connecticut with [Hurricane] Irene,” “TS (tropical storm) Irene,” “Monitoring Pandemic Flu and severe weather events,” “Facebook post on various natural disasters around the world,” “During the earthquake in August 2011; during Hurricane/Tropical Storm Irene in August 2011 and during Winter Storm Alfred in October/November 2011,” “Twitter feeds,” “Facebook, LinkedIn to contact friends in the area,” “Get updates on the situation,” and “Twitter in Hurricane Irene.”

One participant provided a more detailed description of his/her use of social media during a specific emergency: “I repeatedly checked Twitter for updates about Hurricane Irene. Emergency management agencies along the East Coast provided timely and accurate information

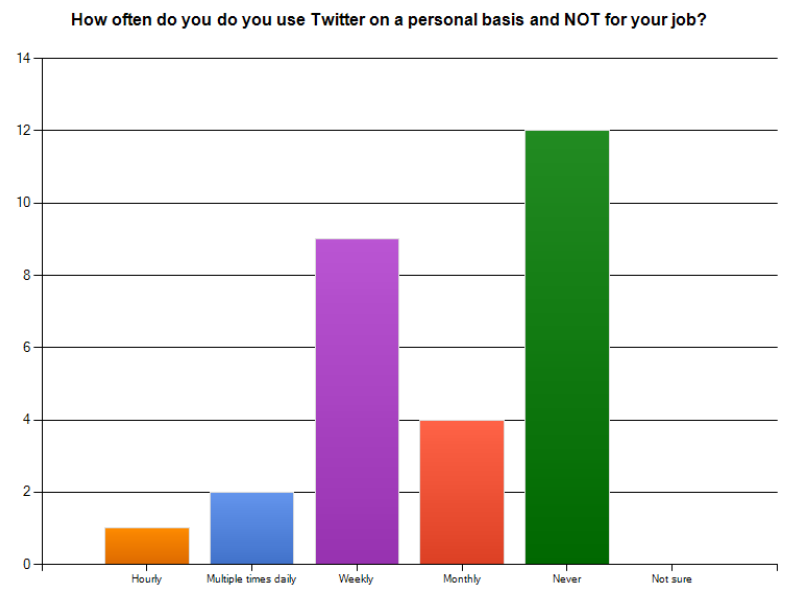
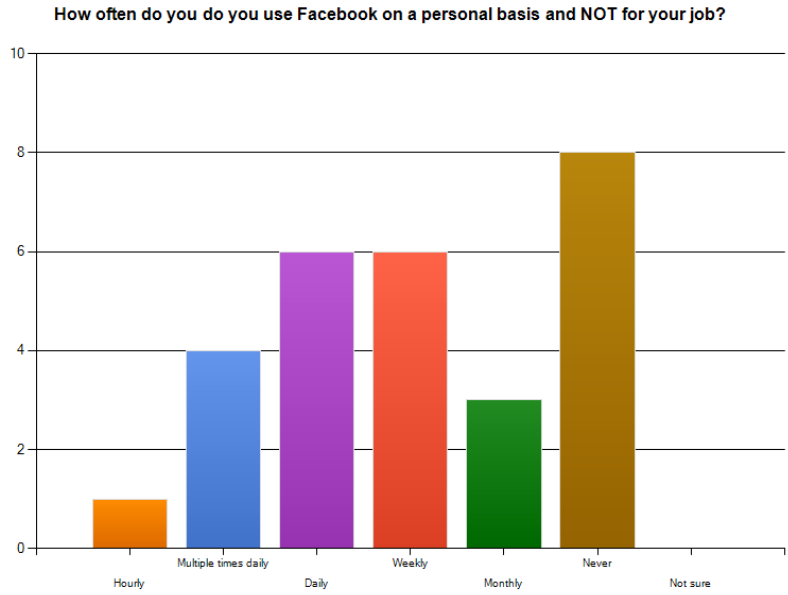


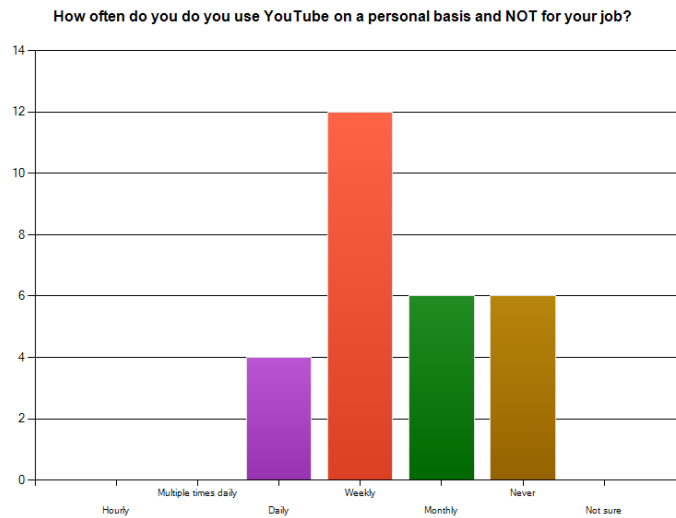
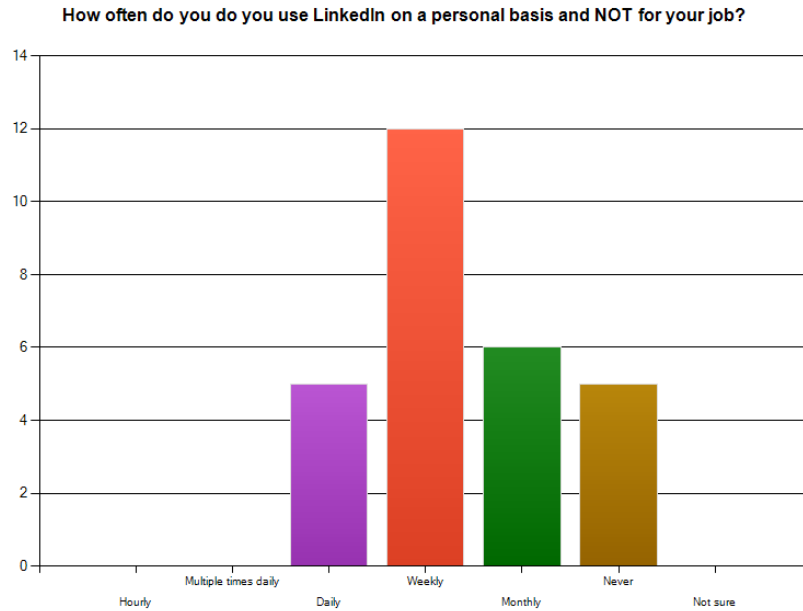
about the situation. I also used Twitter and Facebook to gather information following the earthquake that occurred on the East Coast this year as well.”

**RQ 2:** Do YNH-CEPDR/CHS employees use social media tools for personal use? Results for RQ2 revealed that YNH-CEPDR/CHS employees use social media sites more frequently in their personal lives than they do at work. Facebook was revealed to be the most frequently used. Overall, there was not an overwhelming similarity of responses and across-the-board frequency of usage for social media in the participants’ personal lives. LinkedIn and YouTube uses were very similar, with most participants engaging with the tools weekly, monthly, or, at least daily.



Social media usage for personal purposes was reported to be much higher than social media usage in the context of organizational roles at YNH-CEPDR/CHS. Participants reported usage habits of Facebook, Twitter, LinkedIn, and YouTube for personal use outside of the context of jobs. Twenty (60.6%) of participants reported using Facebook; seventeen (51.5%) reported using Twitter; twenty-two (66.7%) reported using YouTube, and three participants (9.1%) responded as engaging in “None of the Above” social media websites.





Participants’ feedback concerning usage of Facebook, Twitter, LinkedIn, and YouTube for personal purposes varied across the board. Eight (28.6%) participants reported as “Never” using Facebook for personal use. Only one participant reported using Facebook “Hourly.” Four (14.3%) participants reported using Facebook multiple times daily, six (21.6%) reported using Facebook “Daily”, six (21.4%) reported using the social media website “Weekly,” and three (10.7%) participants reported using it “Monthly.” Six participants chose not to answer this set of

questions for Facebook, Twitter, LinkedIn and YouTube usage as it pertains to their personal lives.

Concerning Twitter for personal purposes, YNH-CEPDR/CHS employees responses reflected that twelve (42.9%) “Never” use Twitter, but that four (14.3%) use it “Monthly,” nine (32.1%) use it “Weekly,” two (7.1%) use it “Multiple Times Daily,” and one (3.6%) reported using it “Hourly.” LinkedIn usage was greater with responses reflecting that twelve (42.9%) use LinkedIn “Weekly,” six (21.4%) use it “Monthly,” five (17.9%) use it “Daily,” and five (17.9%) “Never” use the site. Personal YouTube usage rates were comparable to the employees reported frequency of LinkedIn usage. Only four (14.3%) participants reported using YouTube “Daily.” Twelve (42.9%) participants reported using YouTube “Weekly,” six (21.4%) reported “Monthly” usage, and six (21.4%) answered “Never” using YouTube.

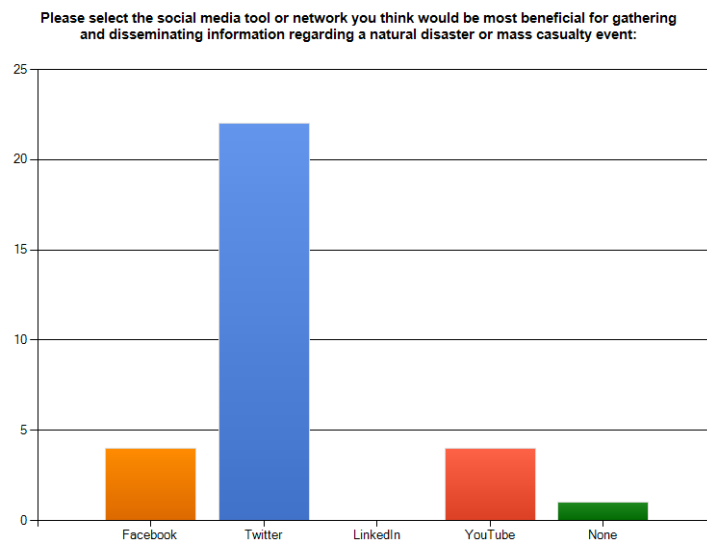
**RQ 3.** Is there a relationship between the tools which YNH-CEPDR/YNHHS-CHS employees use on a personal basis and the tools with which the organization uses to promote their capabilities/products and services?

	Facebook	Twitter	LinkedIn	YouTube	None of the Above
<b>Use in Employee Role</b>	6.1% (2)	15.2% (5)	57.6% (19)	36.4% (12)	27.3% (9)
<b>Use in Personal Life</b>	60.6% (20)	51.5% (17)	45.5% (15)	66.7% (22)	9.1% (3)

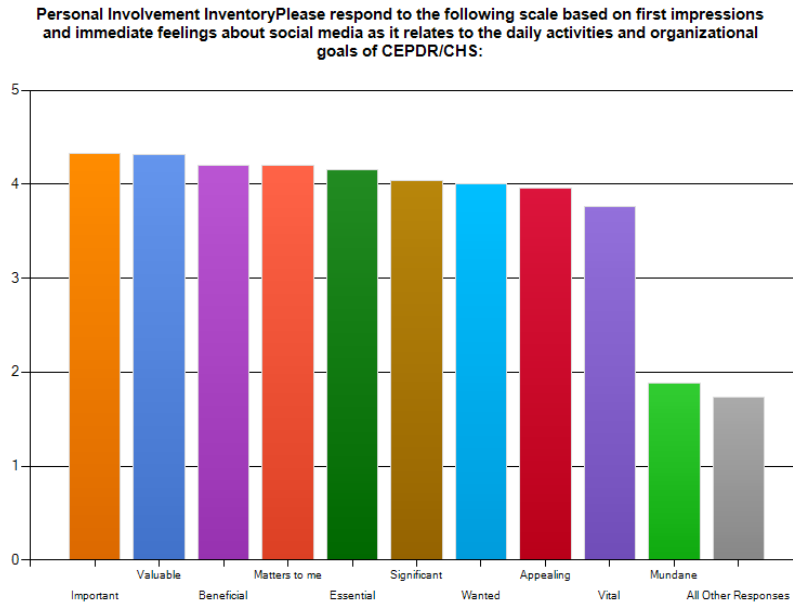
Overall, the tools used in YNH-CEPDR/CHS employees’ personal and work lives are not synchronistic. According to the results, more than half of the participants use social media in their personal lives. LinkedIn was the only social media tool, which had comparable results for both personal and employee usage within YNH-CEPDR/CHS. Several participants noted that an inability to access social networking sites was a limitation to employing these types of social media tools in their workplace. These responses suggest that the lack of usage of social networking tools is not solely due to a disinterest in Facebook, Twitter, LinkedIn, or YouTube,

but is rather, a result of unsanctioned access through the larger parent health system to YNH-CEPDR/CHS. One participant highlighted this area by stating, “The Health System needs to give us the ability to access Facebook and YouTube. Otherwise, we can talk about how important it is until we're blue in the face and we won't be able to use it.”

**RQ 4.** Is there a relationship between the tools that YNH-CEPDR/YNHHS-CHS employees believe would be most valuable and the tools that are being used by the organization?



While employee usage and engagement on both personal and organizational levels varied, most participants (22; 71.0%) responded that “Twitter” would be the most beneficial tool for gathering and disseminating information regarding a natural disaster or mass casualty event. Second were “Facebook” (4; 12.9%) and “YouTube” (4; 12.9%). One participant (3.1%) responded that “None” of the provided social networks would be beneficial for this purpose. Three participants chose not to answer this question.



To gauge participants overall feelings regarding social media, they were asked to complete a Personal Involvement Inventory scale. Participants were asked to respond to the scale based on first impressions and immediate feelings about social media as it relates to the daily activities of YNH-CEPDR/CHS as an organization.

“Strongly Disagree” “Disagree” “Undecided” “Agree” “Strongly Agree”

1

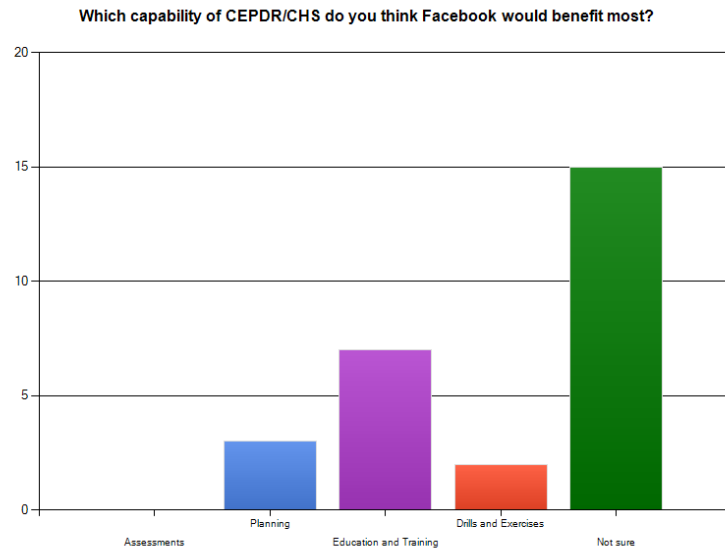
2

3

4

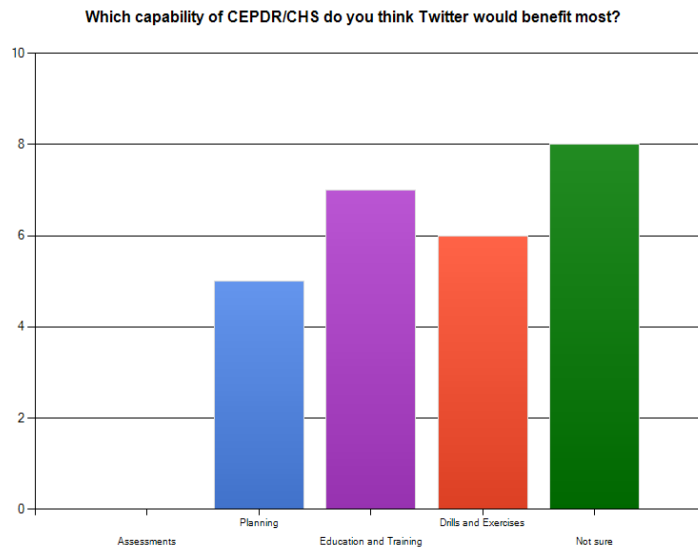
5

**Facebook**



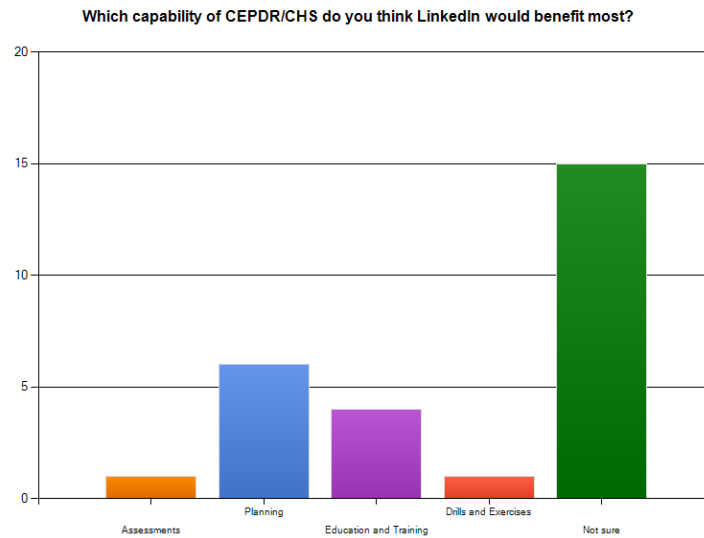
When asked which defined capability of YNH-CEPDR/CHS, Facebook would benefit most, over half (15; 55.6%) of participants were “Not Sure,” which capability to select. Seven (25.9%) reported “Education and Training” and two selected (7.4%) “Drills and Exercises.” Seven participants did not answer this question.

**Twitter**



Participants report that Twitter would be useful in the areas of “Education and Training” (7; 26.9%), “Drills and Exercises” (6; 23.1%), and Planning (5; 19.2%). Most participants (8; 30.8% percent) stated that they are unsure of which capability Twitter would be most useful for. None of the participants report that Twitter would be valuable in the area of Assessments for YNH-CEPDR/CHS. Eight participants did not answer this question.

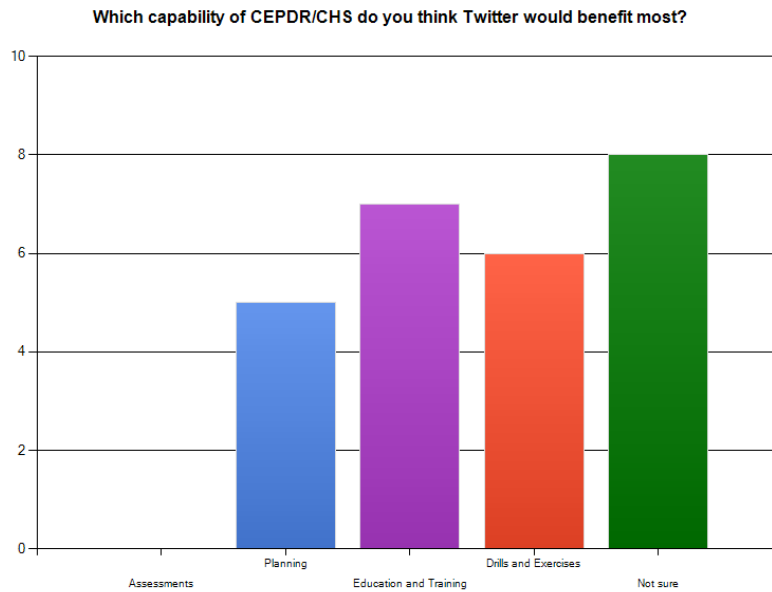
### LinkedIn



Over half (15; 55.6%) of the survey participants report that they are unsure which capability LinkedIn would add value to. Six participants (22.2%) stated that LinkedIn would benefit Planning; four (14.8%) reported Education and Training, one (3.7%) participants reported “Assessments and Drills” and one (3.7%) reported that “Drills and Exercises” would be experience an increase in value by the use of LinkedIn. Seven participants chose not to answer this question.



**YouTube**



	Facebook	Twitter	LinkedIn	YouTube
<b>Assessments</b>	0%	0%	3.7% (1)	3.7% (1)
<b>Planning</b>	11.1% (3)	19.2% (5)	22.2% (6)	22.2% (6)
<b>Education &amp; Training</b>	25.9% (7)	26.9% (7)	14.8% (4)	14.8% (4)
<b>Drills and Exercises</b>	55.6% (15)	23.1% (6)	3.7% (1)	3.7% (1)
<b>Not Sure</b>	55.6% (15)	30.8% (8)	55.6% (15)	55.6% (15)

Participants report that “Education and Training” (16; 59.3%) would experience the most benefit by YouTube. Nine participants (33.3%) reported that they were, “Not sure” which capability of YNH-CEPDR/CHS YouTube would benefit. Two participants (7.4%) report that YouTube will benefit the capability, “Drills and Exercises” most. None of the participants reported “Assessments” or “Planning” as likely to experience benefits by YouTube. Seven participants chose not to answer this question.

The above table provides a summary of the employees’ perceptions and opinions of which social media tools (Facebook, Twitter, LinkedIn or YouTube) would coordinate best with

one of the four stated capabilities of YNH-CEPDR/CHS: Assessments, Planning, Education & Training, and Drills and Exercises. Over half (55.6%) of the respondents for this question were not sure in the areas of Facebook, LinkedIn and YouTube. Twitter had the most responses for each capability.

Overall for **RQ4**, YNH-CEPDR/CHS employees rated social media to be “important,” “valuable,” “beneficial,” “essential,” “significant,” “wanted,” “appealing,” and “vital.” Responses were spread out in terms of being, “undecided” for several of these questions. One participant stated, “I think it [social media] should be used more frequently, not only for obtaining information during an event but incorporate into aspects of our work and products. For example, there are creative applications of tools such as Twitter that could enhance training and exercises.” The high percentage of responses for “Not sure” regarding best potential uses for Facebook, Twitter, LinkedIn and YouTube could be reflective of several things. Due to the fact that participants have not had full access to these tools in the work place and have not actively employed targeted strategies for these areas, they may have not explored this area and developed personal conclusions. Also, some participants may not feel they have the specified training required to conceptualize and employ such strategies. One participant noted, “[We] need additional training in its use.”

## CHAPTER 4 - DISCUSSION

It is hoped that this study will suggest and provide momentum for future research and continued advancement and education for social media among emergency managers and other health communicators.

### **Participants**

In review, this case study was purposed to examine and assess YNH-CEPDR/YNHHS-CHS' integration of social media to communicate products and services to selected target audiences. The research questions for this study are crafted to determine the existence or non-existence of a link between internal employee social media usage and gratification, and the overall social media strategy employed by YNH-CEPDR/YNHHS-CHS to reach target markets. YNH-CEPDR/CHS is a non-profit emergency preparedness and disaster response organization that uses planning, education, training, and employs drills and exercises to prepared for and combat public health emergencies and mass casualty events at the local, national and international level. The survey employed targeted the current employees of CEPDR/CHS to capture internal employees use frequencies and perceived gratifications of social media for personal and job related duties.

### **Facebook**

One participant stated using Facebook in his or her organizational role and seventeen (89.5%) responded to "Never" using Facebook for work. When participants were asked if they had ever used social media to obtain information about an emergency one described using it to gauge posts about natural disasters around the globe and another participant stated using it to contact friends during a disaster event. Several participants described having "access denied" to social media websites by the Yale New Haven Health System. This obstacle made it clear that

the one reason a social media strategy has not yet been employed is primarily due to the inability to even access the sites. While interest may exist to use these sites, engagement in the described social media tools is impossible without direct access on the job. Interestingly, the Yale New Haven Health System has involvement in Facebook, Twitter, YouTube, and LinkedIn.

### **Twitter**

Results revealed that Twitter was perceived to be the most valuable and most used social networking tool in the emergency management community. Results also showed that many employees at YNH-CEPDR/CHS successfully used Twitter during crisis events. When asked if participants had ever used social media to obtain disaster event related information, twelve participants (60%) reported, “Yes,” and eight (40%) reported, “No.” Those participants that had used Twitter for disaster data and information gathering described Twitter as a tool for receiving more continuous updates to situations and disaster event status. It was not determined whether employees gathered these updates and interacted on Twitter off the job, or on the job through a personal mobile device (due to denied access on YNH-CEPDR/CHS server). These results reflect the effectiveness of Twitter for providing minute-by-minute, or even by-the-second updates for “timely and accurate information” for events, as opposed to Facebook for providing a more broad, overview update of an event or person’s status. These results also imply the necessity for access to this social network for job related uses, especially during the height of a crisis event for information gathering and dissemination.

### **LinkedIn**

Overall, results showed that LinkedIn was used more frequently for personal use as opposed to Twitter, LinkedIn and YouTube. Fifteen (45.5%) participants reported using this tool for personal use and nineteen (57.6%) reported using in his or her role as an employee. None of

the participants selected LinkedIn as a beneficial tool for gathering and disseminating information during a crisis event. This finding is concurrent with LinkedIn's primary mission for business networking.

### **YouTube**

YouTube had the largest collective response towards one answer choice for the tool and benefit capability set of questions. Interestingly, on survey question seven, over half 53.6% of participants report that YNH-CEPDR/CHS never uses YouTube to communicate its products and services. One participant reports that YNH-CEPDR/CHS uses YouTube occasionally, nine participants 32.1% report uncertainty regarding this question, and three participants 10.7% report that YNH-CEPDR/CHS uses YouTube for promote products and services to potential clientele seldom. As previously described in the Literature Review, YouTube has numerous uses and applications for the on-the-job functions. YouTube was not described as an "access denied" social media website by the participants. It can be implied that YNH-CEPDR/CHS had not yet created a specific YouTube channel for the organization due to lack of a specific strategy for its usage to promote products and services.

### **Study Limitations**

An inherent limitation of this case study was the little to non-existence of social presence for YNH-CEPDR specifically. While YNH-CEPR/CHS' parent organization, the Yale New Haven Health System, is active in the areas of Facebook, Twitter, LinkedIn, YouTube and numerous other social media sites, YNH-CEPDR/CHS as an individual, non-profit organization is not equally active in these areas. Other limitations related to this area are the inability to access social media sites from the YNH-CEPDR /CHS offices due to established protective,

technological barriers (as described by one participant in survey question 29) by the Yale New Haven Health System.

Another limitation could be the sample size for the organization studied. This study; however, is not meant to produce results for a large, generalized population, yet small sample size is an existing limitation. A mixed method approach would most likely yield more detailed results and capture a more robust data in terms of participants personal opinions and perceived gratifications concerning social media for personal use and organizational use.

An additional limitation is that YNH-CEPDR/CHS was engaged in the development and approval process of a social media plan for the agency during the time of data collection. YNH-CEPDR/CHS did not reflect the planned presence of social media during the survey tool employment time frame. However, the attitudes and opinions of the employees from the survey tools still remain relevant in the researcher's assessment of uses and gratifications regarding social media for personal use and perceived value for YNH-CEPDR/CHS as an organization.

### **Future Research**

Future research should also focus on larger emergency preparedness and response organizations' usage of social media. Larger, government affiliate organizations should be studied and investigated in terms of strength of influence and engagement with public audiences for disseminating public health emergency preparedness and disaster response information. Study and analysis of existing and developing social media policies in emergency management organizations is another key area of importance. As social media usage continues to rise in both private and public sector organizations, a need for streamlined training and policy must be explored. Future research should also investigate individual organizations, as well as, the overall

emergency management community's, perception of the potential necessity for social media training and policy development.

## CHAPTER 5 - RECOMMENDATIONS

The following section is divided into five steps that will provide either a reflective assessment tool to measure the current status YNH-CEPDR/CHS' social media strategy or provide specific steps purposed for the creation and implementation of social media strategy for YNH-CEPDR/CHS. Specific strategies will be provided for Twitter and YouTube, due to their expected implementation at YNH-CEPDR/CHS.

### **Step 1: Determine Your Social Media Strategy**

It is important to first assess the staff's skill level, interest, and experience of selected social media venues. Creating and tailoring a social media skills inventory is a beneficial approach for determining which employees will best engage in chosen social media tools.

Strategy begins with the end objective in mind. A successful social media strategy begins with asking three basic questions: 1) What is the desired end result for using social media, and how much effort is willing to be placed in the development of social media tools and skills?; 2) Within the larger sphere of the organization, how much freedom is required to accomplish these goals?; and 3) What kind of commitment and level of manpower and resources can be dedicated to the specified social media goals? (Phelps & Ali, 2012).

Essential to the use and implementation of these tools is not the mere existence, but rather a strategic plan carried out by specific tactics. Determining a social media strategy also involves identifying where target audiences are interacting online, how to best connect with these audiences, and outlining metrics and goals. The tactical part of social media involves the actual creating and set up required for a Facebook or Twitter page, YouTube channel, or a LinkedIn profile.



**Step 2: Implementing A Social Media Strategy**

Implementing a social media strategy requires a detailed plan of attack. Goals, objectives, a team, and the necessary technology to implement strategy through tactics are essential. The implementation phase of a social media plan is just as important as the planning and strategizing phases.

**Identify the Target**

First, a detailed description of desired targeted audiences must be conducted. Each defined capability may target similar or varied audiences. One social media tool may be more beneficial than others to best reach and engage with specific target groups within the larger target audience of emergency managers.

**SWOT Analysis**

A company should assess strengths, weaknesses, opportunities and threats for any current mediated strategy that incorporates social media tools (this currently includes the Twitter page and YouTube channel YNH-CEPDR/CHS has established). Once these four areas have been assessed and weighed, more concentrated goals can be set and specific tactics will need to be conceptualized and executed.

**Step 3: Branding**

An effective focus and approach to branding will optimize the use of social media making it not just a promotional tool, but a vital and necessary extension of a brand's online presence. Giving your company a "voice" is more than just giving a persona to your brand. The content that is pushed is just as important as any company logo or the visual aspect to a Facebook or Twitter page.

In a recent published study, Facebook and Forrester Research proposed a six-point plan for building brands using social media. The six steps asserted were: 1) Articulate, 2) Connect, 3) Engage, 4) Influence, 5) Integrate, and 6) Rejuvenate. For the articulation phase, Facebook and Forrester recommend finding identifying the aspects of a company's brand that are "inherently social" (Wasserman 2012). Questions such as: what are some way a digital dialogue can be initiated through Facebook or Twitter? What are some current endeavors or accomplishments that can be. Connecting and engaging with customers, means taking part of existing digital conversations. One way to achieve influence is to make your Twitter followers, Facebook friends, or YouTube channel subscribers feel like they are receiving inside, first hand information (Wasserman, 2012).

The fifth step identified by Facebook and Forrester is Integration. "People do not compartmentalize their social media experiences" (Wasserman, 2012). One social media platform should always provide avenues, as way of links, to information that are will vary from social media site, yet are still distinctly relevant the nature of the organization. The sixth step, rejuvenate, means remaining relevant to your followers. If something relevant occurs in the new, share this information with your followers. Depending on the goal of the post or tweet about a piece of information, organizational opinions or perspective may be added (Wasserman, 2012).

It is also important to not that each social media tool is not intended to post the same, exact content, but should, rather, promote the same *type* of content, image, values, products and services. The Twitter and Facebook should provide audiences with the same brand of content while offering different facets of company's "personality," or image, products, and services.

**Step 4: Increasing Engagement**

Once specific social media strategies have been crafted and implemented, engagement will be key. Social media all about connecting people digitally, which may, in turn, spark more digital conversations and even face-to-face conversations about your company and the content it contributes. Creating and maintaining engaging content is vital to the measurement aspects of a social media strategy. By creating conversations around content and subjects that target audiences find meaningful a stronger bond, which will increase the frequency and quality of digital conversations (Awareness Inc., 2011). Once a benchmark, or goal, has been met, ideas and conversations must be refreshed to constantly be providing followers, users, or clients with beneficial pieces of information. Phelps and Ali (2012) synthesized the increasing of social media engagement into four steps: 1) Listen; 2) Engage; 3) Response; and 4) Measure. Due to the social media allowing digital conversations to be comprised of thousands, or even millions, of users it is important to note specific places to “listen” online for organization, product and service feedback from clients and consumers. Blogs, Review sites, Facebook, Twitter, and Google alerts for mentions of your organizations and services are good places to begin a feedback search. Tailored surveys and online forums through your organizations website or LinkedIn page are also valuable places to create fast, efficient, and open spaces for a feedback nature dialogue with clientele (p. 63).

**Step 5: Measuring Results of Social Media Analytics**

Prior to creating benchmarks for success measurement, each social media metric must be clearly understood. Metrics analysis allows for a company to determine whether goals are being achieved. If goals are not being achieved, there are several questions to ask: “Public more often or less often? Publish different types of content or use a different format?; Study your public

target and determine what enjoyable can you offer them?; Does your company respond to comments; Who do your followers follow? What are you doing that they are not?; Are your current goals unrealistic? If necessary, set more realistic goals” (Pratt, 2011). Paramount to the area of measurement is understanding the types of elements that will need to be measured.

### **Twitter**

Due to the short, 140- character messages allotted by twitter, the content for this social media venue must be engaging and always link to other content such as the company website, a relevant article, or other related information. There must always be a benefit to a brand’s Twitter followers. This benefit may be in the form of a piece of information, critical update, or simply an interesting fact.

Another way to utilize Twitter is to tailor the background of the Twitter page. Depending on policy, this would be an excellent way to reflect similarities with the Yale New Haven Health System, yet also distinguish YNH-CEPDR/CHS as an additional resource for a more specific type of information: emergency preparedness and disaster response.

Next, utilizing Twitter “hashtags.” is essential to engaging in Twitter conversations and increasing visibility. “Hashtags represent information that is trending and are a social convention that simplifies searching for a given topic” (iBrand Studio, 2012). Hashtags ensure that key words, information and conversations are highlighted and easily searchable in Twitter. This increases the likelihood for engagement and brand exposure. Another way to increase exposure is to “follow” other organizations and people on Twitter. Following back Twitter users that have chosen to follow YNH-CEPDR/CHS and interact with its contact is also essential. One way to provide immediacy and increase social presence is to send a direct message thanking the Twitter user for the follow. This simple act creates a relationship and is a segway to future interactions.

Regularly responding to, re-tweeting and highlighting followers content will make YNH-CEPDR appear active and engaged on Twitter (iBrand Studio, 2012). One way to ensure balance in the information YNH-CEPDR/CHS tweets is to strive to shape one out of every four tweets about something that is happening at YNH-CEPDR/CHS offices or current endeavors. This could include a recent article published, an exercise event or conference. The other three tweets can focus on other relevant information, or articles for YNH-CEPDR/CHS’ specific target audience.

Promoting Twitter through other online forums further increases exposure. For example, including a clickable logo or link on the company’s main website to Twitter will enable users to become aware of more venues available for interaction.

Twitter		
Profile Data	Activity Data	Loyalty Data
Followers	Number of Clicks	Brand Mentions
Following	Number of Re-tweets	Mention Content
Tweets	What Times	Sentiment
Daily Tweet Average	Which tweet structure gets a better click through rate (CTR)	
	What content gets more clicks	

(Pratt, 2012)

**Facebook**

Similar to all other social media venues, it is critical to first know the audience that you intending to reach and engage with on Facebook. Facebook events feature is a great way to promote a conference to a specific group of people or promote publicly for any Facebook user to

become involved in YNH-CEPDR/CHS activities. What is unique about Facebook, is its steady growth and the access it provides by connecting an infinite number of networks. When a Facebook friend or fan reposts events, useful articles, or relevant information, hundreds of that user’s friends in other networks will be exposed to the post and YNH-CEPDR/CHS’ name.

Facebook		
Quantitative Data	Qualitative Data	Activity Data
New Likes	Users	Post Views
Total Likes	Language	Interactions
Page or Tab Views	Location	Comments
	Comments	Interaction Times
		Clicks on Publications

(Pratt, 2012)

**LinkedIn**

A company profile on LinkedIn can provide several advantages: telling your company’s story, highlighting your products and services, engaging followings, and sharing career opportunities. The company page is mainly purposed for getting updates on organizations’ products and services, but is also a valuable tool for discovering the latest news and trends in a given industry. LinkedIn is a great way to post running updates with links to articles and now has the ability to showcase a running Twitter feed. Since tracking these impressions (number of views) is essential, LinkedIn Company pages allows businesses to see impressions and engagement (total comments, liked, clicks and shares) measurements from every states update (LinkedIn, 2012).

LinkedIn provides specific tips for nonprofit companies. First, making sure the company’s profile is complete, meaning that it highlights expertise, collaboration and involvement that emphasizes relevance, uniqueness and value. Any volunteer experience should be included and highlighted. Collaboration is one of the easiest and primary ways to begin engagement for a nonprofit company page on LinkedIn. Connecting with all current employee, clients, and similar organizations in the same industry allows interactivity in important discussions and industry insights (LinkedIn, 2012).

While LinkedIn, by design, used and purposed for more professional networking, it is important to remember that networking through the site is still of high importance. Commenting, liking, and sharing other organizations’ and target audience members posts shows others know and visibly see proactivity and interactivity on the site. Also asking prior clients and colleagues to write recommendations showcases expertise and provides visible credible for all contacts to view (Kovac, 2012).

LinkedIn		
Quantitative Data	Qualitative Data	Activity Data
Number of Contacts	Types of Groups Joined	Group Discussion Interaction
Visitor Views	Headlines Recommended for User	Updates Shared
	Visitor Interaction	Dialogue with Connections
	Professional Recommended	

**YouTube**

YouTube allows for a variety of dynamic content to be viewed and interacted with. Interviews, organizational-made how-to videos, re-sharing of content. “YouTube hold the titles as number video sharing site, but is also the second ranked top search engine in the world”

(Sullivan 2012). Similar to a company website, Facebook and Twitter page, your YouTube channel’s branding should be coordinate and in sync. “Your Facebook fan page, YouTube channel, Twitter page, etc., should represent your brand logo, colors, imagery, and message.” (Sellordietrying, 2012). Another area to focus on for YouTube is search engine optimization (SEO). To ensure that your company’s YouTube page remains visible and appears in search, select keywords carefully. “The important keyword strategy comes in how you upload your videos. Make sure you include these keywords in the video title, description, and most critically, the video tags. With the recognition that YouTube gets within Google’s search engine rankings, getting the right keywords added to your videos can really boost your views” (Sellordietrying, 2012). Also capitalizing on similar organizations and communities watching videos with similar content is a simple and free way to leverage existing YouTube users.

A beneficial promotional tactic is to implement a video series strategy. A video series provides an incentive for YouTube channel subscribers and people in selected target audiences to return to the channel to receive a benefit. A how-to video or a series on proactivity in health during flu or allergy season provides information that is beneficial to users. This type of content should be promoted on other social media platforms (Facebook, Twitter, LinkedIn, etc). Overall, sharing videos is the best way to kick start traffic to a YouTube channel (Sellordietrying 2012).

YouTube		
Quantitative Data	Qualitative Data	Activity Data
Video Views	Channel Host	Reshares to other social networks
Total Likes	Channel Subscribers	Interactions
Number of Comments	Reshares to other social media platforms	Discussion in other types of media (print, television, etc.)
Video Shares	Location	
	Language	



## REFERENCES

- Abroms, Lorien C. & Lefebvre Craig R. Obama's wired campaign: Lessons for public health communication. *Journal of Health Communication*, 14, 415-423, 2009. DOI: 10.1080/10810730903033000.
- The American National Red Cross. (2011). *About us*. Retrieved from: <http://www.redcross.org/aboutus/>.
- Bankingstaff.com (Powered by Intuit Financial Services). *Social media statistics: By-the-numbers, January 2011 (Part II)*. Retrieved January 24, 2011 from: <http://www.banking2020.com/2011/01/24/social-media-statistics-by-the-numbers-january-2011-part-ii/>. Retrieved April 4, 2011.
- Baran, S. & Davis, D. (1995). *Mass communication theory*. Belmont: Wadsworth Publishing Company.
- Barnes, N., & Mattson, E. (2008, October). Social media in the inc. 500: The first longitudinal study. *Journal of New Communications Research*, 3(1), 74-78. Retrieved February 11, EBSCOhost.
- Beizer, D. (2010, February 24). CDC, other agencies find social media an elixir for healthier public relations. *Federal Computer Week: Strategy and Business Management for Government Leaders*. Retrieved March 10, 2011, from <http://fcw.com/articles/2010/02/24/social-media-tips.aspx>.
- Bennett, E. (2011). Social media and hospitals: From social to trendy. *Healthcare Trends and Implications*, 43-48. Retrieved March 10, 2011.
- Blumler, J. G., & Katz, E. (1974). *The uses of mass communications: Current perspectives on gratifications research*. Beverly Hills, CA: Sage Publications.

- Boremans, P. (2010, July). Ready for anything. *Communication World*, 27(4), 31-33. Retrieved February 21, 2011, from EBSCOhost.
- Boyd, D. M., & Ellison, N. B. (2007, December 27). *Social network sites: Definition, history, and scholarship*. doi:10.1111/j.1083-6101.2007.00393.x.
- Bromley, D. B. (1990). Academic contributions to psychological counseling: I. A philosophy of science for the study of individual cases. *Counseling Psychology Quarterly*, 3(3), 299-307.
- Bulmer, D., & DiMauro, V. (2009). Executive. *Journal of New Communications Research*, 4(2), 93-100. Retrieved February 10, 2011, from EBSCOhost: Communication & Mass Media Complete.
- Burbary, Ken. March 7, 2011. "Facebook demographics revisited- 2011 statistics." *Social Media Today: The Web's best thinkers on social media*. Retrieved from: <http://socialmediatoday.com/kenburbary/276356/facebook-demographics-revisited-2011-statistics>.
- Center for Healthcare Solutions: Yale New Haven Healthcare Solutions (2011). Retrieved April 4, 2011 from <http://www.ynhhs.org/healthcaresolutions/index.html>.
- Center for Disease Control and Prevention: Office of the Associate Director for Communication. (August 2010). *The Health Communicator's Social Media Toolkit*.
- Cohen D, Crabtree B. (2006, July). "Qualitative Research Guidelines Project." *Robert Wood Johnson Foundation*. Retrieved from <http://www.qualres.org/HomeSemi-3629.html>.
- Creswell, J., & Miller, D. (Summer 2000). Determining validity in qualitative inquiry. *Theory into Practice*, 39(3), 124-129. Retrieved April 14, 2011, from JSTOR.

- Currie, D. (2009). Public health leaders using social media to convey emergencies (Cover story). *Nations Health*, 39(6), 1-30. Retrieved February 3, 2011, from Academic Search Complete.
- Dodson, H., & Greenwood, M. (2010, May 26). Lyme disease "app" for iphone developed by Yale School of Public Health. In *Yale Office of Public Affairs & Communications*. Retrieved November 4, 2010.
- Evans-Lacko, S., London, J., Little, K., Henderson, C., & Thornicroft, G. (2010). Evaluation of a brief anti-stigma campaign in Cambridge: do short-term campaigns work? *BMC Public Health*, 10, 339-344. doi:10.1186/1471-2458-10339.
- Evans, J.R., & Mathur, A. (2005) "The value of online surveys", *Internet Research*, (15)2, p.195 - 219ans. Emerald Research. Retrieved from:  
<http://www.emeraldinsight.com/journals.htm?articleid=1464622>.
- Facebook press room (2011). In *Facebook.com*. Retrieved March 5, 2011, from  
<http://www.facebook.com/press/info.php?statistics>.
- Facebook statistics, stats, and facts for 2011 (2011, January 18). In *Digital Buzz*. Retrieved March 10, 2011, from <http://www.digitalbuzzblog.com/facebook-statistics-stats-facts-2011/>
- For-Mukwai & Schmidt, O. (2012). 10 Mistakes of social media, crisis management. *Disaster Recovery Journal*, p. 65-66.
- Francois, G., & Moran, E. (2010, September). The return of the hyper-social organization. *Communication World*, 27(5). Retrieved March 10, 2011, from Communication & Mass Media Complete, EBSCOhost.

- Gaudiosi, J. (2010, March 6). Number of smartphone users to exceed 1 billion worldwide by 2014. In *Gamerlive.tv*. Retrieved March 10, 2011, from:  
<http://www.gamerlive.tv/article/number-smartphone-users-quadruple-exceeding-1-billion-worldwide-2014>.
- Gevertz, D., & Greenwood, G. (2010, August). Crafting an effective social media policy for healthcare employees. *Health Lawyer*, 33(6), 28-33.
- Given, L.M. (2008). *The Sage Encyclopedia of Qualitative Research Methods*. Thousand Oaks, CA.: Sage.
- Golijan, R. (2011, August). East coast earthquake beat bin laden (in tweets per second). MSNBC Technolog. [http://technolog.msnbc.msn.com/\\_news/2011/08/24/7458559-east-coast-earthquake-beat-bin-laden-in-tweets-per-second](http://technolog.msnbc.msn.com/_news/2011/08/24/7458559-east-coast-earthquake-beat-bin-laden-in-tweets-per-second).
- Greenberg, B.S. (1974). Viewing and listening parameters among british youngsters. *Public Opinion Q* (1974) 38 (4): 531-547. doi: 10.1086/268181.
- Haridakis, P. M., & Whitmore, E. H. (2006). Understanding Electronic Media Audiences: The Pioneering Research of Alan M. Rubin. *Journal of Broadcasting & Electronic Media*, 50(4), 766-774. doi:10.1207/s15506878jobem5004\_13
- Healthcare technology today. (2009). *Physical Therapy (PT) Magazine*, 31-35.  
Retrieved March 5, 2011.
- Heighington, A. (2011, June). Homeland security in real-time: the power of the public and mobile technology. *Homeland Security Affairs*, 7, 13, p. 1-7.
- Hepburn, A. (2011). Infographic: Mobile Statistics, Stats & Facts 2011. DigitalBlog: Digitalbuzz.com.

- Katz, E., Blumler, J. G., & Gurevitch, M. (1973-1974). Uses and gratification research. *The Public Opinion Quarterly*, 37(4), 509-523. Retrieved February 9, 2011, from JSTOR.
- Kvale, Steinar (1983). The qualitative research interview: A phenomenological and a hermeneutical mode of understanding. *Journal of Phenomenological Psychology*, 14, 171-196.
- Lazarsfeld, P. F. (1940). *Radio and the Printed Page*. New York, NY: Arno Press.
- Lefebvre, C. (2011, February 17). Integrating cell phones and mobile technologies into public health practice: A social marketing perspective. *Health Promotion Practice*, 10(4), 490-494. Retrieved February 10, 2011, from EBSCOhost.
- Li, C. (2007, June 21). How consumers use social networks. *For Interactive Marketing Professionals*.
- LinkedIn. (2011). *LinkedIn.com: About us*. LinkedIn Press Center. Retrieved from: <http://press.linkedin.com/about>.
- Lipowicz, A. (2010, October 22). CDC publishes social media toolkit online. *Federal Computer: Strategy and business marketing for government leaders*. Retrieved March 10, 2011 from <http://fcw.com/articles/2010/10/22/cdc-social-media-centers-for-disease-control.aspx>.
- Liu, G., Liston-Heyes, C., & Ko, W. (2010). Employee Participation in Cause-Related Marketing Strategies: A Study of Management Perceptions from British Consumer Service Industries. *Journal of Business Ethics*, 92(2), 195-210. Retrieved March 10, 2011, from Communications & Mass Media Complete, EBSCOhost.
- Man, S.J. (2011, October). *Live-tweets bin Laden operation*. USA Today. Retrieved from: <http://content.usatoday.com/communities/technologylive/post/2011/05/social-media-and-osama-bin-laden/1>.

- McNab, C. (2009, August). What social media offers to health professionals and citizens. In *Bulletin of the World Health Organization*. Retrieved January 27, 2011, from Academic Search Complete, EBSCOhost.
- Ming, S. (1997, November). Uses and gratifications of online newspapers: A preliminary study. *The Electronic Journal of Communication/ La revue Electronique de Communications*. Retrieved from: <http://www.cios.org/EJCPUBLIC/007/3/007312.HTML>.
- Moran, E., & Gossieaux, F. (2010, September). The return of the hyper-social organization. *CW Magazine – September/October 2010*.
- Prentice, S. & Huffman, E. (2008, March). “Social media’s new role in emergency management.” Idaho National L, Conference: Emergency Management and Robotics for Hazardous Environments.
- Pratt, Taylor. (2011, April). Raven Blog. “Infographic: Social media analytics.” Retrieved from: <http://raventools.com/blog/infographic-social-media-analytics/>.
- The Nielsen Company. (2011). State of the media: The social media. Retrieved from: <http://www.nielsen.com/content/dam/corporate/us/en/reports-downloads/2011-Reports/nielsen-social-media-report.pdf>.
- Number of twitter users (2011). In *Numberof.net*. Retrieved March 5, 2011, from <http://www.numberof.net/number-of-twitter-users/>.
- Pandey, A., Patni, N., & Singh, M. (2010). YouTube as a source of information on the h1n1 influenza pandemic. *American Journal of Preventive Medicine*, (38)1, p. e1-e3. Retrieved from: <http://www.sciencedirect.com/science/article/pii/S074937970900806X>.

- Pannier, S, & Pannier, J. (2009). Triangulation of methods: The key to analyze visuals and production contexts. *Conference Papers – International Communication Association Annual Meeting, p1, 27p.*
- Paul, I. (2009, March). PC World. Ten facebook tips for power users. Retrieved from: [http://www.pcworld.com/article/161688/ten\\_facebook\\_tips\\_for\\_power\\_users.html](http://www.pcworld.com/article/161688/ten_facebook_tips_for_power_users.html).
- Phelps, R & Ali, A. (2012). Four steps to develop social media engagement. *Disaster Recovery Journal, p. 62-67.*
- Picard, R. (2009). Blogs, tweets, social media and the news business. *Nieman Reports*. Retrieved March 5, 2011, from <http://www.nieman.harvard.edu/reportsitem.aspx?id=101884>.
- Rosengren, K. E. (1974). *Uses and gratifications: A paradigm outlined*. In J. G. Blumler & E. Katz (Eds.), *The uses of mass communications: Current perspectives on gratifications research*, 3, 269 - 286.
- Rousseau-Anderson, J. (2010, September). “The latest global social media trend may surprise you.” Forrester Blog: Market Insights Professionals- Jackie Rousseau-Anderson’s Blog. Retrieved from: [http://blogs.forrester.com/jackie\\_rousseau\\_anderson/10-09-28-latest\\_global\\_social\\_media\\_trends\\_may\\_surprise\\_you](http://blogs.forrester.com/jackie_rousseau_anderson/10-09-28-latest_global_social_media_trends_may_surprise_you).
- Royalpingdom. (2011, January). *Internet 2010 in numbers*. Retrieved from <http://royal.pingdom.com/2011/01/12/internet-2010-in-numbers/>
- Rubin, A.M., & Perse, E.M. (1987a). Audience activity and soap opera involvement: A uses and effects investigation. *Human Communication Research, 14*, 246-268.
- Ruggerio, T.E. (2000). Uses and gratifications theory in the 21<sup>st</sup> century. *Mass Communication & Society, 2000, 3(1)*, 3-37.

- S., Eko. (2012, February). *iBrand Studio. Simple branding strategy tips on twitter: Do's and don't s*. Retrieved from: <http://ibrandstudio.com/articles/branding-strategy-tips-twitter>
- Sellordietrying. (2012, August). *Sell or Die Trying: Digital Marketing and How It will Change the World. 5 Tips to help your youtube strategy in 2012*. Retrieved from: <http://sellordietrying.com/2012/01/23/5-tips-to-help-your-youtube-strategy-in-2012/>
- Schroeder, Stan (2009). *You tube reaches one billion views*. Mashable Social Media. Retrieved from: <http://mashable.com/2009/10/09/youtube-billion-views/>.
- Short, J., Wiliams, E., & Christie, B. (1976). *The social psychology of telecommunications*. New York: Wiley.
- Smith, A., Schlegelmilch, J. and Halstead, W, and Esposito, L. (2012, April). "Social media and virtual platforms: The new situational awareness for emergency management professionals." Yale New Haven Center for Emergency Preparedness and Disaster Response. White Paper.
- Smith, T. Coyle, J.R. and Lightfoot, E. and Scott, A., (2007). Reconsidering models of influence: The relationship between consumer social networks and word-of-mouth effectiveness. *Journal of Advertising Research*, 47(4), p. 387-397. Retrieved February 24, 2011, from Communication & Mass Media Complete, EBSCOhost.
- Solic, B. (2011, October). *The state of social media 2011: Social is the new normal*. Fast Company. Retrieved from: <http://www.fastcompany.com/1788326/the-state-of-social-media-2011-social-is-the-new-normal>
- Sparrow, Nick. (2006). Developing reliable online polls." *International Journal of Market Research* 48, 6, 659-80.
- Sparrow, Nick. (2007, June). Quality issues in online research. *Journal of Advertising Research*.



Stanton, F., and Lazarsfeld, P. *Radio Research*. New York, NY: Duell, Sloan, and Pierce.

SurveyMonkey.com. (2011). "Answers and Facts: User Manual." Retrieved from:

[http://help.surveymonkey.com/app/answers/detail/a\\_id/200/~you-can-password-protect-a-survey-link-with-one-password-that-all-respondents](http://help.surveymonkey.com/app/answers/detail/a_id/200/~you-can-password-protect-a-survey-link-with-one-password-that-all-respondents)

Tobias, E. (2011, June). Using twitter and other social media platforms to provide situational awareness during an incident. *Journal of Business Continuity & Emergency Planning*, 5, 3, p. 208-223.

Trusoy, M., Bodapati, A. V., & Bucklin, R. E. (2010, August). Determining influential users in internet social networks. *Journal of Marketing Research (JMR)*, 47(4), 643-658.  
Retrieved February 24, 2011, from Communication & Mass Media Complete, EBSCOhost.

Tustin, N. (2010). The role of patient satisfaction in online health information seeking.

Urista, M. A., Dong, Q., & Day, K. D. Explaining why young adults use myspace and facebook through uses and gratification theory. *Human Communication*, 12(2), 215-229.

White, P. (2008). How can the worlds of social marketing and healthcare communications join forces to enhance health service reputation? *Journal of Health Communication*, 1(4), 431-440. Retrieved February 9, 2011, from Communication & Mass Media Complete, EBSCOhost.

Williamson, D. A. (2011). U.S. social network usage: 2011 demographic and behavioral trends.

*EMarketer*. Retrieved from:

[http://www.emarketer.com/Reports/All/Emarketer\\_2000777.aspx](http://www.emarketer.com/Reports/All/Emarketer_2000777.aspx).

Van Antwerp, G. (2010). *Creators, critics, collectors, joiners, spectators, and inactives.*

*Enabling Healthy Decisions: Topics of Interest in Healthcare & Communications.*

Retrieved from: <http://georgevanantwerp.com/2010/08/03/creators-critics-collectors-joiners-spectators-and-inactives/>.

Yale New Haven Health: Center For Preparedness and Disaster Response. (2011). *About the Center.* Retrieved from: <http://www.ynhhs.org/emergency/commu/about.html>.

Yale New Haven Health, Center for Emergency Preparedness and Disaster Response (YNH-CEPDR), (n.d). *Capabilities Statement.* Retrieved from: [http://www.ynhhs.org/emergency/pdfs/AboutYNH-CEPDR\\_National\\_2011.pdf](http://www.ynhhs.org/emergency/pdfs/AboutYNH-CEPDR_National_2011.pdf).

Yale New Haven Health, Center for Emergency Preparedness and Disaster Response (2011). *Assessments.* Retrieved from: <http://www.ynhhs.org/emergency/progserv/assessments.html>

Yale New Haven Health, Center for Emergency Preparedness and Disaster Response (2011). *Education and Training.* Retrieved from: <http://www.ynhhs.org/emergency/training/index.html>

Yale New Haven Health, Center for Emergency Preparedness and Disaster Response (2011). *Drills and Exercises.* Retrieved from: <http://www.ynhhs.org/emergency/training/index.html>

Yale New Haven Health, Center for Emergency Preparedness and Disaster Response (2011). *Planning.* Retrieved from: <http://www.ynhhs.org/emergency/planning/index.html>

Yale New Haven Health, Center for Emergency Preparedness and Disaster Response (2011, November). "Study to determine the current state of disaster medicine and public health education and training and determine long-term expectations and competencies."

Published Report. Retrieved from

[http://www.ynhhs.org/emergency/09238/TCN\\_09238%20Final\\_Report.pdf](http://www.ynhhs.org/emergency/09238/TCN_09238%20Final_Report.pdf)

Zucker, D. M. (2009). "How to do case study research." *School of Nursing Faculty Publication Series. Paper 2*. Retrieved from [http://scholarworks.umass.edu/nursing\\_faculty\\_pubs/](http://scholarworks.umass.edu/nursing_faculty_pubs/)  
<http://jiad.org/article153>.

Zaichkowsky, J.L. (1985, December). "Measuring the involvement construct." *Journal of Consumer Research*, 12(2), 341-352. Retrieved from JSTOR at  
[http://www.jstor.org/discover/10.2307/254378?uid=3739936&uid=2134&uid=2&uid=70  
&uid=4&uid=3739256&sid=47698868401787](http://www.jstor.org/discover/10.2307/254378?uid=3739936&uid=2134&uid=2&uid=70&uid=4&uid=3739256&sid=47698868401787)

**APPENDIX 1 - SURVEY TOOL****Email Consent Form**

Social Media Strategies & Yale New Haven Health Center for Emergency Preparedness and Disaster Response/ Yale New Haven Health System Center for Healthcare Solutions (YNH-CEPDR/YNHHS-CHS)

Amanda Smith

Dear Possible Participant,

You are invited to participate in a research study examining social media usage and knowledge in the context of public health and risk assessment centers. This study will specifically focus on the Yale New Haven Center for Emergency Preparedness and Disaster Response Center (YNH-CEPDR) and the Yale New Haven Health System Center for Healthcare Solutions (YNHHS-CHS). You were selected as a possible participant because you have been an employee of YNH-CEPDR/YNHHS-CHS for at least one year and are 18 years of age or older. We ask that you read this form and ask any questions you may have before agreeing to be in the study. This study is being conducted by: Amanda Smith, Department of Communication Studies at Liberty University.

The link to access the survey is included below. The purpose of this study is to take an in-depth look at YNH-CEPDR/YNHHS-CHS employees' organizational attitudes, beliefs, and usage regarding social media tools.

If you are still willing to participate in this study, please click the link at the bottom of this page and follow the instructions, selecting the most appropriate answer, based on your personal knowledge and opinion. The answers you submit will be completely anonymous.

The risks for participating in this study are no more than the participant would encounter in everyday life. The records of this study will be kept secure under password protection in a locked file cabinet that can only be accessed by the researcher. After three years all information pertaining to the study will be destroyed. In any sort of report we might publish, we will not include any information that will make it possible to identify a subject. The results of the study will be non attributable. Online completion of the survey will result in responses being collected as a whole by Survey Monkey with no distinction between individual participants' responses. Surveys will be submitted online. No individual's answers will be viewable apart from other participants' answers.

The researchers conducting this study are Amanda Smith and Dr. Stuart Schwartz. Should you have any questions, you are encouraged to contact them at [asmith7@liberty.edu](mailto:asmith7@liberty.edu). or [sschwartz@liberty.edu](mailto:sschwartz@liberty.edu).

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher(s), you are encouraged to contact the Institutional Review Board, Dr. Fernando Garzon, Chair, 1971 University Blvd, Suite 1582, Lynchburg, VA 24502 or email at fgarzon@liberty.edu.

If you choose to decline participation, please disregard this email.

Thank you for your willingness to participate.

Sincerely,

Amanda Smith

### **SurveyMonkey.com Survey**

#### Introduction

Thank you for your willingness to take this survey regarding your social media perceptions and habits for personal and organizational usage as an employee of YNH-CEPDR/CHHS. You will be asked questions about your opinions about and usage of the following social media tools: Facebook, Twitter, LinkedIn, and YouTube. All information collected will be non attributable and will remain password protected so that only the researcher can access it.

For the purpose of this survey, social media will be described as, "web-based services that allow individuals to 1) construct a public or semi-public profile within a bounded system, 2) articulate a list of users with whom they share a connection, and 3) view and traverse their list of connections and those made by others within the system" (Boyd & Ellison, 2007, p.1).

1. Do you use any of the following social media tools in your role as an employee of YNH-CEPDR/CHS? Please select all that apply:

- Facebook
- Twitter
- LinkedIn
- YouTube
- Not Sure
- None of the above
- Other (please specify in comment box below)

2. Which of the following social media tools do you use on a personal basis and NOT in the context of your role as an employee of YNH-CEPDR/CHS? Please select all that may apply:

- Facebook
- Twitter
- LinkedIn
- YouTube
- None of the Above

3. Have you ever used social media to obtain information about an emergency?

- No  
 Not sure  
 Yes

4. Please select the social media tool or network that you think you be beneficial for gathering and disseminating information regarding a natural disaster or mass casualty event:

- Facebook  
 Twitter  
 LinkedIn  
 YouTube  
 None

5. When you use social media, do you access it from a personal computer, smartphone, iPad or other device?

- Personal computer  
 Smartphone  
 Ipad  
 Not sure  
 None of the above

6. Based on your opinion, please rate the frequency of usage for media venues that YNH-CEPDR/CHS uses most to communicate its products and services to potential clientele.

“Never”	“Seldom”	“Uncertain”	“Occasionally”	“Frequently”
1	2	3	4	5

- Face-to-face  
 Skype or video chat  
 Email  
 Written letters or mailed packets of information  
 Conference telephone call  
 Website  
 Webex or gotometing format  
 Facebook  
 Twitter  
 LinkedIn  
 YouTube

7. Personal Involvement Inventory

Please respond to the following media based on first impressions and immediate feelings about social media as it relates to the daily activities and organizational goals of CEPDR/CHS:

“Strongly Disagree” 1	“Disagree” 2	“Undecided” 3	“Agree” 4	“Strongly Agree” 5	
Important	1	2	3	4	5
Of no concern	1	2	3	4	5
Irrelevant	1	2	3	4	5
Useless	1	2	3	4	5
Valuable	1	2	3	4	5
Trivial	1	2	3	4	5
Beneficial	1	2	3	4	5
Matters to me	1	2	3	4	5
Uninterested	1	2	3	4	5
Significant	1	2	3	4	5
Vital	1	2	3	4	5
Boring	1	2	3	4	5
Unexciting	1	2	3	4	5
Appealing	1	2	3	4	5
Mundane	1	2	3	4	5
Essential	1	2	3	4	5
Undesirable	1	2	3	4	5
Wanted	1	2	3	4	5
Not Needed	1	2	3	4	5

8. Which capability of YNH-CEPDR/CHS do you think **Facebook** would benefit most?

- Assessments
- Planning
- Education and Training
- Drills and Exercises
- Not sure

9. Which capability of YNH-CEPDR/CHS do you think **Twitter** would benefit most?

- Assessments
- Planning
- Education and Training
- Drills and Exercises
- Not sure

10. Which capability of YNH-CEPDR/CHS do you think **LinkedIn** would benefit most?

- Assessments
- Planning

- Education and Training
- Drills and Exercises
- Not sure

11. Which capability of YNH-CEPDR/CHS do you think **YouTube** would benefit most?

- Assessments
- Planning
- Education and Training
- Drills and Exercises
- Not sure

12. Please indicate the degree to which you would be likely to use the following media sources to gather information about an emergency:

“Very Likely” 1	“Unlikely” 2	“Not sure” 3	“Likely” 4	“Very Likely” 5\
--------------------	-----------------	-----------------	---------------	---------------------

- Television
- Radio
- Newspaper
- Facebook
- Twitter
- LinkedIn
- YouTube

### Frequency of Usage

13. How often do you do you use **Facebook** on a personal basis and NOT for your job?

- Hourly
- Multiple times daily
- Daily
- Weekly
- Monthly
- Never
- Not sure

14. How often do you do you use **Twitter** on a personal basis and NOT for your job?

- Hourly
- Multiple times daily
- Daily
- Weekly
- Monthly
- Never
- Not sure



15. How often do you do you use **LinkedIn** on a personal basis and NOT for your job?

- Hourly
- Multiple times daily
- Daily
- Weekly
- Monthly
- Never
- Not sure

16. How often do you do you use **YouTube** on a personal basis and NOT for your job?

- Hourly
- Multiple times daily
- Daily
- Weekly
- Monthly
- Never
- Not sure

17. How often do you do you use **Facebook** in the context of your role at YNH-CEPDR/YNHHS-CHS?

- Hourly
- Multiple times daily
- Daily
- Weekly
- Monthly
- Never
- Not sure

18. How often do you do you use **Twitter** in the context of your role at YNH-CEPDR/YNHHS-CHS?

- Hourly
- Multiple times daily
- Daily
- Weekly
- Monthly
- Never
- Not sure

19. How often do you do you use **LinkedIn** in the context of your role at YNH-CEPDR/YNHHS-CHS?

- Hourly
- Multiple times daily
- Daily
- Weekly
- Monthly
- Never

Not sure

20. How often do you do you use **YouTube** in the context of your role at YNH-CEPDR/YNHHS-CHS?

- Hourly
- Multiple times daily
- Daily
- Weekly
- Monthly
- Never
- Not sure

21. Have you been through any type of social media training?

- Yes
- No
- If yes, please describe venue and training (comment box)

22. Does YNH-CEPDR/CHS use any of the following social media websites?

- Facebook
- Twitter
- LinkedIn
- YouTube

### Demographics Questions

23. Please select your gender

- Male
- Female

24. Please select your age:

- Age Range
- 21 to 34
- 35 to 44
- 45 to 54
- 55 to 64
- 65 and Over
- Decline

25. Would you describe yourself as:

- American Indian/Native American
- Asian
- Black/African American
- Hispanic/Latino
- White/Caucasian
- Pacific Islander
- Other

26. What is the highest level of education you have completed?

- Completed high school
- Some college, but did not finish
- Two-year college degree
- Four-year college degree
- Some graduate work
- Masters degree
- Doctorate degree
- Decline

27. How long have you been employed at YNH-CEPDR/YNHHS-CHS?

- 1-3 years
- 3-5 years
- 5-8 years
- 9+ years
- Other (please specify in comment box below)


What is your professional background?

- Nurse
- Practitioner
- Public Health Practitioner
- Allied Health (technician)
- Administrator
- Other (please specify in comment box below)




Any additional thoughts on using social media in your job?  
(Comment Box)

**APPENDIX 2 - SURVEY RESULTS**

**1. Do you use any of the following social media tools in your role as an employee of CEPDR/CHS? Please select all that apply:**

	Response Percent	Response Count
Facebook 	6.1%	2
Twitter 	15.2%	5
LinkedIn 	57.6%	19
YouTube 	36.4%	12
Not sure	0.0%	0
None of the above 	27.3%	9
Other (please specify)		2
<b>answered question</b>		<b>33</b>
<b>skipped question</b>		<b>1</b>

**2. Which of the following social media tools do you use on a personal basis and NOT in your job? Please select all that may apply:**

	Response Percent	Response Count
Facebook 	60.6%	20
Twitter 	51.5%	17
LinkedIn 	45.5%	15
YouTube 	66.7%	22
None of the Above 	9.1%	3
Other (please specify)		3
<b>answered question</b>		<b>33</b>
<b>skipped question</b>		<b>1</b>

3. Have you ever used social media to obtain information about an emergency?			
		Response Percent	Response Count
No		51.5%	17
Not sure		3.0%	1
Yes		45.5%	15
If yes, please describe:			13
answered question			33
skipped question			1

4. Please select the social media tool or network you think would be most beneficial for gathering and disseminating information regarding a natural disaster or mass casualty event:			
		Response Percent	Response Count
Facebook		12.9%	4
Twitter		71.0%	22
LinkedIn		0.0%	0
YouTube		12.9%	4
None		3.2%	1
Other (please specify)			0
answered question			31
skipped question			3

5. When you use social media, do you access it from a personal computer, smartphone, iPad or other device?			
		Response Percent	Response Count
Personal computer		91.2%	31
Smartphone		67.6%	23
Ipad		35.3%	12
Not sure		0.0%	0
None of the above		5.9%	2
Other (please specify)			0
answered question			34
skipped question			0





**6. Based on your opinion, please rate the frequency of usage for the media venues that CEPDR/CHS uses most to communicate its products and services to potential clientele:**

	Never	Seldom	Uncertain	Occasionally	Frequently	Rating Average	Response Count
Face-to-face	3.4% (1)	6.9% (2)	3.4% (1)	27.6% (8)	<b>58.6% (17)</b>	4.31	29
Skype or video chat	<b>34.5% (10)</b>	24.1% (7)	20.7% (6)	17.2% (5)	3.4% (1)	2.31	29
Email	0.0% (0)	0.0% (0)	0.0% (0)	3.4% (1)	<b>96.6% (28)</b>	4.97	29
Written letters or mailed packets of information	0.0% (0)	10.3% (3)	17.2% (5)	31.0% (9)	<b>41.4% (12)</b>	4.03	29
Conference telephone call	0.0% (0)	0.0% (0)	0.0% (0)	6.9% (2)	<b>93.1% (27)</b>	4.93	29
Website	0.0% (0)	0.0% (0)	10.7% (3)	14.3% (4)	<b>75.0% (21)</b>	4.64	28
Web-ex or gotomeeting.com format	0.0% (0)	10.7% (3)	3.6% (1)	39.3% (11)	<b>46.4% (13)</b>	4.21	28
Facebook	<b>69.0% (20)</b>	3.4% (1)	27.6% (8)	0.0% (0)	0.0% (0)	1.59	29
Twitter	<b>58.6% (17)</b>	10.3% (3)	20.7% (6)	10.3% (3)	0.0% (0)	1.83	29
LinkedIn	<b>42.9% (12)</b>	10.7% (3)	28.6% (8)	17.9% (5)	0.0% (0)	2.21	28
YouTube	<b>53.6% (15)</b>	10.7% (3)	32.1% (9)	3.6% (1)	0.0% (0)	1.86	28
					<b>answered question</b>		<b>29</b>
					<b>skipped question</b>		<b>5</b>

**7. Personal Involvement Inventory Please respond to the following scale based on first impressions and immediate feelings about social media as it relates to the daily activities and organizational goals of CEPDR/CHS:**

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	Rating Average	Response Count
Important	0.0% (0)	7.4% (2)	0.0% (0)	44.4% (12)	48.1% (13)	4.33	27
Of no concern	50.0% (12)	33.3% (8)	12.5% (3)	4.2% (1)	0.0% (0)	1.71	24
Irrelevant	54.2% (13)	37.5% (9)	4.2% (1)	4.2% (1)	0.0% (0)	1.58	24
Useless	54.2% (13)	33.3% (8)	12.5% (3)	0.0% (0)	0.0% (0)	1.58	24
Valuable	0.0% (0)	0.0% (0)	16.0% (4)	36.0% (9)	48.0% (12)	4.32	25
Trivial	45.8% (11)	33.3% (8)	16.7% (4)	4.2% (1)	0.0% (0)	1.79	24
Beneficial	0.0% (0)	0.0% (0)	12.0% (3)	56.0% (14)	32.0% (8)	4.20	25
Matters to me	0.0% (0)	8.0% (2)	8.0% (2)	40.0% (10)	44.0% (11)	4.20	25
Uninterested	50.0% (12)	37.5% (9)	0.0% (0)	12.5% (3)	0.0% (0)	1.75	24
Significant	0.0% (0)	4.0% (1)	20.0% (5)	44.0% (11)	32.0% (8)	4.04	25
Vital	0.0% (0)	8.0% (2)	36.0% (9)	28.0% (7)	28.0% (7)	3.76	25
Boring	45.8% (11)	37.5% (9)	8.3% (2)	8.3% (2)	0.0% (0)	1.79	24
Unexciting	45.8% (11)	37.5% (9)	4.2% (1)	12.5% (3)	0.0% (0)	1.83	24



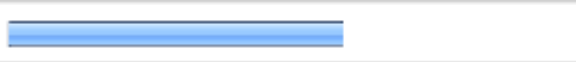


Essential	0.0% (0)	0.0% (0)	24.0% (6)	36.0% (9)	<b>40.0% (10)</b>	4.16	25	
Undesirable	<b>45.8% (11)</b>	37.5% (9)	12.5% (3)	4.2% (1)	0.0% (0)	1.75	24	
Wanted	0.0% (0)	8.7% (2)	21.7% (5)	30.4% (7)	<b>39.1% (9)</b>	4.00	23	
Not Needed	<b>50.0% (12)</b>	20.8% (5)	25.0% (6)	4.2% (1)	0.0% (0)	1.83	24	
							<b>answered question</b>	<b>27</b>
							<b>skipped question</b>	<b>7</b>

8. Which capability of CEPDR/CHS do you think Facebook would benefit most?			
		Response Percent	Response Count
Assessments		0.0%	0
Planning		11.1%	3
Education and Training		25.9%	7
Drills and Exercises		7.4%	2
Not sure		55.6%	15
		<b>answered question</b>	<b>27</b>
		<b>skipped question</b>	<b>7</b>



9. Which capability of CEPDR/CHS do you think Twitter would benefit most?			
		Response Percent	Response Count
Assessments		0.0%	0
Planning		19.2%	5
Education and Training		26.9%	7
Drills and Exercises		23.1%	6
Not sure		30.8%	8
answered question			26
skipped question			8


10. Which capability of CEPDR/CHS do you think LinkedIn would benefit most?			
		Response Percent	Response Count
Assessments		3.7%	1
Planning		22.2%	6
Education and Training		14.8%	4
Drills and Exercises		3.7%	1
Not sure		55.6%	15
answered question			27
skipped question			7

<b>11. Which capability of CEPDR/CHS do you think YouTube would benefit most?</b>			
		<b>Response Percent</b>	<b>Response Count</b>
Assessments		0.0%	0
Planning		0.0%	0
<b>Education and Training</b>		<b>59.3%</b>	<b>16</b>
Drills and Exercises		7.4%	2
Not sure		33.3%	9
<b>answered question</b>			<b>27</b>
<b>skipped question</b>			<b>7</b>






**12. Please indicate the degree to which you would be likely to use the following media sources to gather information about an emergency:**

	Very Unlikely	Unlikely	Not sure	Likely	Very Likely	Rating Average	Response Count
Television	0.0% (0)	0.0% (0)	0.0% (0)	10.7% (3)	<b>89.3% (25)</b>	4.89	28
Radio	0.0% (0)	7.1% (2)	3.6% (1)	28.6% (8)	<b>60.7% (17)</b>	4.43	28
Newspaper	18.5% (5)	<b>33.3% (9)</b>	11.1% (3)	18.5% (5)	18.5% (5)	2.85	27
Facebook	11.1% (3)	14.8% (4)	<b>33.3% (9)</b>	18.5% (5)	22.2% (6)	3.26	27
Twitter	14.8% (4)	0.0% (0)	18.5% (5)	25.9% (7)	<b>40.7% (11)</b>	3.78	27
LinkedIn	18.5% (5)	25.9% (7)	<b>40.7% (11)</b>	11.1% (3)	3.7% (1)	2.56	27
YouTube	30.8% (8)	15.4% (4)	<b>46.2% (12)</b>	3.8% (1)	3.8% (1)	2.35	26
<b>answered question</b>							<b>28</b>
<b>skipped question</b>							<b>6</b>



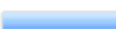

**13. How often do you use Facebook on a personal basis and NOT for your job?**



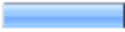

	Response Percent	Response Count
Hourly 	3.6%	1
Multiple times daily 	14.3%	4
Daily 	21.4%	6
Weekly 	21.4%	6
Monthly 	10.7%	3
<b>Never</b> 	<b>28.6%</b>	<b>8</b>
Not sure	0.0%	0
<b>answered question</b>		<b>28</b>
<b>skipped question</b>		<b>6</b>



**14. How often do you do you use Twitter on a personal basis and NOT for your job?**



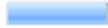


		Response Percent	Response Count
Hourly		3.6%	1
Multiple times daily		7.1%	2
Weekly		32.1%	9
Monthly		14.3%	4
Never		42.9%	12
Not sure		0.0%	0
<b>answered question</b>			<b>28</b>
<b>skipped question</b>			<b>6</b>



**15. How often do you do you use LinkedIn on a personal basis and NOT for your job?**



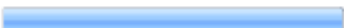

		Response Percent	Response Count
Hourly		0.0%	0
Multiple times daily		0.0%	0
Daily		17.9%	5
Weekly		42.9%	12
Monthly		21.4%	6
Never		17.9%	5
Not sure		0.0%	0
<b>answered question</b>			<b>28</b>
<b>skipped question</b>			<b>6</b>



16. How often do you do you use YouTube on a personal basis and NOT for your job?			
		Response Percent	Response Count
Hourly		0.0%	0
Multiple times daily		0.0%	0
Daily		14.3%	4
<b>Weekly</b>		<b>42.9%</b>	<b>12</b>
Monthly		21.4%	6
Never		21.4%	6
Not sure		0.0%	0
<b>answered question</b>			<b>28</b>
<b>skipped question</b>			<b>6</b>


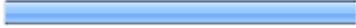

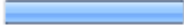
17. How often do you do you use Facebook in the context of your role at CEPDR/CHS?			
		Response Percent	Response Count
Hourly		0.0%	0
Multiple times daily		0.0%	0
Daily		0.0%	0
Weekly		0.0%	0
Monthly		7.1%	2
<b>Never</b>		<b>89.3%</b>	<b>25</b>
Not sure		3.6%	1
<b>answered question</b>			<b>28</b>
<b>skipped question</b>			<b>6</b>

18. How often do you do you use Twitter in the context of your role at CEPDR/CHS?			
		Response Percent	Response Count
Hourly		0.0%	0
Multiple times daily		3.7%	1
Daily		3.7%	1
Weekly		0.0%	0
Monthly		18.5%	5
Never		66.7%	18
Not sure		7.4%	2
answered question			27
skipped question			7

19. How often do you do you use LinkedIn in the context of your role at CEPDR/CHS?			
		Response Percent	Response Count
Hourly		0.0%	0
Multiple times daily		0.0%	0
Daily		10.7%	3
Weekly		35.7%	10
Monthly		17.9%	5
Never		28.6%	8
Not sure		7.1%	2
answered question			28
skipped question			6

20. How often do you do you use YouTube in the context of your role at CEPDR/CHS?			
		Response Percent	Response Count
Hourly		0.0%	0
Multiple times daily		0.0%	0
Daily		0.0%	0
Weekly		10.7%	3
Monthly		10.7%	3
Never		64.3%	18
Not sure		14.3%	4
<b>answered question</b>			<b>28</b>
<b>skipped question</b>			<b>6</b>

21. Have you been through any type of social media training?			
		Response Percent	Response Count
Yes		10.7%	3
No		89.3%	25
<b>If yes, please describe</b>			<b>2</b>
<b>answered question</b>			<b>28</b>
<b>skipped question</b>			<b>6</b>

<b>22. Does CEPDR/CHS use any of the following social media websites?</b>			
		<b>Response Percent</b>	<b>Response Count</b>
Facebook		13.3%	2
Twitter		66.7%	10
LinkedIn		26.7%	4
YouTube		33.3%	5
	Other (please specify)		8
	<b>answered question</b>		<b>15</b>
	<b>skipped question</b>		<b>19</b>



## APPENDIX 3 - YNH-CEPDR/YNHHS-CHS CAPABILITIES

### I. Assessments

The Yale New Haven Center for Emergency Preparedness and Disaster Response (YNH-CEPDR) conducts mission-critical assessments to assist organizations with identifying concrete strategies for improving their response and recovery capability, ensuring interoperability with regional response and recovery partners and sustaining their critical roles in the community they serve.

YNH-CEPDR has experience in developing and delivering the following assessments:

#### Gap Analysis

- Implementation of a standardized gap analysis tool either as a self-help resource or part of an on-site consultation
- Linking identified gaps to best practice solutions
- Assisting organizations with the implementation of best practices and solutions

#### Standardized Hazard Vulnerability Analysis

- Implementation of a hazard vulnerability analysis (HVA) tool
- Training toward a consistent approach and terminology for using the standardized tool or others

#### Business Impact Analysis

- Implementation of a business impact analysis survey as a precursor to business continuity management, including continuity of operations, to identify critical services and functions of an organization and its ability to recover from an incident.
- Development of business continuity plans
- Assisting with identification and prioritization of mitigation strategies

(Yale New Haven Health, 2011)

### II. Planning

The Yale New Haven Center for Emergency Preparedness and Disaster Response (YNH-CEPDR) assists organizations in the development of emergency management plans (EMPs), emergency operator plans (EOP) and business continuity plans (BCP) that address state and national accrediting organization requirements. From recommendations for establishing an emergency management committee to the development of incident-specific annexes to an all-hazards emergency operations plan, YNH-CEPDR can guide organizations through an emergency management process that will help build and sustain a culture of emergency preparedness.

YNH-CEPDR has experience in developing and delivering the following types of plans:

### **Emergency Operations Plans**

- Review of existing plans for compliance with The Joint Commission, NIMS, CMS and NFPA requirements
- Support for development or enhancement of plans using templates and discussion-based seminars/workshops

### **Emergency Operations Plan Annexes**

- Review and/or development of evacuation plans, mass casualty care plans and mass fatality management plans
- ESAR-VHP development deployment and management
- Countermeasures distribution and risk communication plans

### **Business Continuity Plans**

- Includes the following design elements: plan scope and objectives; major plan components; escalation; notification and plan activation; vital records and off-site storage; personnel control program
- Implementation of mitigation strategies

### **Community and Regional Planning for Sub-state Regions**

- Assessments of regional planning progress and recommendations for enhancing regional capability and capacity

(Yale New Haven Health, 2010)

## **III. Education & Training**

### **Knowledge that lends confidence**

The Yale New Haven Center for Emergency Preparedness and Disaster Response (YNH-CEPDR) has provided training to personnel employed in a variety of healthcare organizations including hospitals, emergency medical services, urgent care centers, skilled nursing facilities, community health centers and public health, as well as staff from other business entities. YNH-CEPDR courses allow organizations to maintain compliance with standard setting and regulatory agencies such as The Joint Commission, the Occupational Safety and Health Administration (OSHA), the Centers for Medicare and Medicaid Services (CMS), the Office of the Assistant Secretary for Preparedness and Response (ASPR) for the Department of Health and Human Services (HHS) and the Department of Homeland Security (DHS). Courses are created to be:

- Competency-based
- Time-efficient
- Cost-effective
- Healthcare-focused
- Delivered via multiple modalities, including the YNH-CEPDR LMS
- Scalable and customizable for regional variations
- Supportive of ongoing compliance with standard-setting organizations and regulatory agencies such as The Joint Commission, OSHA, Centers for Medicare and Medicaid Services and the National Incident Management System (NIMS)
- Broadly shared and publicized with healthcare organizations, public health and local, state, regional and national professional associations and organizations

YNH-CEPDR provides instructor-led/practicum courses that utilize "best practices" curricula as well as a multidimensional delivery approach. Courses are available through contract with YNH-CEPDR. For a complete listing of our courses, please view our course listings.

### **Online courses**

To provide consistent training to a large and diverse audience in a rapid and cost-effective manner, the center has developed online courses. Healthcare workers worldwide will be able to gain access to a wide range of emergency preparedness courses specifically developed or adapted to be delivered via the web.

(Yale New Haven Health, 2011)

### **IV. Drills & Exercises**

Exercises allow hospital, healthcare, public health and other business personnel to train and practice prevention, protection, response and recovery operations in a risk-free environment. They are a valuable tool for assessing and improving performance, while preparing for major incidents. Through exercises, organizations gain objective assessments of their capabilities so that gaps, deficiencies and vulnerabilities are addressed prior to a real world incident.

The Yale New Haven Center for Emergency Preparedness (YNH-CEPDR) can assist your organization with establishing an exercise program that is compliant with The Joint Commission standards and Homeland Security Exercise and Evaluation Program (HSEEP) requirements. Beginning with the definition of clear exercise objectives to scenario design, evaluation and development of an After Action Report, YNH-CEPDR's HSEEP-certified exercise staff can fulfill all or part of your organization's exercise needs.

YNH-CEPDR can provide:

- Complete HSEEP-compliant drill and exercise support or individual components as needed:
  - Planning conferences
  - Development of exercise objectives

- Development of exercise scenario and situation manual
- Exercise facilitation
- Exercise evaluation
- Development of an After Action Report by subject matter experts
- Coordination of After Action Conference and Corrective Action plans
- Assistance with developing and implementing a comprehensive exercise program

(Yale New Haven Health, 2011)