CRISIS AND EMERGENCY RISK COMMUNICATION

Pandemic Influenza

August 2006

Revised October 2007

The purpose of this book is to provide the reader with vital communication concepts and tools to assist in preparing for and responding to a severe influenza pandemic in the United States. The focus of the book is on the possibility of a severe pandemic. Although the concepts do apply to less intense public health challenges, they may not need to be executed at the same level of intensity.

This book is intended to be used as an addition to the CDC *Crisis and Emergency Risk Communication* coursebook (Reynolds, Galdo, Sokler, 2002) and the *Crisis and Emergency Risk Communication: By Leaders for Leaders* coursebook (Reynolds, 2004). The concepts in this book do not replace, but, instead, build on the first two books. This book shares foundational concepts that will support your communication work and should be relevant even as the circumstances surrounding a severe pandemic may change. Nonetheless, the information in this book is current as of October 2007. As major events occur, especially related to countermeasures such as pandemic vaccine development, some assumptions may change.

Importantly, this book explains in more depth the communication challenges to be expected in a severe influenza pandemic. This is not a primer on pandemic influenza and is not the place to turn to for up-to-date message maps, communication tools, and pandemic preparedness and planning information. The "go-to" place for evolving information is the U. S. Government Pandemic Flu website at http://www.pandemicflu.gov. At www.pandemicflu.gov you will find resource materials for creating communication products, as well as additional guidance on planning. HHS and CDC are engaged in a number of research and development projects related to pandemic communication. Check the website regularly for updates.

Crisis and Emergency Risk Communication: Pandemic Influenza

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Office of the Director, Office of Enterprise Communication (OEC)
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Written by
Barbara Reynolds, M.A,
Centers for Disease Control and Prevention

In collaboration with:
Shana Deitch, M.P.H. & Richard Schieber, M.D., M.P.H., Capt. USPHS
Centers for Disease Control and Prevention

Edited by:
Suzy DeFrancis, Assistant Secretary for Public Affairs (ASPA), HHS
Donna Garland, OEC, CDC
William Hall, ASPA, HHS
Shaunette Crawford, OEC, CDC
Ann Norwood, M.D., Office of Public Health Emergency Preparedness (OPHEP), HHS
Stephanie Marshall, ASPA, HHS
Sharon KD Hoskins, M.P.H., OEC, CDC
Lorine Spencer, B.S.N., M.B.A.,OD, CDC

Faculty
Barbara Reynolds, M.A., CDC
Matthew Seeger, Ph.D., Wayne State University
Tim Sellnow, Ph.D., North Dakota State University
Richard Brundage, President & CEO, Center for Advanced Media Studies
Robert Ulmer, Ph.D., University of Arkansas, Little Rock
Deanna Sellnow, Ph.D., North Dakota State University

Development, preparation, and implementation of this course were made possible through the knowledge, wisdom, and effort of the people listed here:

CDC

Dan Baden, M.D.
Jay Bernhardt, Ph.D.
Mindy Barringer
Martha Boyd
Richard Bright
Mary Bryant-Mason
Alyce Burton
Emily Cramer
Bridget Cleveland
Annise Chung
Lateka Dammond
Irene Edward-Chery
Ron Ergle
Melinda Frost
Nancy Gathany
Cynthia Goldsmith
D'Angela Green
Kathryn Harben
Benjamin Haynes
Sharon K.D. Hoskins
Jamila Howard
Asim Jani
Mattie Jones
William Jones III
Ronald Lake
Cynthia Lewis
Renee Maciejewski
Cecilia, Meijer
Jennifer Morcone
Joshua Mott, Ph.D.
Teresa Nastoff
Karen Ngowe
John O'Connor
Dori Reissman, M.D.
Karen Resha
Matthew Reynolds
Khalid Rodriguez
Marian Sachs
Kristine Sheedy
Lorine Spencer
Patricia Taliaferro
Lisa Williams
Andrea Young
James Archer

Local and State Public Health Departments
Bart Aronoff, Hawaii Dept. of Health
Bret Atkins, Ohio Dept. of Health
Nancy Bourgeois, Los Angeles Dept. of Health and Human Services
Kim Coleman, West Virginia Dept. of Health and Human Resources
Debbie Crane, North Carolina Dept. of Health and Human Services
Nancy Erickson, Vermont Dept. of Health
Laura Espino, NPHIC
Jami Haberi, Iowa Dept. of Health
Larry Hill, Virginia Dept. of Health
Clara Jenkins, NPHIC
Richard McGarvey, Pennsylvania Dept. of Health
Christine Newlon, Nebraska Dept. of Health
Sandra Page-Cook, New York City Dept. of Health and Mental Hygiene
Marisa Raphael, New York City Dept. of Health and Mental Hygiene
Ken Seawright, Mississippi Dept. of Health
Doug Skroback, South Carolina Dept. of Health and Environmental Control
Tom Slater, New Jersey Dept. of Health and Senior Services
Steve Wagner, Ohio Dept. of Health
Rhonda White, Florida Dept. of Health
Ann Wright, Arkansas Dept. of Health

CERC Consultation Panel
Laura Blaske (Washington state)
Jim Beasley (South Carolina)
Debbie Crane (North Carolina)
Kristine Smith (New York)
Barbara Beiser (Colorado)
Marie Milkovich (Michigan)
Christine Holmgren (Oregon)
Bret Atkins (Ohio)
Thomas Slater (New Jersey)
Nicola Whitley (New Hampshire)

Department of Health and Human Services
Jack Kalavritinos
Eric Jewett
Laura Caliguiri
By Region
Brian Cresta. Region I
David Abdobo, Region I
Deborah Knopko, Region II
Gordon Woodrow, Region III
Thomas Harris, Region III
Chris Downing, Region IV
Deric Gilliard, Region IV
Dough O'Brien, Region V
Don Perkins, Region VI
Ashlea Quinonez, Region VI
Fred Schuster, Region VII
Adele Hugley, Region VII
Joe Nunez, Region, Region VIII
Michelle McGowan, Region VIII
Claise Munoz, Region IX
Jennifer Koentop, Region IX
James Whitfield, Region X
Jenny Holladay, Region X

DoD
Lori Geckle, U.S. Army
Walter H. Orthner, Joint Forces Command
David, A. Zacharias, Joint Forces Command

Community & University
Dorothy Sorensen
Rita Cox
Alita Corbett
Claudia Parvanta, Ph.D.
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William Reynolds
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Crisis and Emergency Risk Communication

Pandemic Influenza

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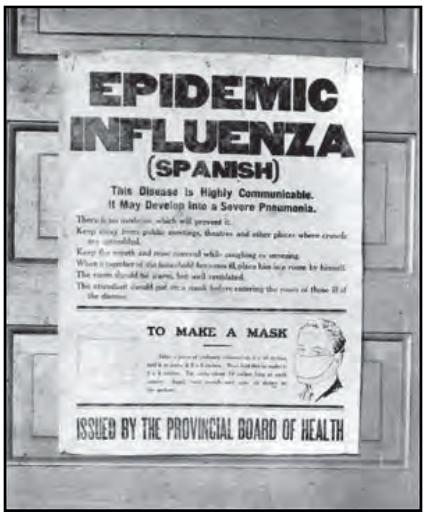
Authored by Richard Schieber, MD, MPH, National Immunization Program, CDC

Module 1 • Introduction

Crisis and Emergency-Risk **Communication**

Be first. Be right. Be credible.

risk (rĭsk)
n.
1. The possibility of suffering a harmful event.
2. A factor or course involving uncertain danger.



Crisis and emergency risk communication is a vital component of public health emergency response. The initial objectives for public information releases from response authorities early in a crisis are: 1) to prevent further illness, injury, or death; 2) to restore or maintain calm; and 3) to engender confidence in the operational response (National Response Plan, 2005). Because emergencies are chaotic, planning should be directed at simplifying roles and responsibilities to achieve the greatest good for the greatest number while maintaining enough resources to reach those few who can't help themselves (Clarke, 2003; Seeger, Sellnow, & Ulmer, 2003).

Mitroff said about preparing for crises, "We must improve dramatically our abilities to 'think about the unthinkable'" (2004, p. 11). Among these crises, the one most likely to directly involve the greatest number of persons in the United States is a major respiratory-transmitted infectious disease outbreak such as pandemic influenza. In this widespread emergency, public health response officials would need to communicate messages to the public asking them to take particular actions and refrain from other actions (e.g., engage in cough etiquette and refrain from gathering in groups). An influenza pandemic of a highly pathogenic strain that occurs in our technologically advanced society—where instant horizontal communication takes place around the clock—will severely tax the ability of public health crisis response officials to provide accurate, timely, consistent, and credible information to the U.S. population (Reynolds et al., 2002). Emergency messages will need to be communicated to a highly diverse U.S. population and to cultures around the world.

Fast Facts

Four different influenza antiviral medications: Amantadine, Rimantadine, Oseltamivir, and Zanamivir are approved by the FDA for the treatment and/or prevention of influenza.

All four antiviral medications usually work against influenza A viruses. However, the drugs may not always work, because influenza virus strains can become resistant to one or more of these medications.

The influenza A (H5N1) viruses identified in humans in Asia in 2004 and 2005 have been resistant to Amantadine and Rimantadine.

Monitoring of avian viruses for resistance to influenza antiviral medications continues. (www.pandemicflu.gov)

According to the National Strategy for Pandemic Influenza (2005), a pandemic may come and go in waves, each of which can last for six to eight weeks. An especially severe influenza pandemic could lead to high levels of illness, death, social disruption, and economic loss. Everyday life would be disrupted because so many people in so many places could become seriously ill at the same time. Impacts can range from school and business closings to the interruption of basic services such as public transportation and food delivery. A substantial percentage of the world's population will require some form of medical care. Health care facilities could be overwhelmed, creating a shortage of hospital staff, beds, ventilators and other supplies. Surge capacity at non-traditional sites such as schools may need to be created to cope with demand. The need for vaccine is likely to outstrip supply and the supply of antiviral drugs is also likely to be inadequate early in a pandemic. Difficult decisions will need to be made regarding who gets antiviral drugs and vaccines.

Death rates are determined by four factors: the number of people who become infected; the virulence of the virus; the underlying characteristics and vulnerability of affected populations; and the availability and effectiveness of preventive measures. In the United States alone, estimates of deaths during a pandemic range from approximately 200,000 to 2 million (HHS, 2005). However, the effects of a pandemic can be lessened if preparations are made ahead of time. The following are assumptions that have been made by subject matter experts to assist in planning for the next pandemic:

- Susceptibility to the pandemic influenza virus will be universal.
- Efficient and sustained person-to-person transmission signals an imminent pandemic.
- The clinical disease attack rate will likely be 30% or higher in the overall population during the pandemic. Illness rates will be highest among school-aged children (about 40%) and decline with age. Among working adults, an average of 20% will become ill during a community outbreak.
- Some persons will become infected but not develop clinically significant symptoms. Asymptomatic or minimally symptomatic individuals can transmit infection and develop immunity to subsequent infection.
- Of those who become ill with influenza, 50% will seek outpatient medical care.

- Due to the availability of effective antiviral drugs for treatment, the proportion of sick people seeking outpatient care may be higher.

- The number of hospitalizations and deaths will depend on the virulence of the pandemic virus. Estimates differ ten-fold between more and less severe scenarios. Two scenarios are presented based on extrapolation of past pandemic experience (Table 1). Planning should include the more severe scenario.

- Risk groups for severe and fatal infection cannot be predicted with certainty but are likely to include infants, the elderly, pregnant women, and persons with chronic medical conditions.

- Rates of absenteeism will depend on the severity of the pandemic.

- In a severe pandemic, absenteeism attributable to illness, the need to care for ill family members, and fear of infection may reach 40% during the peak weeks of a community outbreak, with lower rates of absenteeism during the weeks before and after the peak.

- Certain public health measures (dismissing students from school, quarantining household contacts of infected individuals, “snow days”) are likely to increase rates of absenteeism.

- The typical incubation period (interval between infection and onset of symptoms) for influenza is approximately 2 days.

- Persons who become ill may shed virus and can transmit infection for up to one day before the onset of illness. Viral shedding and the risk of transmission will be greatest during the first 2 days of illness. Children usually shed the greatest amount of virus and therefore are likely to pose the greatest risk for transmission.

- On average, infected persons will transmit infection to approximately two other people.

- In an affected community, a pandemic outbreak will last about 6 to 8 weeks.

- Multiple waves (periods during which community outbreaks occur across the country) of illness could occur with each wave lasting 2-3 months.

- Historically, the largest waves have occurred in the fall and winter, but the seasonality of a pandemic cannot be predicted with certainty.

Table 1. Number of Episodes of Illness, Healthcare Utilization, and Death Associated with Moderate and Severe Pandemic Influenza Scenarios*

Characteristic	Moderate (1958/68-like)	Severe (1918-like)
Illness	90 million (30%)	90 million (30%)
Outpatient medical care	45 million (50%)	45 million (50%)
Hospitalization	865,000	9,900,000
ICU care	128,750	1,485,000
Mechanical ventilation	64,875	745,500
Deaths	209,000	1,903,000

* Estimates based on extrapolation from past pandemics in the United States. Note that these estimates do not include the potential impact of interventions not available during the 20th century pandemics.

Source: United States Department of Health and Human Services Pandemic Influenza Plan

Disasters are inherently different from routine daily emergencies and the difference is more than just one of magnitude. Chaos theory related to crises emphasized that disasters that *take a toll on human life* are inherently characterized by change, high levels of uncertainty, and interactive complexity (Seeger, Sellnow, & Ulmer, 2003).

The possibilities of harmful human behaviors, combined with bad communication practices, can lead to overwhelming negative public health outcomes during the crisis response (Reynolds, Galdo, & Sokler, 2002; Seeger et al., 2003). However, many of the expected harmful individual and community behaviors can be mitigated with effective crisis and emergency risk communication. Strategic communications activities based on scientifically derived risk communications principles are an integral part of a comprehensive public health response before, during, and after an influenza pandemic. Effective communication can guide the public, the news media, healthcare providers, and other groups in responding appropriately to outbreak situations and complying with public health measures (HHS Pandemic Influenza Plan).

Communications preparedness for an influenza pandemic should follow key risk communications concepts.

- When health risks are uncertain, as likely will be the case during an influenza pandemic, people need information about what is known and unknown, as well as interim guidance to formulate decisions to help protect their health and the health of others.

- Coordination of message development and release of information among federal, state, and local health officials is critical to help avoid confusion that can undermine public trust, raise fear and anxiety, and impede response measures.

- Guidance to community members about how to protect themselves and their family members and colleagues is an essential component of crisis management.

- Information provided to the public should be technically correct and succinct without seeming patronizing.

- Information presented during an influenza pandemic should minimize speculation and avoid over-interpretation of data and avoid overly confident assessments of investigations and control measures.

- An influenza pandemic will generate immediate, intense, and sustained demand for information from the public, healthcare providers, policy makers, and news media. Healthcare workers and public health staff are likely to be involved in media relations and public health communications.

- Timely and transparent dissemination of accurate, science-based information about pandemic influenza and the progress of the response can build public trust and confidence.

To avoid confusion early in a crisis, accurate, relevant, simple, fast and consistent messages are best (Reynolds et al., 2002; Seeger et al., 2003). Communication expertise that supports the needs of public health professionals responding to a public health emergency or crisis will borrow from many areas of communication study. This special combination is called "crisis and emergency risk communication."

Crisis and emergency risk communication encompasses the urgency of disaster communication with the need to communicate risks and benefits to stakeholders and the public (Reynolds et al., 2002; Reynolds & Seeger, 2005). Crisis and emergency risk communication differs from crisis communication in that the communicator is not perceived as a participant in the crisis or disaster, except as an agent to resolve the crisis or emergency. Crisis and emergency risk communication is

To avoid confusion, accurate, relevant, simple, fast, and consistent messages are best.

Crisis and emergency risk communication is the effort by experts to provide information to help people make the best possible decisions about their well-being within nearly impossible time constraints and ultimately to accept the imperfect nature of choices during the crisis.

the effort by experts to provide information to allow an individual, stakeholder, or an entire community to make the best possible decisions about their well-being within nearly impossible time constraints and help people ultimately to accept the imperfect nature of choices during the crisis. This is the communication that goes on in emergency rooms, not doctors' offices.

Crisis and emergency risk communication also differs from risk communication in that a decision must be made within a narrow time constraint, the decision may be irreversible, the outcome of the decision may be uncertain, and the decision may need to be made with imperfect or incomplete information. Crisis and emergency risk communication represents an expert opinion provided in the hope that it benefits its receivers and advances a behavior or an action that allows for rapid and efficient recovery from the event.

Crisis Communication Lifecycle

Understanding the communication pattern of a crisis can help professionals anticipate problems and respond effectively. For communication professionals, it's vital to know that every emergency, disaster, or crisis evolves in phases and that the communication must evolve in tandem (Reynolds et al., 2002). By dividing the crisis into phases, the communicator can anticipate the information needs of the media, stakeholders, and the general public. Each phase has unique informational requirements and the movement through each of the phases will vary according to the triggering event (Figure 1). Not all crises are created equally (Mitroff, 2004). The degree or intensity and longevity of a crisis will impact required resources and staff needed to provide risk information.

Pre-crisis phase

The pre-crisis phase is where all of the planning and most of the work should be done. In this phase, organizations should consider the types of disasters that they may need to address. Reasonable questions can be anticipated, and preliminary answers can be sought. Initial communication can be drafted with blanks to be filled in later. Alliances and partnerships can be fostered to ensure that experts are speaking with one voice.

Initial phase

In the initial phase of a crisis or emergency, people want information. They want timely and accurate facts about what happened, and where, and what is being done, and they want it now. They will

question the magnitude of the crisis, the immediacy of the threat to them, the duration of the threat, and who is going to fix the problem. Communicators should be prepared to answer these questions as quickly, accurately, and fully as possible.

Simplicity, credibility, verifiability, consistency, and speed count when communicating in the initial phases of an emergency. The initial phase of a crisis is characterized by confusion and intense media interest. Information is usually incomplete, and facts are dispersed. It's important to recognize that information from the media, other organizations, and even within one's own organization may not be accurate. In the initial phase of a crisis, there is no second chance to get it right. An organization's reputation depends on what it does and does not say.

Crisis maintenance

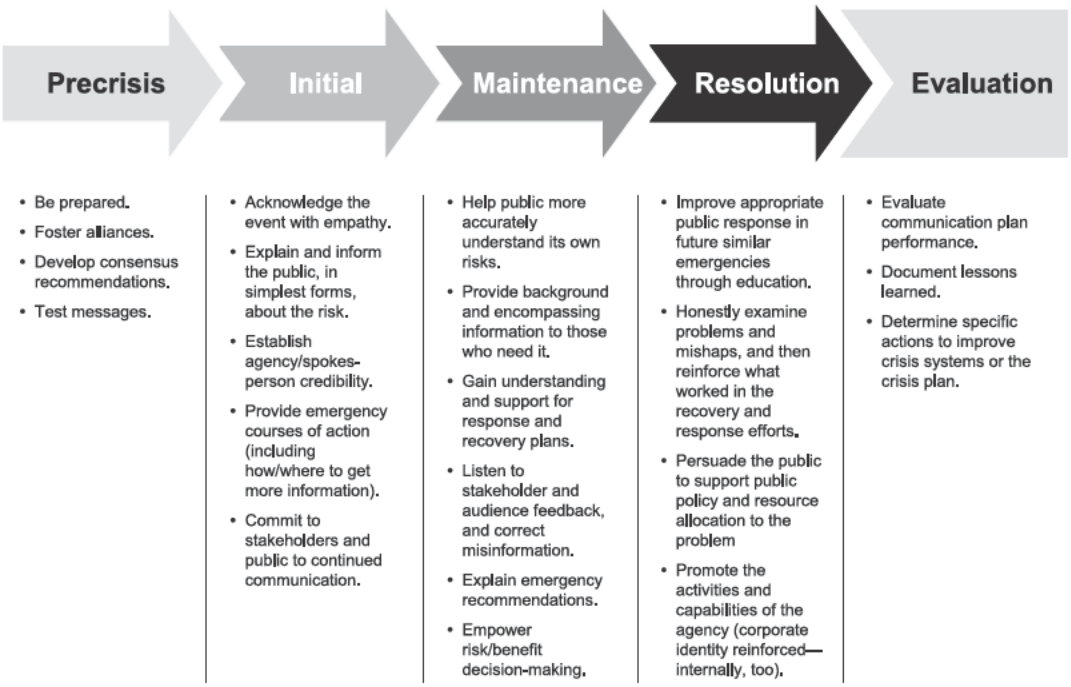
As the crisis evolves, one can anticipate sustained media interest and scrutiny. Unexpected developments, rumors, or misinformation may place further media demands on organization communicators. Experts, professionals, and others not associated with the organization will comment publicly on the issue and sometimes contradict or misinterpret messages. Processes for tracking communication activities become increasingly important as the workload increases.

Resolution

As the crisis resolves, there is a return to stasis, with increased understanding about the crisis as complete recovery systems are put in place. This phase is characterized by a reduction in public and media interest. Once the crisis is resolved, a response organization may need to respond to intense media scrutiny about how the event was handled. In this phase, there is an opportunity to reinforce public health messages while the issue is still current.

During the Interpandemic Period, national, state, and local health communications professionals should focus on preparedness planning and on building flexible, sustainable communications networks. During the Pandemic Period, they should focus on well coordinated health communications to support public health interventions designed to help limit influenza-associated morbidity and mortality.

Figure 1. Crisis Communication Life Cycle



Communication in a Crisis is Different

How people absorb or act on information they receive during an emergency may be different from non-emergency situations (Hecht, Allen, Klammer, & Kelly, 2002). Research has shown that in a dire emergency, people or groups may exaggerate their communication responses as they revert to more rudimentary or instinctual "flight or fight" reasoning, caused in part by the increase of adrenaline and cortisol in the blood system (Reynolds, 2002).

In public safety disasters, all persons will be affected to some extent, emotionally, cognitively, physically, and interpersonally (DiGiovanni, 1999; Norris, 2001; Novac, 2001). Emotional responses will range from terror and shock to blame, anger, and guilt. Cognitive effects will include impaired concentration, impaired decision-making, memory impairment, decreased self-esteem, worry, and dissociation. People are also affected physically, oftentimes experiencing fatigue, insomnia, hyper-arousal, increased physical pain, reduced immune response, headaches, and vulnerability to illness (Brehm, Kassin, & Fein, 2005). Fear, anxiety, and despondency can be reduced to manageable levels by reducing situational uncertainty with information, by giving people things to do which restores a sense of control, and by modeling optimistic behavior (Brehm et al., 2005; Reynolds, et al., 2002; Young, et al., n.d.).

However, it is important to note that individuals will tend to simplify complex information, attempt to force new information into previous constructs, and cling to current beliefs (Brehm et al., 2005; Novac, 2001). Therefore, if the emergency message requires asking people to do something that seems counterintuitive they may hesitate to act. Because people tend not to seek out contrary evidence and are adept at maintaining their beliefs, conflicting or contrary information may be misconstrued to conform to established beliefs (Andreasen, 1995).

Uncertainty and communication

Uncertainty exists as an extension of a situation or in the limitations of the information and knowledge shared about that situation (Brashers, 2001). For example, as the world enters the influenza pandemic alert period the situation itself is ambiguous, unpredictable, and complex. Public health experts monitoring the global situation can not know with certainty whether a potential pandemic virus strain will become more easily transmitted between humans. They can not predict when a pandemic strain will reach their region, and the decision about who should be vaccinated first is complicated by which virus strain ultimately infects the population. However, uncertainty can also be caused by existing information that is not available or is inconsistent. Uncertainty is better or worse tolerated depending on the relevance of the situation to the person. What is at stake?

Perception of risk

The perception of risk is also vitally important in emergency communication. Not all risks are created equally. A wide body of research exists on issues surrounding risk communication (Bond & Smith, 1996; Brehm et al., 2005; Cohen, 2001), but the following emphasizes that some risks are more accepted than others.

- **Voluntary versus involuntary:** Voluntary risks are more readily accepted than imposed risks.

- **Personally controlled versus controlled by others:** Risks controlled by the individual or community are more readily accepted than risks outside the individual's or community's control.

- **Familiar versus exotic:** Familiar risks are more readily accepted than unfamiliar risks. Risks perceived as relatively unknown are perceived to be greater than risks that are well understood.

- **Natural origin versus manmade:** Risks generated by nature are better tolerated than risks generated by man or institution. Risks caused by human action are less well tolerated than risks generated by nature.

- **Reversible versus permanent:** Reversible risk is better tolerated than risk perceived to be irreversible.

- **Statistical versus anecdotal:** Statistical risks for populations are better tolerated than risks represented by individuals. An anecdote presented to a person or community can be more damaging than a statistical risk of one in 10,000 presented as a number.

- **Endemic versus epidemic (catastrophic):** Illnesses, injuries, and deaths spread over time at a predictable rate are better tolerated than illnesses, injuries, and deaths grouped by time and location (e.g., U.S. car crash deaths versus airplane crashes).

- **Fairly distributed versus unfairly distributed:** Risks that do not single out a group, population, or individual are better tolerated than risks that are perceived to be targeted.

- **Generated by trusted institution versus mistrusted institution:** Risks generated by a trusted institution are better tolerated than risks that are generated by a mistrusted institution. Risks generated by a mistrusted institution will be perceived as greater than risks generated by a trusted institution.

- **Adults versus children:** Risks that affect adults are better tolerated than risks that affect children.

- **Understood benefit versus questionable benefit:** Risks with well-understood potential benefit and the reduction of well-understood harm are better tolerated than risks with little or no perceived benefit or reduction of harm.

The principles of risk communication are vital when developing messages during an emergency. Most disaster response planners gauge the severity of a crisis on two factors: the physical impact on people (numbers ill, injured and dead) and property damage (dollars and geographic areas). However, the other measure of a crisis is its emotional toll on the people affected by the crisis. If it's the first emergency of its type—manmade, imposed, or catastrophic—the communication challenges increase.

How the Public Judges Messages in a Crisis

Expect the public to immediately judge the content of an official emergency message in the following way: "Was it timely? Can I trust this source?" and "Are they being honest?" Research shows that there are four basic elements to establishing trust and credibility: expressing empathy and caring; showing competence and expertise; remaining honest and open; and being committed. Empathy and caring should be expressed early in messages and repeated. Being perceived as empathetic and caring provides greater opportunity for your message to be received and acted upon (Sandman, 2002). In a crisis, the message should acknowledge the fear, pain, suffering, and uncertainty being experienced. For most public health professionals, being honest means not being paternalistic in communication but, instead, participatory—giving people choices and enough information to make appropriate decisions. It means allowing the public to observe the process while reminding them that this process is what drives the quality of the emergency response.

Empathy

The concept of empathy is critical to communicating in a crisis. Every person has the innate ability to feel empathy. Have you ever seen a nursery in a hospital where one baby starts to cry and within a minute all of them are crying—that's human empathy. We have the ability to understand what our fellow humans are feeling even if we are not. The challenge for a response official is to believe it is appropriate to acknowledge that pain, after all we are taught to be stoic in our roles.

We must recognize that the people we want to help need us to put into words that we understand the emotions they are feeling at the worst moments of their lives. If we put into words what they are feeling they will know we "get it" and they will trust us more to help them. They may calm down enough to hear what we have to say. And then they will be more likely to listen to our guidance.

Never say "I know how you feel" and think you have expressed empathy. To express empathy means to put into words the actual emotion that someone is feeling. So, if someone said the words "I know how you feel" I would be left wondering, do you really? If the person said, "I understand how anxious you must feel waiting for an answer about your loved one" – then I can be certain the other person has insight about what I'm feeling because I am feeling anxious!

A national leader recently said, "Well, we want to express empathy to the victims and their families." That doesn't work either. Yes, you want

Fast Facts

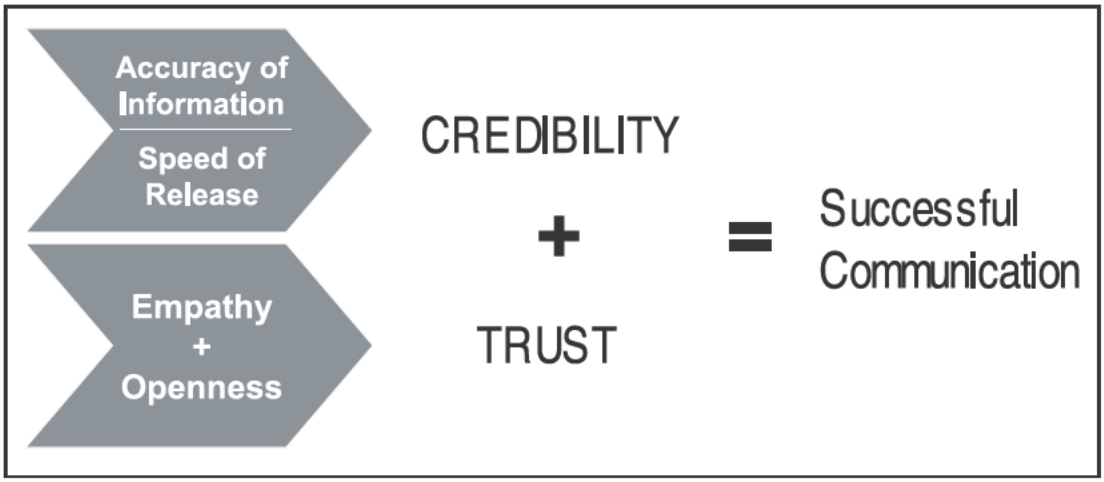
A pandemic may come and go in waves, each of which can last for 6 to 8 weeks at a time. If an influenza pandemic occurs, the virus will spread easily from person to person.
While vaccines and antiviral medications are part of overall pandemic response planning, simple hygiene habits will also be important. Simple steps can help to limit the spread of germs. Parents should model these steps and teach them to their children:

- Wash hands frequently with soap and water (use an alcohol-based hand cleaner if soap and water are unavailable);
- Use a tissue to cover your mouth and nose when you cough or sneeze;
- Use your upper sleeve if you don't have a tissue; and
- Stay at home if you are sick.

(www.pandemicflu.gov)

to express empathy—but that requires taking a moment to put yourself in the other person's shoes and recognize they feel frightened, anxious, confused, or angry and then making a simple statement of recognition of that feeling. Don't worry. You will get it right. Empathy can work in situations that are not tragic, but when we are talking life and death situations, it's usually pretty easy to imagine how others are feeling. Most people want to feel safe, in control of their own fate, and respected by others. Keep that in mind and in most situations you will know what people are feeling. The people counting on you need you to connect with them in that moment (Reynolds, 2004).

Figure 2. Elements of Successful Communication



Developing an Emergency/Crisis Communication Plan

Mitroff (2004), Reynolds (2006) and Seeger (2006) stress that successful communication, especially in a crisis, requires the following five steps:

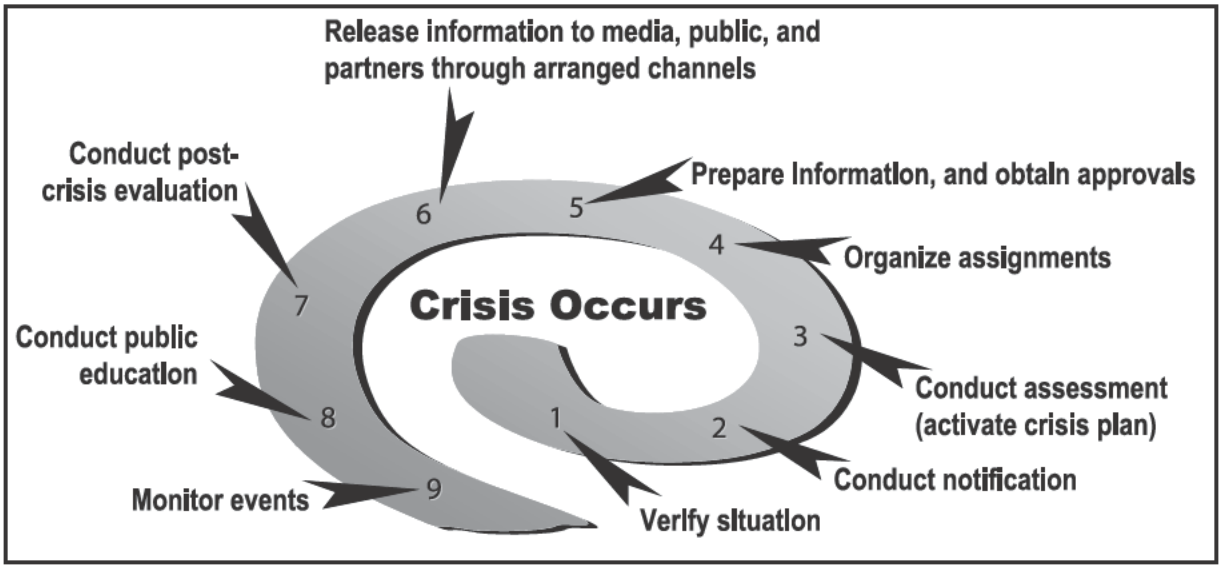
- Execute a solid communication plan;
- Be the first source for information;
- Express empathy early;
- Show competence and expertise; and
- Remain honest and open.

The crisis communication plan must be designed with the worst case scenario in mind. Furthermore, an organization's crisis communication plan should be fully integrated into the overall emergency response

plan for the organization and the local, state, providence, or national response plan. A true public health emergency will involve a number of agencies and departments, and a good plan will reflect that coordination. An important benefit is the opportunity to mobilize shared resources; for example, a city-wide telephone number to respond to public concerns.

The plan is not a step-by-step "how to." Emergency communications plans should systematically address all of the roles, lines of responsibility, and resources needed to provide information to the public, media, and partners during a public health emergency (Watkins, 2002). In the initial phase of a crisis, for example, the communication professional will move through nine steps in the response. These steps will be repeated over and over as the event evolves and may be truncated in some events (Figure 3).

Figure 3. Nine Steps of Crisis Response



Communication is a broad science and an imperfect art. Nowhere in this book is there an implied promise that a population or community faced with the realities of a severe influenza pandemic will overcome its challenges solely through the application of the principles presented here. However, this book does offer the promise that an organization can compound its problems during a severe pandemic if it neglects sound crisis and emergency risk communication planning. Through this book, the reader should expect to gain the following understandings:

- The psychology of a severe pandemic and what kinds of messages the public will need from their public health professionals.

- Why stigmatization occurs and how officials can respond and discourage it.

- The importance of strengthening community hardiness and personal resilience to provide the optimum opportunity for recovery from a crisis.
- How to incorporate loss, grief and mourning rituals in communication to the community while respecting cultural differences.
- Distinguish which populations will be unable to receive general public health emergency messages related to pandemic influenza through mass communication channels during the beginning of an influenza pandemic.
- Recognize the National Incident Management System and the intricacies of the Joint Information Center
- How information technology and the new media influence communication decisions and pandemic preparedness.

Well-planned and well-executed crisis and emergency risk communication, fully integrated into every stage of the pandemic influenza planning and response, can give the organization the critical boost necessary to ensure that limited resources are efficiently directed where truly needed. A severe influenza pandemic will take a physical, emotional, and societal toll on the U.S. population. Crisis and emergency risk communication principles will ameliorate some of the expected negative outcomes.

Checklist: Basic Tenets of Emergency Risk Communication

❑ *Don't over reassure.* The objective is not to placate, but to engender, calm concern.

❑ *Acknowledge uncertainty.* Offer what you know versus what you don't know. Show your distress and acknowledge your audience's distress regarding the uncertainty of the situation.
"It must be awful to hear we can't answer that question right now . . ."

❑ *Express that a process is in place* to learn more. "We have a system (plan, process) to help us respond (find answers, etc)."

❑ *Give anticipatory guidance.* If you are aware of future negative outcomes, let people know what to expect. Example: side effects of antibiotics. If it's going to be bad, tell them.

❑ *Be regretful, not defensive*. Say "we are sorry . . ." Or "we feel terrible that . . ." when acknowledging misdeeds or failures from the agency. Don't use "regret," which sounds like you're preparing for a lawsuit.

❑ *Acknowledge people's fears*. Don't tell people they shouldn't be afraid. They are and they have a right to their fears. Don't tell them they are idiots for their misplaced fear, acknowledge that it's normal, human to be frightened. They aren't experts.

❑ *Acknowledge the shared misery*. Some people will be less frightened than they are miserable, feeling hopeless and defeated. Acknowledge the misery of a catastrophic event and then help move them toward hope for the future through the actions of your agency and actions they too can take.

❑ *Express wishes.* "I wish we knew more." "I wish our answers were more definitive."

❑ *Stop trying to allay panic.* Panic is less common than imagined. Panic doesn't come from bad news, but from mixed messages. If the public is faced with conflicting recommendations and expert advice, they are left with no credible source to turn to for help. That level of abandonment opens the door to charlatans and mass poor judgment. Candor protects your credibility and reduces the possibility of panic, because your messages will ring true.

❑ *At some point, be willing to address the "what if" questions*. These are the questions every person is thinking about and wants to hear answers from experts. It's often impractical to fuel "what ifs" when the crisis is contained and not likely to affect wide numbers of people; it is reasonable to answer "what ifs" if the "what if" could happen and people need to be emotionally prepared for it. However, if you do not answer the "what if" questions, someone with much less at risk regarding the outcome of the response will answer them for you. If you are not prepared to address "what ifs," you lose credibility and the opportunity to frame the "what if" questions with reason and valid recommendations.

❑ *Give people things to do.* In an emergency, some actions communicated are directed at victims, persons exposed or persons who have the potential to be exposed. However, those who do not need to take immediate action will be engaging in "vicarious rehearsal" regarding those recommendations and may need substitute actions of their own to ensure they do not prematurely act on recommendations not meant for them. Simple actions in an emergency will give people back a sense of control and will help to keep them motivated to stay tuned to what is happening (versus denial, where they refuse to acknowledge the possible danger to themselves and others) and prepare them to take action when directed to do so. When giving them something to do, give them a choice of actions matched to their level of concern. Give a range of responses, a minimum response, a maximum response, and a recommended middle response

❑ *Ask more of people.* Perhaps the most important role of the spokesperson is to ask people to bear the risk with you. People can tolerate considerable risk, especially voluntary risk. If you acknowledge the risk, its severity, complexity and legitimate people's fears, you can then ask the best of them, to bear the risk during the emergency and work toward solutions. As a spokesperson, especially one who is on the ground and at some self risk, you can model the appropriate behavior, not false bonhomie, but true willingness to go on with life as much as possible, to make reasonable choices for yourself and your family. Don't be glib, but be stalwart. Your determination to see it through will help others who are looking for role models to help them face the risk too. Americans have great heart, a sense of selflessness, and a natural competitiveness. Sparking those inherent attributes will help people cope with uncertainty, fear and misery.

Empathy, expertise, dedication and follow-through are the elements that build trust. As a spokesperson, you need to quickly build trust and credibility if you hope to have your public health recommendations acted on by the public.

Checklist: Scientific Risk Communication for the Public

Success depends on the interaction of the following factors: pre-existing trust and credibility of the presenting organization; level of foreknowledge in the target audience; message development and spokesperson's presentation; seriousness or relevance of the information to the target audience; competing points of view (adversaries); and follow-up.

Organization's Reputation

- ❑ Different publics trust different information sources
- ❑ 48% of Americans trust CDC as a source for reliable information
- ❑ Perceived competence is a key factor in public's trust to official responses
- ❑ Equitable treatment despite ethnicity or income is vital
- ❑ American's trust their own doctor most for health information (77%) but also trust local health dept. (61%) and local hospital (53%)
- ❑ High-profile events of the past are most likely to form public's opinion of the organization

Target Audience Expertise/Psychology

- ❑ People act on the information they have, even if it is incorrect
- ❑ People take more precautions when they feel threatened or are concerned
- ❑ People act rationally to protect themselves, families, and pets
- ❑ Beware of stigmatization against products, animals, population groups, and nations
- ❑ Find out what the audience knows now and what level of information they want (long-term health issues require more information; short-term crisis health issues require less information and more definitive conclusions)
- ❑ Denial is alive and well (threat must be real, imminent, and actionable)
- ❑ Understand audience by age/culture/level of experience or familiarity with the subject/language/geographic location

Message Development

- ❑ "Alarm" of the day? Be judicious in attempting to educate about risk
- ❑ Controversial decisions based on technical data/science must be explained
- ❑ Action by public should be voluntary with police power a last resort
- ❑ Use third-party validations when possible (consistent message from multiple sources)
- ❑ Association, causation, risk factors, adverse risk, relative risk, theoretical risk, etc., all mean something different to scientists but do not to the media/public
- ❑ Messages that challenge audience beliefs will be resisted
- ❑ Theoretical risks are more distressing than risks stated in whole numbers
- ❑ Statistics perceived as manipulated or convoluted will not be trusted
- ❑ Anecdotes, scenarios and examples are best ways to teach about risk
- ❑ Be careful about risk comparisons whose attributes are not similar (e.g., number of vehicle crashes in three weeks in D.C. versus number of sniper shootings).
- ❑ Present: short, concise, focused messages, then repeat the message consistently, and give positive action steps whenever possible
- ❑ Eliminate jargon
- ❑ Eliminate scientific terms unless they are absolutely vital and can be defined at a level of understanding of a young adolescent.

Spokesperson (Working through the media)

- ❑ The scientist's language and the public/media's language are different
- ❑ Scientists use qualifiers—media (public) want bottomline (in or out, dangerous or safe).
- ❑ Scientists want full explanation—media want highlights and conclusions
- ❑ Scientists attempt to avoid controversy—media want controversy and will focus on negative
- ❑ Scientists want data to be released when it's "seasoned"—the media/public want fresh data NOW.
- ❑ Spokespersons are judged on message and delivery
- ❑ Spokespersons build credibility with empathy, competence (ability to share expert knowledge), honesty, openness, and commitment
- ❑ Tell the truth, always

All Risks Are Not Equal

- ❑ The public hates uncertainty
- ❑ The public hates not being in control of their well-being and that of their family, and pets.
- ❑ Socio-economic impacts can skew public reaction (e.g., my livelihood depends on the recreational park remaining open so Eastern Equine Encephalitis in the community may not be a reason to close operations to conduct control measures like aerial spraying for mosquitoes.)
- ❑ Types of risks more and less tolerated by the public:
  - ❑ Voluntary versus involuntary
  - ❑ Controlled by self or controlled by others
  - ❑ Familiar or exotic? (flu verusus SARS)
  - ❑ Natural origin or manmade (Earthquake versus business or criminal)
  - ❑ Reversible or permanent (Broken leg versus severed leg)
  - ❑ Statistical or anecdotal (1 in 10,000 die from anesthesia versus Aunt Mae died from anesthesia)
  - ❑ Endemic (spread over time) or epidemic (catastrophic) (car crashes versus plane crash)
  - ❑ Fairly distributed or unfairly distributed (tornado deaths versus terrorist bombing)
  - ❑ Generated by trusted institution or mistrusted institution

Media Advocacy Groups or Competitors

- ❑ Is litigation a possibility? Then, public reactions may not be consistent with the official assessment of the risk
- ❑ Is it opinion or scientifically based information being provided?
- ❑ Be careful to correct message but not disparage the source if the source is accepted by target audience
- ❑ Don't expect logic and reason arguments to outweigh emotional or common sense messages

Follow-up: Monitoring, Adjusting, and Commitment

- ❑ Environmental scanning needed to quickly find out if public is: misunderstanding, believing rumors, or spreading myths (Internet is hotbed for these).
- ❑ Media and public hotline calls should be assessed for trends
- ❑ New concerns should be addressed quickly
- ❑ Public access to additional information and personal consultation is best

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Module 2 • What is Different

Severe Influenza Pandemic: What is Different?

dif•fer•ent (dĭf´ər-ənt, dĭf´rənt)
adj.
1. Unlike in form, quality, amount, or nature; dissimilar: *took different approaches to the problem.*
2. Distinct or separate: *That's a different issue altogether.*
3. Various or assorted: *interviewed different members of the community.*
4. Differing from all other; unusual: *a different point of view.*

Which killed more people, World War I or the 1918 influenza pandemic? World War I claimed an estimated 16 million lives. The influenza pandemic that swept the world in 1918 killed an estimated 50 million people. One fifth of the world's population was attacked by this deadly virus. Within months, it had killed more people than any other illness in recorded history.

The [outbreak] emerged in two phases. In late spring of 1918, the first phase, known as the "three-day fever," appeared without warning. Few deaths were reported. Victims recovered after a few days. When the disease surfaced again that fall, it was far more severe. Scientists, doctors, and health officials could not identify this disease which was striking so fast and so viciously, eluding treatment and defying control. Some victims died within hours of their first symptoms. Others succumbed after a few days; their lungs filled with fluid and they suffocated to death.

The [virus] did not discriminate. It was rampant in urban and rural areas, from the densely populated East coast to the remotest parts of Alaska. Young adults, usually unaffected by these types of infectious diseases, were among the hardest hit groups along with the elderly and young children. The flu afflicted over 25 percent of the U.S. population. In one year, the average life expectancy in the United States dropped by 12 `years. It is an oddity of history that the influenza epidemic of 1918 has been overlooked in the teaching of American history.

(National Archives: Online Exhibit: The Deadly Virus: The Influenza Epidemic of 1918. Available from http://www.archives.gov/exhibits/influenza-epidemic/index.html.)

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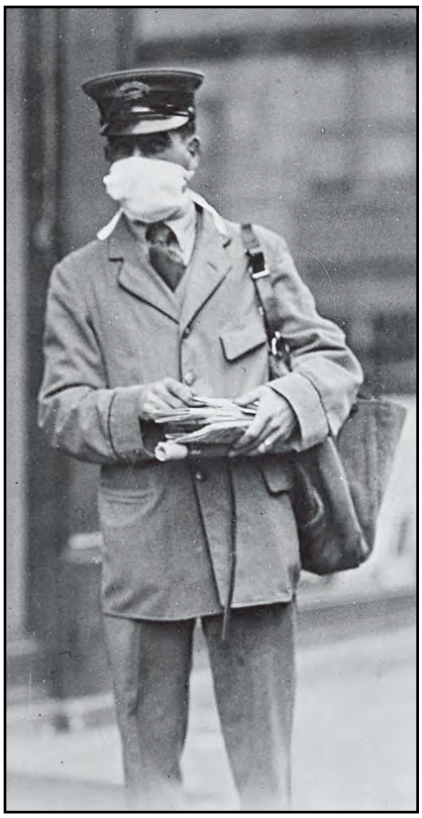
We are the descendants of the survivors of the 1918 influenza pandemic. Historians, like those at the National Archives, believe it's an oddity that so little has been written about this worldwide killer. Only since the re-emergence of the avian influenza H5N1 virus in this decade has

Objectives:

- Appraise the range of challenges presented by a severe influenza pandemic and the communication steps that could be taken.
- Formulate communication priorities based on a full exploration of the context of a severe influenza pandemic.
- Recognize communication themes required to fulfill severe influenza pandemic response goals of fewer disease cases, spread over a longer timeframe with fewer deaths.



so much attention been paid to that enormous public health tragedy. It was the very voraciousness of this virus that condemned it to the dusty archives in the first place. It swept the globe and crowded the graveyards. The world, post-1918, had no need to give witness to this affront to the human race. After all, it was an absolute, shared experience. Who didn't know about "the 1918 plague?" It has taken nearly a century and a new influenza threat to emerge to make us now look both backward and forward with renewed interest. The public health question is: "In a severe influenza pandemic what is different?"

A pandemic is a global disease outbreak. Influenza pandemics occur when a new influenza A virus emerges for which there is little or no immunity in the human population, begins to cause serious illness and then spreads easily from person-to-person worldwide. This makes it a dreaded disease, even in this era of advanced medical technology. Historically, the 20th century saw 3 pandemics of influenza:

- The 1918 influenza pandemic caused at least 675,000 U.S. deaths and up to 50 million deaths worldwide
- The 1957 influenza pandemic caused at least 70,000 U.S. deaths and 1-2 million deaths worldwide
- The 1968 influenza pandemic caused about 34,000 U.S. deaths and 700,000 deaths worldwide.

Influenza viruses do not respect distinctions of race, sex, age, profession or nationality, and are not constrained by geographic boundaries. The next influenza pandemic is likely to come in waves, each lasting months, and pass through communities of all sizes across the nation and world. While a pandemic will not damage power lines, banks or computer networks, it will ultimately threaten all critical infrastructure by felling ill essential personnel from the workplace for weeks or months.

This makes a pandemic a unique circumstance necessitating a strategy that extends well beyond health and medical boundaries, to include sustaining critical infrastructures, private business in all sectors, the movement of goods and services across the nation and the globe, and economic and security considerations. *The National Strategy for Pandemic Influenza* (White House, 2005) guides our preparedness and response to an influenza pandemic, with the goal of:

1) stopping, slowing or otherwise limiting the spread of a pandemic to the United States;

2) limiting the domestic spread of a pandemic, and mitigating disease, suffering and death; and

3) sustaining infrastructure and mitigating impact to the economy and the functioning of society.

A pandemic will require planning, preparedness, and action on the part of many individuals, institutions, and industries not accustomed to responding to health crises. The Department of Health and Human Services (HHS) Secretary, Mike Leavitt, stated that "communication is the heart of our planning" for a pandemic (www.pandemicflu.gov, 2006). We must work to ensure there is clear, effective and coordinated risk communication, domestically and internationally, before and during a pandemic. This includes identifying credible spokespersons at all levels of government to effectively coordinate and communicate helpful, informative messages in a timely manner. We must also communicate to individuals, in the pre-pandemic period, infection control behaviors and the specific actions they will need to take during a pandemic, such as self-isolation and protection of others if they—themselves contract influenza.

Understanding what an influenza pandemic is, what needs to be done at all levels to prepare for a pandemic, and what could happen during a pandemic, helps us make informed decisions, both as individuals and as a nation. Should a pandemic occur, the public must be able to depend on its government to provide scientifically sound public health information quickly, openly and consistently.

While the basic tenets of Crisis and Emergency Risk Communication (CERC) fully apply to pandemic influenza (Reynolds, Galdo, Sokler, 2002; Reynolds, 2004; Reynolds & Seeger, 2005), the very magnitude of this impending challenge requires communication professionals to delve deeper. What will be different in a severe pandemic and what specific CERC activities should be intensified?

Challenges from a severe influenza pandemic will wreak havoc on us, our communities, nation, and the world at the biological, psychological/spiritual, and sociological levels. Communication professionals must begin to meet these challenges, where they can, with available tools and research. Biological, psychological and sociological challenges will *not* affect all individuals or communities equally and may become more or less critical in time as preparedness strides are made (e.g., breakthroughs in vaccine development). However, our communication planning and activities should consider each of these challenges. For the purposes of this communication planning, the assumption is that we must prepare to respond to a severe pandemic. To prepare for anything less would be folly.

Challenges from a severe influenza pandemic will wreak havoc on us at the biological, psychological and sociological levels.

Few other natural risks so equally threaten the entire world.

Biological Challenges

Little or no immunity worldwide

When a pandemic influenza virus emerges, its global spread is considered inevitable. Death rates for a severe pandemic will be high and largely determined by four factors: the number of people who become infected; the virulence of the virus; the underlying characteristics and vulnerability of affected populations; and the effectiveness of preventive measures.

Preparedness activities should assume that the entire world population is susceptible. Most people alive today have not lived through a threat similar to that posed by severe influenza pandemic. Humans are adept at engaging their psychological defense mechanisms to avoid thinking about risks. They do so when they speed down the interstate to work or indulge in a banana split though they have high cholesterol and diabetes. Denial allows us to continue to function in a risky world. Even so, few other natural risks so equally threaten the entire human race with the stark possibility of widespread death within a few short weeks as does a severe influenza pandemic. Countries might, through measures such as border closures and travel restrictions, delay arrival of the virus, but they cannot stop it. Therefore, we must take steps to prepare as individuals, as families, as communities, and as a nation.

When a threat is not seriously looming, however, only a quarter of the U.S. population will engage in efforts to prepare for an emergency (American Red Cross, unpublished data, 2005). People ready to prepare expect guidance from responsible organizations now. We must make every effort to reach those interested citizens with the best, most accurate, and useful information to help them prepare. They will expect clear action items.

A modest portion of the 75% of the population not engaged in preparedness efforts will be interested in information about the threat, but will not take any action to prepare early. The majority of the population will have little interest—that is, until the threat seems real. Threats become real to different people at different times. Unfortunately for some, the threat will not become real until it is too late. For the "just-in-time" preparers, it will be important that they know where to get life-saving information quickly. Much of the early preparedness public outreach should build awareness about who can give them credible information when they want it and where. The government website, PandemicFlu.gov (available day and night around the world

and updated regularly), is an example of such a tool. The national website, supplemented by local sources of information, should be widely advertised and reinforced in all messaging.

Ideally disaster response officials would prefer to have everyone well prepared in advance of a pandemic. Despite our best efforts, that is not likely to happen. Instead, we must engage the "early preparers" and ask them to help when the "just-in-time" preparers feel the threat is real. The "early preparers" may be the neighborhood leaders, or the first person to bring a preparedness checklist to their workplace, their church, or their children's schools. Research following Hurricane Katrina reinforces that women are more likely to prepare for disasters than men (Seeger, 2006). Accordingly, women should be a focus of preparedness communication outreach.

More persons are high risk

More than 90 million people in the United States live with chronic illness. More than 36 million people in the United States are 65 years of age or older. People with chronic illness, suppressed immune systems, older adults, pregnant women and young children are at greater risk of serious illness, complications, and death from seasonal influenza, and will presumably be so from a pandemic influenza virus as well. Although no one can be certain which subpopulations will be hardest hit, those who are already vulnerable because of current health conditions or age may feel emotionally vulnerable. They may need special guidance on how they can protect themselves.

Communication activities before a pandemic should include outreach to these populations through health associations and in health-care settings. Concerned family members or caregivers should also be alerted to any special concerns for these populations and directed to guiding information. People who are traditionally targeted to receive seasonal influenza vaccine may not understand and may even feel abandoned if they do not receive the vaccine early in the pandemic. The potential for mixed messages that confuse the public is high if seasonal influenza occurs at the same time the nation is being urged to prepare for pandemic influenza. Messages must be delivered scrupulously to always make the distinction between seasonal and pandemic influenza. Populations at higher risk from seasonal influenza must continue to be the focus of outreach because of their potential and perceived vulnerability to pandemic influenza.

Disaster response officials would prefer to have everyone to be well prepared in advance of a pandemic. Despite our best efforts, that is not likely to happen.

It is very different to tell a grandmother and her grandchildren that she is not getting the early vaccine for pandemic flu.

When a pandemic influenza vaccine becomes available, communicators should take time to explain who will receive the earliest doses of vaccine, especially if these groups differ from those who are typically recommended to receive seasonal flu vaccine earliest. It is logical to determine that older persons, for example, should not be first in line for the earliest vaccine during a flu pandemic, in order to vaccinate law enforcement and health care workers so that they can stay on the job. However, it is very difficult to tell a grandmother and her grandchildren that she is not getting the early vaccine for pandemic flu as she does during seasonal influenza outbreaks.

Communication messages will have to make both logical and emotional appeals for understanding. Societal-level decisions that put the greater good for the greater number first can still be a hard pill to swallow. Community role models (i.e., well-known people with similar characteristics to those who do not receive the vaccine earlier) could publicly express their willingness to step back, at some risk to themselves, so the community will fare better. Any personal sacrifice made by people adhering to public health recommendations should be acknowledged and reinforced through expressions of thanks. Anything less will engender resentment, a sense of privilege for some, and possible non-adherence to further public health and infection control guidelines for pandemic influenza.

Evolves in waves

Perhaps the most daunting aspect of pandemic influenza is that it will likely occur in two or three waves of 6 to 8 weeks duration in a community over about an 18-month timeframe. Until the pandemic unfolds, one can not predict which wave could be most severe, strictly from the biological nature of the virus, or how it does or does not mutate between waves. Facing the virus during the first wave will be a traumatic experience for a community. Knowing that it will be cycling around a second or third time could be severly demoralizing.

Although it may seen counterintuitive, people should be given even the very worst news about what they are facing as quickly as possible without softening the news. Soft-pedaling what could be the worst event of their lives won't increase the credibility of response organizations in the long run. Most people will use the information to adapt their environments and engage coping strategies. The fact that the virus will burn through a community more than once should be made clear *before* the pandemic begins. Information should focus on community cooperation and personal resilience. As the pandemic begins, continued emphasis on the importance of community measures before, during,

and after each wave may mitigate the impact of the first and subsequent waves. Acknowledge shared misery and point people in the direction of things they can do to control their situation.

Psychological/Spiritual Challenges

Uncertainty

Planning for a severe pandemic is fraught with uncertainty: when will it happen, where will it begin, who will be at greatest risk of death, will vaccines work, will they get to us in time, will antivirals work, will there be enough, how will I care for my kids if schools close, what if we put effort into this and the threat from H5N1 fades, what would I do if I couldn't drive my taxi or open my restaurant, will people help each other or take advantage of each other, are we emotionally prepared for death at this magnitude?

Uncertainty exists as an extension of a situation or in the limitations of information and knowledge shared about that situation (Brashers, 2001). As the world remains in the third stage of the influenza pandemic alert period, the situation is ambiguous, unpredictable, and complex. Public health experts monitoring the global situation can not and do not know with certainty whether, or if, the H5N1 influenza strain will become more easily transmitted between humans, or which influenza A strain has the potential to become a pandemic virus strain. The development of a pandemic influenza vaccine, as well as decisions regarding who gets the vaccine and when, is dependent on which strain of the virus adapts to fit pandemic qualifications. Neither can public health experts predict when a pandemic strain will reach the United States. Uncertainty can also be caused by inconsistent information or information not available to individuals. Therefore, health officials should rapidly share what they know when they know it to reduce the anxiety of uncertainty.

Uncertainty can be related to the probability of something occurring: uncertainty is at its highest when all outcomes are equally likely. Uncertainty, however, is not only a function of assessing probabilities; uncertainty management occurs within a context of self-efficacy, value judgments, and assessments of intention. Uncertainty is better or worse tolerated, depending on the relevance of the situation to the person, and how one determines what is at stake.

Uncertainty can increase anxiety if there is a perception of danger or threat (Brashers, 2001). To reduce anxiety, people engage in information gathering and processing to look for options and confirm or disconfirm their beliefs. The information used in this process does not have to be accurate. To improve coherence and reduce anxiety, persons may be

Individuals can manage stress at a level that will reduce hopelessness and helplessness.

selective about the information they attune to in attempting to reduce uncertainty. They may discount information that is distressing or overwhelming. People who seek information to reduce anxiety from dangerous uncertainty may choose a familiar source of information over a less familiar source, regardless of accuracy, and may be more attentive to behaviors and language styles of persons in power (Brashers, 2001). Persons less certain of their ability to process information involving complex situations may choose an advocate to collect and interpret information for them.

Response organizations and communication professionals should attempt to reduce uncertainty when and where they can. A fair message in the earlier phases of pandemic alert is to simply acknowledge the uncertainty. One must also be prepared to answer "What if" questions. This is how people begin to manage their anxiety. Asking "what if all the caskets are used up in town?" is a legitimate question for someone who is processing the threat on a community or personal level. Any reply to that question that discounts this type of thinking or laughs at the questioner will quash personal preparedness efforts.

The greatest uncertainty for communities and individuals occur in the earliest phases of a pandemic. At that time, messages should include their questions, explain why the answer is not available and commit to a process to try and answer their questions. If response officials do not, someone else will answer the question and it may be someone who is not invested in a positive outcome for the community.

Community hardiness and personal resilience

The public must feel empowered to take action in the event of a crisis to reduce the likelihood of extreme stress, victimization and fear (Tierney, 2003). Physical and mental preparation will relieve anxiety despite the expectation of potential injury or death. An "action message" can imbue people with the feeling that they can improve a situation and not become passive victims of threat. By giving persons who are stressed a restored sense of control, individuals can manage stress at a level that will reduce hopelessness and helplessness. Altering self-talk and offering helping tasks can be important during the recovery phase of a severe pandemic.

Community hardiness depends on community cohesion. Nonetheless, conflict is inevitable in a group (Zastrow, 2001). The degree of task conflict and relationship conflict in a group depends on the level of trust among group members. Task conflict (e.g., disagreement about how to determine which social events should be cancelled) can add to cohesiveness and improve the performance of the group. In contrast,

relationship conflict (e.g., the mayor acts disdainfully toward the community activist who may join the mayoral race against him next year) is disruptive to group achievement. Relationship conflict in a low-trust group causes biased information processing, self-fulfilling prophecies, and personal attacks. As trust grows, relationship conflicts are moderated and tasks can be accomplished. Conflict in a group can be addressed through role reversal, empathy, inquiry, "I"-statements, disarming, positive reinforcement, and mediation (Zastrow, 2001). However, these communication strategies for handling intragroup conflict are appropriate only when time is not a factor. When time for settling group conflict is constrained, such as in the beginning of a pandemic influenza wave, prosocial behaviors such as helping others and expressing empathy increase community or group cohesiveness.

Communication messages surrounding preparedness and response to a severe pandemic should acknowledge different emotions that may arise among the community in addition to stressing the importance of helping others. Likewise, refocusing individuals and groups on the task to be accomplished can reduce harmful conflict.

Number of deaths out of time

About 2.5 million people die in the United States each year. In a severe pandemic, an estimated 2 million people in the Unites States could die from influenza and its complications, in a span of 18 months (HHS, 2006). This 2 million is *in addition to* the annual rate. If children and young adults die in high numbers during a severe pandemic, the challenge to grief recovery will be great. These "deaths out of time" are unnatural, hence, the grief process will be challenging. If accepted bereavement rituals are ignored or cut short through necessity, (i.e. due to recommendations limiting social interaction) the emotional toll could be even greater.

Communication activities before a pandemic should focus on understanding community bereavement norms to ensure that messages during the pandemic are respectful of those norms. No message can prepare a community for the magnitude of deaths over a short period. However, messages being developed now, that discuss the course of the disease and proper handling of bodies, should be sensitive in tone. What is now an intellectual exercise will not be when people are dying, especially people in your own community. A clinical tone is appropriate, but be sensitive to how people will react to what they are reading and avoid sensational descriptions.

If children and young adults die in high numbers during a severe pandemic, the challenge to grief recovery will be great.

When deaths occur, acknowledge loss and help redirect people to coping tasks—give people things to do to contribute to the community and family well-being. Encourage symbols of mourning, but remember, community memorial services should be held only once the outbreak is over.

Sociological Challenges

Behaviors of others impact infection rates

When an infectious disease is transmitted easily from person to person, the behaviors of others can either protect or threaten your health. When people are dependent on each other's behavior for their very lives, the potential for conflict is present. Established public health messages related to infectious disease prevention may diffuse disagreement regarding preventive measures, as they already stress handwashing, cough etiquette, and staying home from work or school if ill.

During a severe pandemic, public health measures to reduce the spread of disease may also include well household members staying home when any member of the family is ill with influenza, school or business closings, or limiting group gatherings. As the cost (e.g., loss of social contact or esteem, pay and profit) of a behavior increases, it may be more difficult for people to take recommended actions, even at the risk of severe illness or death. Some people will engage in denial (e.g., it won't happen to me) and refuse to alter their behaviors. Individuals with high-risk, high-adventure personalities will also not alter their behaviors (e.g., sneezing on each other is Russian roulette). Some will expect the burden of the mitigation measures to be borne by others, not themselves, and will not alter their behaviors (e.g., somebody should do it to protect us, but I'm too busy/important to be bothered). Some will be very concerned about the risk but will believe that they can't alter their behaviors (e.g., if I don't get in my taxi even though I'm sick, I won't be able to put food on the table). While community mitigation activities to slow the spread of pandemic influenza will not need 100% cooperation, communication messages must be directed at everyone.

Social and community norms may be challenged. People in the United States have a strong work ethic, with a concomitant belief that one should "tough it out" and come to work when ill. In a severe pandemic, that might be true if you sprained your ankle rollerblading over the weekend, but not true if you have fever, muscle aches, and the start of a cough. People will need permission to go against societal norms that could hurt them during a pandemic; they will need to hear from people who influence them that they are taking the right step by staying

home. Formal and informal messaging, including public service announcements, should reinforce this. Of course, barriers to adherence generated by something other than cultural dissonance could prevent people from taking a life-saving action. These must also be addressed and communicated (e.g., adjustments to sick-leave policies).

Communication messages before a pandemic must help people understand disease transmission and the reasonableness of recommended actions, and stress personal responsibility. These messages should also acknowledge the "cost" to the individual or industry. Community pressure to conform to life-saving behaviors can also be effective. When a pandemic strikes and community mitigation activities begin, communicators must praise adherence and pass along solutions to people who want to comply but believe they can not.

Early inadequate vaccines/antivirals

For the majority of the population, a severe pandemic will be met with no or little vaccine, especially during the first wave. The same will be true for antivirals. There is no communication task more difficult than telling people that there's a "fix" to a problem but they will not receive it now nor possibly ever. This prospect is so daunting that any misstep in communication and execution could create an atmosphere necessary for chaos.

There are, however, some primary steps that should be taken to avoid this possibility:

- Involve community members in discussing realities of a severe flu pandemic. However, what sounds fair in early pandemic alert phases, absent a threat, may not sound so fair when the threat presents itself. Be aware that points of view can and will change.

- Ensure that early messages stress the realities of limited resources. However, do not refer to persons who receive antivirals/vaccines first as "priority or essential groups." (In early formative research efforts, these were "loaded" words among the public.)

- Be transparent. Before being asked, ensure that the criteria used for deciding who will need the first supplies are available to the public. Explain that some people are at greater risk because they are caring for sick persons or critical to the socioeconomic infrastructure of the community because they keep the city water pumping. Show the value of the allocation criteria to the community as a whole.

- Account for vaccines and antivirals publicly – tell the community who is receiving them.
- Do not change established vaccine or antiviral allocation guidelines without first telling the community that you are adjusting the supplies based on new information/criteria.
- Be certain to avoid any hint of privilege or favoritism related to allocation. (Be prepared to be accused of both—respond with empathy and facts.)
- Help people who won't be getting vaccine by telling them interim steps they can take to avoid illness.

Openness, empathy, and consistency will be critical. Tell people all you know as soon as possible, acknowledge fear, anxiety, and helplessness, and don't alter messages unnecessarily. Appeal to individuals' sense of fairness and contribution to the greater good. Never promise what is outside your control to achieve, and keep promises.

Situational awareness difficult/new media

Expect communication chaos and conflicting information. Be prepared to communicate provisional information and acknowledge that the information could change as the pandemic evolves and more is learned. This is especially important when first learning of pandemic cases in the community. Beware the "numbers." The public and the media will expect to hear reports of numbers of flu cases or deaths in the initial period of a pandemic event, until the numbers are overwhelming and, therefore, less meaningful. During the resolution phase, numbers will become important again. Provide official reports of numbers of clinical cases and deaths only once a day. Use the established reporting systems and stick to them, despite the availability of information from multiple sources and challenges to official numbers by media. Explain the reporting system and the need for precise, official records, even in the face of lags in reporting.

During Hurricane Katrina, the CDC reported the number of persons who became ill and died from *Vibrio spp*. The pathogens are of great threat to persons with weakened immune systems, persons with chronic liver disease, and the elderly. When the official reporting system (established through the emergency operation center) was bypassed and unofficial lab results were released publicly, the public received mixed messages. Although information, especially that which helps inform

health decisions, should be shared quickly, total numbers of cases and deaths do not fall into this category and therefore, official channels should be created and upheld.

The ability to be flexible is important during the response to a severe pandemic. Flexibility should also be coupled with some level of skepticism about first reports of information, which are typically wrong. Recent information and communication technologies further complicate the struggle for situational awareness. Instant messaging, text messaging, web searches, weblogs, and camera phones may provide access to valuable situational information reports from across the world but may also provide erroneous or harmful information. Media literacy, identification of trusted information sources, and media and rumor monitoring will be critical in launching and maintaining a successful communications campaign during an influenza pandemic.

Response organizations must work *before* a pandemic to establish their credibility, answer relevant questions quickly, adapt to new technologies, and admit mistakes. During a pandemic, this increased credibility could make the difference between life and death.

Health/Medical Disruptions

A substantial percentage of the world's population will require some form of medical care during a flu pandemic. Nations are unlikely to have the staff, facilities, and equipment needed to cope with large numbers of people who suddenly fall ill. The need for vaccine is likely to outstrip supply. The need for antiviral drugs is also likely to be inadequate early in a pandemic. A pandemic can create a shortage of hospital beds, ventilators, and other supplies. Surge capacity treatment centers at non-traditional sites, such as schools, may be created to cope with demand.

A severe pandemic may strain the health care system in hundreds of communities at the same time, making redistribution of health care resources difficult. Community planning to expand medical surge capacity (e.g., health care personnel and intact supply chains for medical supplies) should be ongoing and is a critical preparedness step.

Individuals and populations who traditionally have limited access to health care will be that much more vulnerable during a pandemic. In addition, efforts to distribute vaccines and antivirals in such populations may be hampered by the scarcity of customary sources of medical care.

Individuals and populations who traditionally have limited access to health care will be that much more vulnerable during a pandemic.

Unfamiliarity with isolation and quarantine

While countermeasures such as vaccines and antivirals are optimal ways to control the spread of a pandemic influenza virus, we must plan for the possibility that vaccines will not be available during the first wave of a pandemic and supplies will be limited in subsequent stages. Some early models demonstrate a layered approach, with a number of mitigating measures including school closures, workers remaining home if ill, voluntary household quarantine (if one member is ill, household members stay home for at least two incubation periods), and targeted prophylaxis with antivirals, significantly reduce or slow disease attack rates in a community (WHO, 2006). Models showed success within the following conditions:

- Severe pandemic
- At least 30% of the community undertaking measures (not all members must take all measures for the approach to be effective)
- Measures are initiated early in the community outbreak

The federal government is conducting validating research for these models and is working to identify potential unintended consequences of these approaches (i.e., risk versus benefit). They are considering the emotional and fiscal impact on a community taking any or all of the measures, and segments of a community most impacted by the measures.

Voluntary quarantine, (i.e. exposed persons removing themselves from contact with well, unexposed persons) at the level of families and individuals is a legitimate public health intervention. It was successful in the public health response to the SARS outbreak. Because influenza infection can be transmitted by infected people who do not show symptoms of illness, and because viral shedding occurs before the onset of symptoms of illness, quarantine may be a useful measure in a influenza pandemic as well.

The communication challenge is in re-introducing the concept of quarantine, saddled as it is with outdated connotations due to disuse. How do communications officials promote quarantine in today's society and convince the public that this intervention is worthwhile? People will need to understand the difference between isolation (of someone who is sick) and quarantine (of someone who is not sick but could be due to contact with a sick person). Communicators must manage rumors

related to "imposed" quarantine. People will need clear and concise information to help them learn and understand the concepts related to virus transmission, infectious disease controls, clinical symptoms versus pre-clinical viral shedding, and incubation periods.

Stigmatization

Stigmatization can affect a product, an animal, a place, and an identifiable group of people. One is stigmatized by an infectious disease when the risk is *not* present in the minority population but people associate the risk with that population group. There are two ways to eliminate stigma in a severe pandemic: raise awareness and understanding among the dominant group about stigmatization or wait for the pandemic to become so pervasive in the dominant group that it eliminates the distinctions of race, ethnicity, profession, or other identifiable characteristics. Even if the dominant group is swept up by the pandemic and stigmatization lessens, stigma is still there and may return in the resolution phases of a pandemic. As misery and anger turns to fault-finding and blame, the perceived "progenitors" of the pandemic could be stigmatized once again. Therefore, communication professionals must intercede.

If a population group becomes stigmatized, members of this group may experience emotional pain from the stress and anxiety of social avoidance and rejection. Stigmatized persons also have been subject to limited access to health care, education, housing, and employment (Heatherton et al., 2000) and may even be victims of physical violence.

Communication professionals must help counter potential stigmatization during a pandemic. They must be cautious about images they share repeatedly and understand that constant portrayal of a segment of the population in images may contribute to eventual stigmatization. If stigmatizing statements or behaviors appear, public health officials must offset this with accurate risk information that people can understand, and speak out against the negative behavior.

Seasonal *versus* avian *versus* pandemic

- *Seasonal (or common) flu* is a respiratory illness that can be transmitted from person-to-person. Most people have some immunity, and a vaccine is available.

- *Avian (or bird) flu* is caused by influenza viruses that occur naturally among wild birds. The H5N1 variant that is currently circulating Asia and parts of Europe and Africa is deadly to domestic fowl and can be transmitted from birds to humans. Humans have no immunity and no vaccine is available.

During the 1918 influenza pandemic, home remedies were as prevalent as they were ineffective. Nebraska's *Hastings Tribune* recorded that some Nebraskans wore garlic amulets. Vick's VapoRub was recommended. So were Vacona, a medicated salve, and something called Dr. Pierce's Golden Medical Discovery.

—The Great Influenza Pandemic of 1918: State by state, PandemicFlu.gov

- *Pandemic flu* is virulent form of a flu virus that causes a global outbreak, or pandemic, of serious illness in humans. There is no immunity, but unlike the current H5N1 strain, a defining feature of pandemic flu is that the disease spreads easily and quickly from person to person. H5N1 has the potential to become a pandemic strain but it is not certain that it will do so any more than another novel influenza A virus. What is certain is that influenza pandemics occur in the course of humanity. At some point we will experience a flu pandemic. Less certain is when. Currently, there is no pandemic flu and no pandemic flu vaccine.

Seems simple enough? Messages around these three different viruses can be and are confused. For example, some people incorrectly believed that their seasonal flu shot would fully protect them from pandemic flu. Others don't understand why the medical and public health communities insist on splitting hairs about avian versus pandemic flu. Avian influenza H5N1 has the *potential* to mutate into a pandemic strain. It could also mutate to become nothing more serious than it is now, or even mutate to a less harmful influenza virus than it is now. Unfortunately, incorrect assumptions regarding avian influenza virus mutating into a pandemic strain are sometimes perpetuated in the media and to the public through the continued use of these terms interchangeably. The tougher concept, and part of the reason behind the interchangeability, is the difficulty in accepting that an influenza virus strain that we have not yet identified could be our next pandemic strain.

Despite annual vaccination programs and advanced medical technologies, an estimated 36,000 seasonal influenza deaths and 226,000 hospitalizations occur each year in the United States (HHS, n.d.). Communication professionals must counter misperceptions if we want the public to act. The Department of Health and Human Services is launching a series of communication activities to help people understand the current risks of seasonal influenza and to avoid confusion with avian and pandemic influenza.

Home remedies—fraud

Today, potential remedies range from nutritional supplements to air filters. What works and what doesn't must be assessed quickly and shared with the public. While some alternatives may be worth consideration, the potential for widespread fraud for monetary gain is high. When people are confronted with an uncertain threat and known countermeasures are in short supply, they will search for alternatives. In early 2006, the U.S. Food and Drug Administration (FDA) issued warning letters to nine companies marketing bogus flu products who claimed their products, of which eight purported to be

dietary supplements, could be effective against preventing avian flu or other forms of influenza. Examples of the unproven claims cited in the Warning Letters include: "prevents avian flu," "a natural virus shield," "kills the virus," and "treats the avian flu." These alternative therapies are promoted as "natural" or "safer" treatments that can be used in place of an approved treatment or preventive medical product. FDA was not aware of any scientific evidence that demonstrated the safety or effectiveness of these products for treating or preventing avian flu. The agency issued the warning letters to the firms marketing the products due to concern that the use of these products could harm consumers or interfere with conventional treatments. There are currently initiatives in place to deter counterfeiters and sellers of fraudulent or phony products that claim to prevent or treat avian flu. After all, the use of *unproven* flu cures and treatments increases the risk of catching and spreading disease rather than lessening it because people assume they are protected and safe when they are not.

Communications professionals should widely distribute messages about the FDA's initiatives and its ruling regarding fraudulent flu products. Individuals have a strong desire to learn and adopt personal protective actions—actions people can take to protect themselves and their families during a pandemic. We must offer credible information when individuals want it or risk them finding dubious advice elsewhere with potentially negative outcomes.

Conclusion

What is different in a pandemic? That question might be answered with, "What is not?" A severe influenza pandemic may be one of the most complex communication challenges we face. Communication professionals ultimately will want to help people help themselves and their communities during a severe pandemic. For those ready for these messages now, make sure information is widely available by posting and publicizing the government website, fact sheets, brochures, and recommendations.

For others, interest in preparedness will likely begin late in pandemic alert stage 4 and peak late pandemic alert phase 5. However, the distinctions among WHO pandemic alert phases 4, 5, and 6 will be lost on most of the public. Therefore, the bulk of communication work must be done now, in advance of phases 4, 5, and 6 to be most effective. During phases 4 and 5, the communication response will depend on the speed with which subject matter experts can answer novel situational questions not anticipated now. Therefore, communication professionals must be integrated into all areas of planning and response.

Individuals have a strong desire to learn and adopt personal protective actions—actions people can take to protect themselves and their families during a pandemic.

Your public message in a crisis must be:

Simple
Timely
Accurate
Relevant
Credible
Consistent

Before, during, and following a pandemic, messages must be sensitive to individuals' perceptions of honesty and equity. Most people carry a "just world" view and believe their institutions and neighbors should be fair and equitable in their behavior toward them. Beware of trying to protect people from hard facts. When sugar-coated, the awful truth feels more like a lie. Express empathy in messages early and often, give people things to do, and be respectful. To do less invites confusion, mistrust, and anger.

Compelling questions that can't be ignored by communication professionals are "What will be our indicator of performance success in a pandemic influenza communication response? What can be expected of and what is outside the control of communication professionals?" Our objective is to communicate messages that will reduce illness, save lives, and maintain societal structures. The right message at the right time through the right channel (e.g., spokesperson) can do that. Communication needs to be at the heart of pandemic planning. It will also have to be at the heart of response. We, like all pandemic response professionals, must be prepared to declare our success indicators in advance and be clear-eyed enough to hold ourselves to those standards during post-pandemic evaluations. Good communication will not save a bad response operation; however, poor communication can damage a good response operation. Individuals, families, neighborhoods, communities, religious institutions, businesses, industries, and nations will be engaged in the pandemic response. Who will or will not survive a severe pandemic will depend on all of us.

Communication Triggers

At the time of this writing, in the current context of H5N1 as a potential pandemic strain, communication professionals should consider the following triggering events and how they will respond:

Triggering events for increased pandemic communication efforts in the United States:

1. First case of H5N1 (highly pathogenic) or other potential pandemic virus in a migratory bird in the Western Hemisphere.

2. First case of H5N1 (highly pathogenic) or other potential pandemic virus in a migratory bird in the United States.

3. First case of H5N1 highly pathogenic or other avian potential pandemic virus in the poultry industry/zoo birds/community petting zoos/pet stores/etc. in the United States.

4. First human case of H5N1 or other avian potential pandemic virus identified in someone in the United States, acquired internationally.

5. First human case of H5N1 or other avian potential pandemic virus identified in a United States resident, acquired domestically from a bird, with no secondary transmission.

6. First human case of H5N1 or other potential pandemic virus in the United States, acquired domestically, from another human.

7. Sustained human-to-human transmission of H5N1 or other potential pandemic virus occurring somewhere other than the Western Hemisphere.

8. First cluster of human H5N1 or other potential pandemic influenza virus transmitted person to person in the United States.

Table: Biopsychosocial challenges in the United States in a severe pandemic corresponding with pandemic alert phases and the crisis communication lifecycle

Public Health Pandemic Alert Phases – U.S. Government & World Health Organization

	Pandemic Alert Phase 0-2 USG Phase 1-4 WHO No or limited human cases/outbreaks outside the United States	Pandemic Alert Phase 3-5 USG Phase 5-6 WHO Widespread overseas human outbreaks/first cases in the United States/spread throughout the United States	Pandemic Alert Late Phase 5 USG Late Phase 6 WHO Spread throughout the world and the United States, first wave waning in the United States

Crisis Communication Life Cycle

	Selected Biopsychosocial Challenges	*Pre-Event*	*Initial Crisis*	*Maintenance Crisis*	*Crisis Resolution*
Biological	*No immunity worldwide scope*	Raise awareness in interested populations and encourage preparedness Advertise where to get information Pull marketing strategies Begin to build spokesperson trust	Acknowledge scope of outbreak—all at risk, some at more risk Counter "risk denial" in some and hyper-reactions in others Answer the "what if" questions Engage empathy Employ STARCC	Share epidemiological information about outbreak characteristics Warn those at greater risk Provide more science-based information about immune system and disease course	
	Chronic illness—suppressed immunity increased prevalence	Engage health care partners and associations Alert family members			
	Evolving in waves	Prepare interested persons for extended disruption Messages about social cooperation and resilience critical	Explain the need for community measures that will slow the progress through the community	Note that supplies of vaccines will be helpful for second wave	Recoup resources for wave two Expect emotional fatigue Leader role models for hardiness

Psychological	*Uncertainty*	World scope--timing, virulence, geographic start in question so expect variation in interest (fight or flight) Ensure information available for people seeking it now	Uncertainty becomes personal to self and family Acknowledge dread and give people things to do Information seeking high and credibility crucial for response organizations		Return of dread about timing of second wave, ability to cope Acknowledge emotional toll and give people things to do Avoidance in some to be expected—expect messages to be rejected, anger
	No or lost resilience or hardiness community & individual	Prepare interested population sectors and communities Offer web-based resilience information—community teams Acknowledge strengths in people/ community and ability to cope	Expect smartswarms to develop in some communities Some communities will become victims and need more support and direction	Expect smartswarms to develop in some communities that will challenge inadequate response from authority Use "best practices" from resilient communities to educate hopeless/helpless	Expect "smartswarms" will challenge inadequate response from authority Stakeholder engagement critical to repair trust and gain cooperation
	Deaths out of time/up to 2 million in U.S.	Candidly offer worst-case estimates Offer planning guidance for interested groups Prepare community grief materials and educate others about cultural differences in grief, bereavement, mourning Death taboo in U.S.	Express sincere empathy in every verbal message Share community misery and frustration about truncated grieving Reaction to deaths among children and healthy adults stronger	Expect new norms related to bereavement rituals (i.e., social distancing) Death no longer taboo in U.S.—expect people to want suffering acknowledged	Symbols and community rituals for mourning will become important (act only when safe to do so) Opportunities for slights high Leaders will be expected to become "Mourners – in – chief"
Sociological	*Infection control behaviors impact other's well being*	Educate widely personal infection control AND need for social distancing Acknowledge the need for cooperation and social responsibility	Challenges to infection control and extreme measures taken Folk medicine and natural methods will be touted—embrace what you can and be direct about what does not work Include recommendations in every message	Reemphasize the basic messages and social responsibility Use positive role models, instill pride among those who look out for others Shame the behavior as antisocial—putting others at risk	Temporal associations between behaviors and outcomes will drive lay "theories" about what works Include trusted/expert basic recommendations in every message

Inadequate vaccines / antivirals	Educate interested groups and warn that decisions agreed to in absence of threat may not be followed at time of threat Emphasize why persons are given vaccine for protection and antivirals primarily for treatment	Ensure leaders and spokespersons can clearly state reasons for those earliest in cue for vaccine and antivirals Share the decisions as quickly as possible Acknowledge inherent struggle for fairness and say "I wish"		Expect to defend decisions from an ethical, political, and values-based perspective
Situational awareness difficult and information flow horizontal	Providing guidance early with little evidence-based science will challenge message consistency Acknowledge what we know, what we don't know and what we're doing to get answers	Rumors and misinformation will be rampant—in and out of the ICS. Consistent, trusted messages will work Employ STARCC Empower people with information and give choices when possible	Don't use numbers as absolutes, but as ranges. Trend data will be useful Expect new media to impact community behaviors	Capture lessons learned and preserve information for historical use
Targeted prophylaxis	Build awareness among interested populations regarding the need for and social fairness in the decision Acknowledge that what seems fair in concept will not feel fair in reality—when the threat is real. As early as possible communicate (web) the expected early receivers with a defendable explanation for each group Explain that other groups (e.g., children) were considered and not included.	Expect strong emotions and push back about all aspects of targeted prophylaxis—the single toughest communication challenge. If there are exceptions, tell people early, openly, and be sure it adheres to universal values of fairness. Expect some in targeted populations to reject prophylaxis because of guilt/sense of unfairness. Give the "have nots" options to restore some control.		When the threat resolves, expect much rumination and accusation about how decisions were made. Posting of who/why in pre-event will mitigate some of this.

Health disparities in medical access (poor/powerless)	Reach out to poor/powerless support associations now and commit to partnering efforts now. Find outlets that have credibility with these populations now. Select spokespersons who can interact well or train them	Ensure recommendations can be carried out by most people (e.g., don't tell people to stockpile meds if they can't afford them). Look for strong role models in the community and heap praise on their example of behavior.		The biggest shame that responders will face is if they do not protect the poor/ powerless.
Isolation and quarantine	Help interested people understand the value and limits of isolation and quarantine. Make these words more commonplace for greatest number of people.	Dispel myths/rumors about imposed quarantine. Expect % of people to self-impose too early, too long (fight or flight)—messages needed to put risk in perspective.	Look for success stories and share widely. Expect anger at the limits of this strategy.	
Travel/border closings or restrictions	Communicate when or how these could be used and health reason behind it.	Expect surprise when it happens. Consider family separations and be empathetic. Communicate clearly the health reasons for restrictions. Ensure persons who enforce understand and can communicate the health reasons for restriction.		

Stigmatization (e.g., immigrant groups)	Don't use images of Asians as the "pandemic image" Always ensure that messages distinguish between world situations and U.S. situations (e.g., poultry raised outside versus poultry raised inside). Teach against stigmatization now and in all materials caution professionals and interested persons about this.	Communicate early the real risk from associations with products, people, places—don't expect people to understand intuitively. Be prepared to dispel risk myths based on stigmatization. Aggressively counter misstatements regarding health risks known to be based only on stigmatization		Expect some stigmatization to linger for those products, people, places who first suffer from pandemic influenza. Be careful that historical images of early outbreaks do not reinforce the stigmas.
Economic disruptions (loss of work—5% of gross domestic output)	Tailor preparedness messages to likely harmed businesses first. Encourage best practices exchange and acknowledge progress and success. Find opinion leaders as spokespersons (If X thinks it's important so do I).	Economic disruption is as emotionally upsetting as physical threat to wellbeing. Need to balance messages so persons suffering economic loss early (e.g., small business owner) do not despair—acknowledge suffering (money loss is bad).	Realities set in and grieving will be for people and loss of wealth/opportunity.	
Social disruptions—school closed, health care, public safety, essential supplies, power	Balance message between all is lost and all will be rosy. Provide information to interested persons about ways to avoid or compensate for disruptions	Reinforce "just in time" preparedness messages. When possible, use examples from similar communities about how to cope Ask more of people	Expect social disruptions to bring about anti-social behaviors such as a "black market" or price gouging and prepare to help people not be exploited. Ask more of people	Provide evidence of restoration of community norms when possible and acknowledge that some disruption continues. Build hope and prepare for next wave
Seasonal versus avian versus pandemic	Continual challenge for communication. Make distinctions clear in all messaging. Work with media who have large reach to ensure distinctions are made.			

Pandemic as terrorism		Depending on where it starts, could become a question. Respect the role of FBI, DOJ, DHS and law enforcement when crafting messages Monitor for rumors. Counter ignorance with facts and fight against attempts to exploit and stigmatize.		Counter ignorance with facts and fight against attempts to exploit and stigmatize.
Home remedies, fraud,	Begin to educate the community about what health officials recommend and to be cautious about claims not supported by science. Determine what resources are available to assist community members who may be vulnerable to such ploys. Monitor the FDAs work against fraud.	If a home remedy is benign, don't waste valuable time refuting its use, instead focus on adding the right behavior to the mix. Monitor the community for instances of fraud and report it to authorities. Ask the media to be alert to scams, fraud, and false claims.		

Pandemic Influenza
Stages of Federal Government Response

Stage 0
New Domestic Animal Outbreak in At-Risk Country

Goals

- Provide coordination, support, technical guidance
- Track outbreaks to resolution
- Monitor for reoccurrence of disease

Actions

- Support coordinated international response
- Prepare to deploy rapid response team and material
- Offer technical assistance, encourage information sharing

Policy Decision

- Deployment of countermeasures

Compare to WHO Phase 1 or 2
Inter-Pandemic Period

Stage 1
Suspected Human Outbreak Overseas

Goals

- Rapidly investigate and confirm or refute
- Coordination and logistical support

Actions

- Initiate dialogue with WHO
- Deploy rapid response team
- Amplify lab-based and clinical surveillance to region
- Prepare to implement screening and/or travel restrictions from affected area

Policy Decisions

- Pre-positioning of U.S. contribution to international stockpile assets
- Use of pre-pandemic vaccine

Compare to WHO Phase 3
Pandemic Alert Period

Stage 2
Confirmed Human Outbreak Overseas

Goals

- Contain outbreak and limit potential for spread
- Activate domestic medical response

Actions

- Declare incident of National Significance
- Support international deployment of countermeasures
- Implement layered screening measures; activate domestic quarantine stations
- Prepare to limit domestic ports of entry
- Prepare to produce monovalent vaccine

Policy Decisions

- Contribution to countermeasures for affected region
- Entry/exit screening criteria; isolation/ quarantine protocols
- Diversion of trivalent vaccine production to monovalent
- Revise prioritization and allocation of pandemic vaccine and antiviral medications

Compare to WHO Phase 4 or 5
Pandemic Alert Period

Stage 3
Widespread Outbreaks Overseas

Goals

- Delay emergence in North America
- Ensure earliest warning of first case(s)
- Prepare domestic containment and response mechanisms

Actions

- Activate domestic emergency medical personnel plans
- Maintain layered screening measures at borders
- Deploy pre-pandemic vaccine and antiviral stockpiles, divert to monovalent vaccine production
- Real-time modeling; heighten hospital-based surveillance
- Prepare to implement surge plans at Federal medical facilities

Policy Decisions

- Prioritize efforts for domestic preparedness and response

Stage 4
First Human Case in North America

Goals

- Contain first cases in North America
- Antiviral treatment and prophylaxis
- Implement national response

Actions

- Ensure pandemic plans activated across all levels
- Limit non-essential domestic travel
- Deploy diagnostic reagents for pandemic virus to all laboratories
- Continue development of pandemic vaccine
- Antiviral treatment and targeted antiviral prophylaxis

Policy Decisions

- Revision of prioritization and allocation scheme for pandemic vaccine

Stage 5
Spread throughout United States

Goals

- Support community response
- Preserve critical infrastructure
- Mitigate illness, suffering, and death
- Mitigate impact to economy and society

Actions

- Maintain overall situational awareness
- Evaluate epidemiology; provide guidance on community measures
- Deploy vaccine if available; prioritization guidance
- Sustain critical infrastructure, support health and medical systems, maintain civil order
- Provide guidance on use of key commodities

Policy Decisions

- Federal support of critical infrastructure and availability of key goods and services
- Lifting of travel restrictions

Compare to Who Phase 6
Pandemic Period

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Module 3 • Community Hardiness and Personal Resilience

Community Hardiness and Personal Resilience

re•sil•ience (rĭ-zĭl´yəns)
n.
1. The ability to recover quickly form illness, change, or misfortune; buoyancy.
2. The property of a material that enables it to resume its original shape or position after being bent, stretched, or compressed; elasticity.

Severe pandemic: What is different?

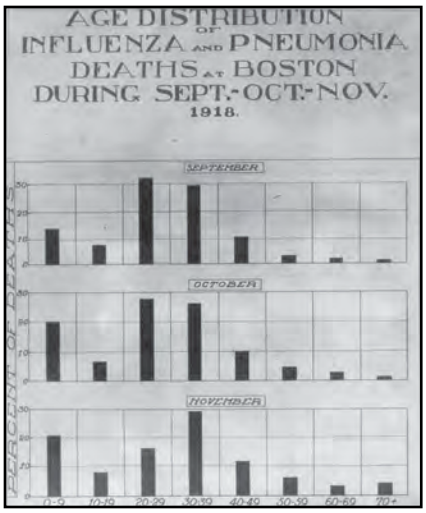
- Widespread illness occurring in most communities concurrently requires community resourcefulness.
- Outbreaks will occur in waves with two to three waves expected.
- Countermeasures will be limited and will require targeted distribution.

Crises, emergencies and disasters happen. Disasters are inherently different from routine daily emergencies and the difference is more than just one of magnitude. Chaos theory related to crises emphasizes that disasters that *take a toll on human life* are inherently characterized by change, high levels of uncertainty, and interactive complexity (Seeger, Sellnow, & Ulmer, 2003). The majority of people in the United States will experience at least one traumatic event "outside the range of normal human experience" (Bonanno, 2004, p. 24), sometime within their lives. How well we cope with those traumatic events will depend, in great part, on our community's hardiness and our own personal resilience.

Consider two scenarios. Westpark is a heterogeneous community with a range of ethnic groups, income levels, and professions and industries. Eastpark is a homogenous community that is not diverse by ethnicity, income level, or profession and industry. Which community would one expect to be able to pull together and support each other during the first wave of a severe pandemic? It depends! Which community is currently managing their challenges through civic interaction? Which community has developed strong volunteer emergency response groups? Which

Objectives:

- Recognize the positive role of community hardiness and personal resilience.
- Compare and contrast expected community outcomes based on hardiness or lack of hardiness.
- Predict the community's level of hardiness now and identify ways to build, restore, and strengthen hardiness before and during a severe influenza pandemic through communication activities.
- Acknowledge the role of leaders in building community hardiness before and during a pandemic.



community recognizes problems early and intervenes to prevent the problem from growing? Which community expects their problems to be solved by others? Which community feels a sense of "ownership" and wishes to exercise control over their neighborhoods? Which community believes that "fate, luck, or preference" will secure what they need? Which community has experienced a major trauma in the recent past?

Measuring community hardiness

The measure of a community's hardiness will come from several domains, including its socioeconomic status (e.g., income levels, unemployment rates, education levels, and health-related behaviors), community-based organizations, non-governmental organizations, neighborhood associations, places of worship, and its political and governmental structures. Pre-disaster community cohesion is important to community hardiness. In contrast, existing social stressors such as ongoing racial, economic or political strife that weakens cohesion can bode ill for a community's ability to cope with the impact of a severe influenza pandemic. Importantly, pre-existing social strains such as community poverty, individual poverty, low perceptions of risk, poor preparedness, and limited access to mitigation, response, and recovery resources are associated with bleaker outcomes for a community (Schultz, Espinel, Galea, & Reissman, 2006).

For individuals, families, neighborhoods, communities, and nations to fare well in the next severe influenza pandemic several factors will need to be in place. Some of these factors can be influenced by communication messages before and during the pandemic and should originate both from response organizations and from response and community leaders. Communication professionals should consider the psychological components of community hardiness and personal resilience and reinforce the positive aspects of both in their messaging. This is not an attempt at mass mental therapy. It is an attempt to take every available advantage and apply it to what may be the biggest public health challenge of our careers.

Cognitive, affective, and physical human responses in a crisis

In a dire emergency such as a severe influenza pandemic, threatened people or groups may exaggerate their responses as they revert to more rudimentary or instinctual fight or flight reasoning (DiGiovanni, 1999). However, Clarke (2003) negates some myths about how people react in a crisis, including: people automatically follow their leaders; people need only one spokesperson with one message; people

given multiple warnings will not believe officials and will succumb to "cry wolf" syndrome; and people panic in high numbers. He defends these conclusions with historical examples. Regarding public panic, for example, he refers to multiple attacks by the Japanese against the Chinese, between 1932 and 1945, with biological agents such as bubonic plaque, cholera, and anthrax, in which there was very little evidence of panic. The same was true in New York City following the September 11, 2001, terrorist attack where officials credited the relatively low death toll, in part, to a public that generally responded well. Research also reveals that altruistic norms and positive social behaviors dominate responses by the public in disasters (Brehm, Kassin, & Fein, 2005).

In a severe influenza pandemic, people will be affected to some extent emotionally, cognitively, physically, and interpersonally (DiGiovanni, 1999; Norris, 2001; Novac, 2001). Emotional responses will range from terror and shock to blame, anger, and guilt. Cognitive effects will include impaired concentration, impaired decision-making, memory impairment, decreased self-esteem, worry, and dissociation. People will also be affected physically, experiencing fatigue, insomnia, hyper-arousal, increased physical pain, reduced immune response, headaches, and vulnerability to illness (Brehm et al., 2005). Limited social interaction (as a means of infection control) could increase relational conflict, social withdrawal, distrust, and denial.

Melvyn Yessenow's research about the psychology of survival included looking for personality traits shared by those who survived in life-threatening situations (Andresky, 1986). Yessenow found shared attributes among survivors, such as high self-esteem and the feeling that actions can change the world. Mental toughness was more important than physical ability for survival. Yessenow also found that having a sense of direction during the crisis increased survival because people who could focus on a goal or action such as "helping their family survive" gave the individual's mind relief from thoughts of the threat (Andresky, 1986). Another predictor of a positive outcome for a disaster victim was experience. For less severe crises, prior experience with the type of disaster reduced anxiety, increased the likelihood the person had prepared for the hazard in advance, and indicated that the individual was more likely to follow directions from response officials such as evacuation orders (Norris, 2001).

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Personal Resilience

Personal resilience is a person's ability to maintain their equilibrium in the face of trauma and loss. Resilience is often described as the protective factors that help humans thrive after extreme disasters and

People's fear, anxiety, and despondency can be reduced to manageable levels by reducing situational uncertainty

foster positive outcomes (Bonanno, 2004). Bonanno found that persons who are resilient also may engage in repressive coping by suppressing unpleasant thoughts and emotions. The following psychological resources protect victims of disaster: coping efforts, self-efficacy, mastery, perceived control, self-esteem, hope, and optimism (Norris, 2001). Attributes of self-efficacy, perceived control, hope, and optimism were positively associated with both short-term and long-term mental health (DiGiovanni, 1999; Norris). Social embeddedness, social support received, and perceived social support are important to well-being and recovery of disaster victims (Norris, 2001). Everyone involved in a disaster is affected; however, the people who are most exposed to the danger or threat are at risk for the greatest emotional impact (Brehm et al., 2005). Most survivors of a disaster exhibit normal stress reactions. A proportion of survivors may experience intense feelings. Some people may feel that the familiar normal world they knew is gone and feel a sense of dissociation. This may be mitigated with quick, firm directions for action, and by reconnecting these traumatized survivors with the world, remind them that the larger community shares societal values of altruism and goodness (Young, Ford, Ruzek, Friedman, & Gusman, n.d.). Interestingly, helping others can act as a substitute for self-esteem, in part because "being valued by others is likely to increase self-worth" (Crocker and Neur, 2004 p. 484).

Social factors that predict adverse outcomes for disaster victims include the following: displacement, extensive loss of property, horror, life threat, bereavement, injury, and separation from family. Psychological impairment is more likely as the numbers of stressors increase (Norris, 2001). People's fear, anxiety, and despondency can be reduced to manageable levels by reducing situational uncertainty with information, by giving individuals or communities things to do, which restores a sense of control, and by modeling optimistic behavior (Brehm et al., 2005; Reynolds, et al., 2002; Young, et al., n.d.).

Social psychologist Albert Bandura understood that experiences contribute to one's self-efficacy. Self-efficacy is simply one's confidence in one's ability to perform and predict consequences of that behavior. One acquires self-efficacy in four ways: physical and emotional states (e.g, well rested and not anxious), mastery experiences, vicarious experiences, and social persuasion. Mastery experience relates to past performance in that if an individual accomplishes a task in the past, his or her self-efficacy increases in relation to similar future tasks. However, if one fails at a past task, one's self-efficacy decreases, especially if the person applied full effort to the task. Vicarious experiences could increase or decrease self-efficacy, depending on who is performing the observed behavior and his relationship to the observer (e.g., if a competitor does better than expected, one's self-efficacy could

decrease). "Self-efficacy influences what people choose to do, their persistence in the face of difficulties, and how much effort they put forth" (Hoyt, Murphy, Halverson, & Watson, 2003, p. 260). Importantly, self-efficacy influences how people cope with aversive experiences, including the amount of time they can cope and with what effort.

Bandura noted that strong emotion typically lowers performance, especially when people experience high levels of fear, anxiety or stress (Feist and Feist, 2002). Thinking alone can increase stress and fear and reduce self-efficacy. Both reasonable and unreasonable fears are based on one's thoughts. More-intense-than necessary (or dysfunctional) anxiety, fear, worries, and self-doubts may be caused by the following:

- Observing someone else who exhibits excessive fear and nervousness in the situation (e.g., the person ahead of you in line for a vaccination is nervous and fearful).

- Distorting incoming perceptions or faulty perceptions (e.g., the line outside the clinic for vaccinations is long and you think there's not enough vaccine, so you give up and go home unvaccinated).

- Applying unreasonable expectations to the perceived situation that creates irrational thoughts (e.g., the person taking your health information at the mass vaccination clinic is abrupt and you believe they are so because they know you are HIV positive).

- Acting on faulty conclusions (e.g., expecting a horrible outcome from an act and therefore never attempting it, such as there is a 1 in a million chance of a life-threatening reaction to the vaccination and you do not get vaccinated).

Anxiety reduces self-efficacy, so reducing anxiety in a population during a severe pandemic may help individuals maintain the ability to act while facing a tough situation. Anxiety is a common condition of our modern society and is only exaggerated in the context of a severe pandemic. Physiological symptoms of anxiety include palpitations of the heart, insomnia, irritable outbursts, fatigue, nausea, diarrhea, urinary frequency, perspiration, suffocating sensations, dilated pupils, and rapid breathing (Hale, n.d.). Understandably these symptoms can occur because of other reasons, including normal stress or fear. They are described as symptoms of anxiety when they occur absent a physical problem and in situations handled with relative ease by others. Fear is considered adaptive and is limited in duration and specifically directed. Anxiety awakens the danger "alerting system" of our body's fight or

Cohesion in a group is that aspect that makes disparate individuals wish to belong and behave as a group

flight system when there is no fighting or fleeing to do. Anxiety actually hampers fight or flight (because the action can't be taken) and inhibits positive fear reactions when needed. Simply, the anxiety over the possible "fearful event" exhausts the person's fight or flight system and makes the person less prepared to protect themselves.

Individual and group buffers to extreme stress include "being committed to finding meaningful purpose in life, the belief that one can influence one's surroundings and the outcome of events, and the belief that one can learn and grow from both positive and negative life experiences" (Bonanno, 2004, p. 25). Communication messages should, again, stress self-efficacy (i.e., "you can protect yourself and others and what you do will directly influence the outcome of the pandemic for you and your neighbors"). During the resolution phase of a severe pandemic, messages should acknowledge the shared misery and celebrate the efforts taken to save lives and function as a community under extraordinary circumstances. The community that both mourns its dead and celebrates all of its successes will recover more quickly than a community that focuses only on their loss, responds with anger or guilt, and chooses to blame.

Community Hardiness

Issues of self-efficacy, cultural beliefs, and performance during stressful situations extend beyond the individual. Hecht, Allen, Klammer, and Kelly (2002) found that group potency (the amount of belief among the group that they can succeed) actually affects group performance. "It seems that a shared belief in the group's ability to be effective is critically important for complex tasks that require the combined efforts of all group members" (Hecht et al., 2002, p. 149). This aspect of social interaction could be critical in a severe influenza pandemic, where a community's well-being could directly depend on the group's ability to comply with novel instructions from authoritative sources, such as being asked to create a community education plan if schools are closed, or how to ensure impoverished community members will be fed if under a voluntary household quarantine.

Key factors that could contribute or detract from group success include leadership style, task definition and training, and level of cohesion (Brehm, Kassin, & Fein, 2005). In addition, roles, norms and cohesiveness interact to improve group potential. Cohesion in a group is that aspect that makes disparate individuals wish to belong and behave as a group (Losh, 2001). Group cohesion manifests in different ways depending on the type of group in consideration and the individual resources persons bring to the group. Two elements that increase

group cohesion are member similarity (e.g., demographics, shared experiences, shared threats, and values) and member attractiveness (e.g., prestige, acknowledged expertise, and relevance to the desired task) (Swenson, n.d.). Cohesion is strengthened by barriers to membership, frequent interaction among members, shared goals, physical isolation, and a common enemy or competition (Swenson). Holtz (2004) found that the cohesiveness of a group contributed to attitude agreement which, in turn, influenced opinion certainty. The tighter the group cohesion, the more likely attitudes would be in agreement and opinion-certainty strong. Group cohesion may contribute to group resilience and, ultimately, group success.

Important elements to keep a group together include defining and accepting roles and sets of behaviors for members, an accepted set of norms, and any forces that draw the group together, such as a short work deadline or competition from another group (Brehm et al. 2005). However, factors such as why the group was formed, whether it began as a leaderless group, the length of time the group exists, and the importance of the tasks to be accomplished also influence the steps taken to keep the group together.

Group worldview

Possible threats to community hardiness may depend on groups' "worldview." If group members share an "injustice" worldview, the group's persistent belief will be that they have significant and legitimate grievances against another group. Such a world view can be especially important in regard to distributions of scarce resources and the belief that other people receive resources because their powerful group "rigged the system." Group worldviews that assign superiority and injustice and lead to feelings of helplessness, mistrust, or vulnerability can trigger either group mobilization or inter-group conflict. During extreme situations, these group worldviews can lead to different choices in coping behaviors (Novac, 2001). Task-oriented coping strategies focus on solving the problem and attempting to change the situation. In contrast, emotion-coping strategies focus on reducing stress through self-preoccupation and fantasy. Although individuals do exhibit coping preferences, situations can change coping styles. Groups with worldviews of helplessness and vulnerability may not believe they have the power to change the situation and take action, and will respond with emotional coping strategies. The extent to which group members believe they have control, they are more likely to act.

Fast Facts

Influenza pandemics involve the rapid spread of a novel (most people have no immunity against it) influenza virus across the world, resulting in an unusually high number of illnesses and deaths for approximately 2 to 3 years. Such pandemics occurred in 1918, 1957, and 1968.

At times, false alarms do occur where a novel influenza virus emerges that causes a few human cases of severe illness or death, but never succeeds in causing widespread human illness. Scientists can monitor these viruses, but can't predict the outcome.

It is impossible to know whether the currently spreading influenza type A (H5N1) virus will cause a human pandemic.

(www.pandemicflu.gov)

Threats strengthen cultural conformity

The threat of death impacts individuals and groups in significant ways, and:

> Concerns about human mortality affect a broad range of socially significant behaviors that are unrelated to the problem of death . . . in any logical way, including interpersonal evaluations, judgments of moral transgressors, stereotyping, in-group biases, aggression, social consensus estimates, and conformity to personal and cultural standards. (Pyszczynski, Greenberg, and Solomon, 1999)

To guard against fear and anxiety from thoughts of death, persons engage in thoughts and behaviors that boost self-esteem, including strongly holding onto cultural beliefs (Crocker & Neur, 2004). Importantly, when death looms, cultural beliefs will become more important and any rebuffs to those beliefs will be more likely to create conflict. For example, someone's cultural belief related to funeral rituals may involve large, intimate social gatherings. In a pandemic, this ritual may be in conflict with recommendations for social distancing. This could be extremely upsetting for members of that cultural group and their reaction to the recommendation strong. Communication professionals must understand the dynamic of heightened awareness related to cultural differences in a severe pandemic and ensure that cultural norms are respected when at all possible. When cultural beliefs and public health recommendations are incompatible, acknowledge the cultural belief and explain why it is necessary to alter behavior related to that belief for a short time.

To promote resilience and encourage recovery following each wave of the severe pandemic, communication activities must focus on the following:

- Overcoming helplessness by strengthening self- and community efficacy (i.e., giving people things to do for themselves and others).
- Overcoming risk by framing the risk and promoting protective actions.
- Overcoming dread, fear and uncertainty by sharing information that is honest, realistic, and restores a sense of self-control amidst the chaos.
- Overcoming despair, hopelessness, and victimization by engaging people in the response, and expecting more of people.

- Overcoming isolation and loss by reconnecting people to the larger community, including through new information technology.

These efforts are known to help people cope with and recover from traumatic events, especially from ongoing threats such as repeated waves of a pandemic (Reissman, Watson, Klomp, Tanielian, & Prior, 2006).

Hecht et al. concluded that "those interested in designing interventions to improve group performance might . . . promote efficacy beliefs and [spend] less time trying to gain buy-in or commitment" (p. 150). In other words, a message that tells people they can help themselves and how to do so is a better pre-event message than simply attempting to persuade them that the official response requires their commitment and help. Focus the messages on the individual and the community and reinforce that they can care for themselves. Show them that people who are just like them are doing it. Tell them how to care for themselves. Tell them how caring for themselves can protect them, their families, and their neighbors. Stress the vital role each individual will play in the pandemic response. Give them things to do, for themselves and for others. Give them incremental steps to take that they can easily master.

Leader's Role in Building Hardiness

Generally, leadership is described as the process of influencing others to achieve goals. Leaders may influence goal achievement by providing direction, through charisma, and by example (Seeger, et al., 2003; Yukl, 2002). Before, during, and after a severe influenza pandemic, community leaders will have tremendous potential to positively influence community outcomes. Leaders must understand their role in building, restoring, and strengthening community hardiness.

How much power and influence a leader will have with followers during a severe influenza pandemic will depend on past interactions between the leader and followers. Past demonstrated competence and loyalty by the leader strongly influences expectations about the leader in the crisis and the "amount of status and power accorded a person is proportionate to the [population's] evaluation of the person's potential contribution relative to others" (Yukl, 2002, p. 154). In other words, the leader who gets the job done and has our best interest in mind will be able to influence community behavior. In obvious contrast, incompetence by the leader will result in a loss of status and loss of legitimate authority over the population.

During a severe pandemic, a leader may become a symbol of order and authority (Seeger et al., 2003). Therefore, a crisis leader may need to exercise power to engage members of the community or organization to behave as needed to mitigate further harm and to restore the community to a state of normalcy. The leader's power may be exhibited in numerous forms (Yukl, 2002), including legitimate power (e.g., members believe the leader has the right to ask and they have the obligation to comply, such as the police chief ordering a curfew); expert power (e.g., members comply because they believe the leader has specialized knowledge, such as tourists who accept the U.S. public health quarantine order for a cruise ship to stop the spread of a disease outbreak); and referent power (e.g., members comply because they admire the leader and want to gain approval, such as adhering to social distancing recommendations from an admired public health official). Leaders in a crisis can influence followers and exercise authority through a number of behaviors, including rational persuasion, inspirational appeals, collaboration, and coalition building (Northouse, 2001;Yukl, 2002).

Power and influence are not static conditions and can be acquired and lost. Therefore, leaders in a severe influenza pandemic must be aware of the types of power available to them and the best application of these powers. The best use of expert power by a leader in a pandemic requires the leader to act confidently and decisively, explain to the community the reason(s) and import behind the requested actions, provide evidence that the action will be successful, be careful and consistent in communicating with the group, represent the facts truthfully, and listen to others' concerns (Yukl, 2002).

Situational context of a pandemic

The situational context of a severe influenza pandemic challenges leaders in specific ways. Certain character traits and leadership styles are better suited for crisis leadership situations than in normal operating circumstances. Limited research indicates that leaders with increased intelligence and greater experience are positively related to their group's ability to produce creative ideas under normal conditions (Yukl, 2002). However, when the leader and group are in high-stress conditions, there is no advantage in the group's ability to produce creative ideas based on the leader's intelligence and experience. Some researchers observe that this loss of advantage from the leader's intelligence and experience is because the highly intelligent leader tends to stifle group input by dominating the group activity in a high-stress situation. In so doing, the leader is not only less creative, but the group overall is less productive (Yukl, 2002). Simply put, the whole is not greater than the sum of its parts because the leader does not allow for all of the parts to contribute

to problem-solving. A community will strengthen its hardiness in the face of a severe influenza pandemic to the extent that its leader will call upon the talents and expertise of the community members.

Once the pandemic virus arrives, tasks are more apt to be unstructured, relationships between leaders and followers strained, and authority confused (Seeger, Sellnow, & Ulmer, 2003). In addition, the time constraints in the midst of a severe pandemic will reduce the time for consultation, consensus building, and justifying decisions before taking action, which adds to the possibility that relations will be further strained and authority more confused. Nonetheless, those involved in a severe pandemic will look to the leader to provide information, reduce uncertainty, and clarify meaning. More importantly, how a leader behaves early in the crisis will significantly affect how others frame the crisis for themselves and for their community (Norris, 2001; Reynolds, et al., 2002; Seeger, et al., 2003).

Therefore, broad community involvement is critical in finding the best solutions for anticipated challenges *before a pandemic occurs*. When the pandemic occurs, the leader must assume a greater role in decision-making or risk a sense of chaos and uncertainty overwhelming the community, shaking its group-efficacy. Although democratic styles of leadership are preferred for most day-to-day operations, in contrast, authoritative leadership styles may be better suited for crisis situations (Seeger, et al., 2003). Followers may be more willing to grant greater control to the leader in a severe pandemic. Leaders using an authoritative style typically give the appearance of decisiveness, which, in the unstructured and confusing times of a crisis, helps to reduce uncertainty and helps the organization or community regain a sense of control.

Charismatic leadership—good and bad

Some aspects of charismatic leadership style also may be beneficial in a crisis context (Mitroff, 2004; Reynolds, et al., 2002; Young, n.d.). Some traits and behaviors associated with charismatic leadership are expected from the crisis leader (Seeger, et al., 2003; Yukl, 2002). In fact, "charismatic leaders are more likely to emerge when there is a crisis" (Yukl, 2002, p. 243). Leaders who are decisive and confident, make self-sacrifices, share risks, offer persuasive appeals, and articulate an inspirational vision are often considered charismatic. Charismatic leaders also are typically strong, expressive communicators who can build group identification and empower followers (Yukl, 2002). Studies by Smircich and Stubbard (1985) (as reported in Seeger, et al., 2003) stressed that the leader's interpretation of the crisis will compete with other interpretations. The leader's interpretation must be compelling

Those involved in a severe pandemic will look to the leader to provide information, reduce uncertainty, and clarify meaning.

Leaders can influence some aspects related to community recovery from a severe pandemic.

if the leader is to win the competition for the "critical mass" needed for followers to act according to the leader's beliefs. "The critical mass depends on persuasion and interpretation much more than on the objective facts," (Seeger, et al., p. 247). However, Yukl (2002) warns of the dark side of charismatic leadership: leaders may be too optimistic about the situation and not recognize strategic flaws, may begin to believe they are infallible, and some people will be antagonized by the leader's strong convictions and become disillusioned.

Stakeholder expectations

The public and stakeholders want to accomplish the following five things with the information they get from their leaders during a severe pandemic: gain the wanted facts needed to protect them, their families and their pets from the dangers they are facing; make well-informed decisions using all available information; have an active, participatory role in the response and recovery; act as a "watch-guard" over resources, both public and donated; and, recover or preserve well-being and normalcy, including economic security (Reynolds, et al., 2002; Seeger, et al., 2003; Young, et al., n.d.). For any leader in a crisis, the challenge is to give the public and stakeholders what they demand within the fog of information overload or the absence of information and uncertainty. Employing some aspects of a charismatic and authoritative leadership style with the positive use of power and influence may help them accomplish their objectives.

Among the central principles necessary to help survivors recover following a crisis, some can be accomplished through the communication of a crisis leader. Leaders can help people reduce fear, anxiety, and despondency to manageable levels by reducing situational uncertainty with information, by giving them things to do which restores a sense of control, and by modeling optimistic behavior (Reynolds, et al., 2002; Young, et al., n.d.). Leaders can influence some aspects related to community recovery from a severe pandemic. Recommendations for leaders include the following: whenever possible, keep people in their natural groups if relocated; hold group meetings to allow community members to brainstorm about community rebuilding and to allow survivors to recognize the reality of loss; emphasize inclusiveness and reach out to people who may feel marginalized; and find ways to collectively express grief (Norris, 2001; Reynolds, et al., 2002).

Following a severe pandemic, a responsible leader should: be accountable and offer explanations if needed; support investigations and studies for lessons learned; create a hopeful vision for the community; participate in symbolic acts and grieving ceremonies; begin renewed pre-crisis planning; and teach lessons learned to others (Seeger, et al., 2003).

Successful Pandemic Communication

In a crisis, individuals will immediately judge the content of official messages by the speed of communication and the trust and credibility of the messenger (Peters et al., 1997; Seeger, 2003). The speed with which information is shared with the public during a severe influenza pandemic will indicate to the public how prepared officials are to respond to the emergency, that there is a response system in place, and that needed action is being taken. If the public is not aware that a response is ongoing they may lose confidence in the organization's ability to respond.

Along with information about the response, empathy and caring should be expressed repeatedly in messages to community members (Peter, et al., 2003). Empathy is the ability to vicariously experience another's emotions or the willingness to put oneself in another's shoes. People with high empathy are found to be more aware of the environment that those with low empathy. Interestingly, the more anxious a person is the less empathetic they will be. According to research, being perceived as empathetic and caring provides greater opportunity for the message to be received and acted upon. Empathetic messages should acknowledge fear, pain, suffering, and uncertainty.

Source competence is also important (Brehm et al., 2005). Education, position title, or organizational roles and missions are quick ways to indicate expertise. Previous experience and demonstrated abilities in the current situation enhance the perception of competence. Another useful tool to build trust is to have established a relationship with the audiences in advance of the emergency (Seeger et al., 2003). If that is not possible, a third party, who has the confidence of the audience, who expresses his or her confidence in the response organization and officials is useful.

Honesty and openness in crisis communication means facing the realities of the situation and responding accordingly. It means not being paternalistic in communication but, instead, participatory—giving people choices and enough information to make appropriate decisions. In situations of great uncertainty, the public should be told why the information isn't available for release at the time (Brashers, 2001). To build trust, the public should be allowed to observe the process while being reminded that this process is what drives the quality of the emergency response.

Conclusion

Personal resilience is more prevalent than often believed and adaptive coping strategies can be learned. Discussing personal resilience and allowing people to mentally rehearse how they believe they would respond under the stress of a pandemic outbreak in their community is worthwhile. This rehearsal will allow them to adjust their view about their mastery over the event and consider the consequences of the behavior before acting. While community cohesion can not independently improve community hardiness, cohesion can be strengthened before a pandemic, thus adding to potential community hardiness. Communities should assess their hardiness based on the domains of influence. The interdependence of the task, the leader's style and community cohesion are all important elements in building community hardiness. Group cohesion improves as groups identify themselves as a collective and achieve success. Communication activities before and during a severe pandemic can increase personal resilience (e.g., building mastery skills) and community hardiness (e.g., use social persuasion to increase cohesion).

At Risk from Negative Thinking

Selected ideas which create negative emotions and helplessness:

1. When things do not go the way I wanted and planned, it is horrible and, of course, I am going to get very upset.
2. When other people, this screwed-up society, or bad luck happens to me all the time, how could I be happy? I have no control over anything, so I can't do anything about my miserable feelings.
3. When the situation is frightening or going badly, I worry all the time.
4. I avoid thinking about tense situations. It's easier than facing the problem and taking responsibility for making things better.
5. Things have been this way forever; I can't do anything about these problems now.
6. People who are evil should be punished severely (and I have the right to get very upset if they aren't stopped and made to "pay the price").

Instead consider:

1. Accept reality: Say to yourself, "That's the way it is. I'll change what I can and then make the best of it."
2. Learn lessons from the past and how to improve the future: "It didn't go the way I wanted it to. So, now I'll examine it to make things work out better next time."
3. Accept responsibility for your feelings: "No one can make me feel any way. But, *I* can change how I feel. "I" statements remind us that we alone are responsible for our feelings.

Activities to Increase Personal Resilience

Strong Thinking	Demand from yourself that you will counter every negative thought with an opposing positive through: Negative: I can't stay home with my kids during a pandemic—we'll starve! Positive: I wonder what other single Moms are doing. I'll look for a website. Or maybe start one! Take a different perspective. She cut me off in traffic, what a bully. Or She cut me off in traffic, I wonder if she's worried and preoccupied about a sick relative Imagine in your mind doing a complex task step-by-step with ease. Celebrate that success and practice it over and over. Express thoughts as positives. Stop negative words before they come out of your mouth A pattern of strong thinking will, literally, strengthen resilience building neural pathways—exercise your brain's "optimistic" muscles Greater purpose: Attach a meaningful personal goal to motivate you during hard times: "I have to be here for my family" Help someone else knock out negative thinking Connect with your loved ones often
Strong Mind	Calm your mind by breathing deeply Meditate to calm yourself Take mini mental breaks and divert yourself from the complex task or the chaos around you. Send your mind on vacation—feel nature around you. Seek out pleasant smells that invoke good memories
Strong Body	You know what good food is—eat it and know you are doing something to protect yourself every day Exercise Drink lots of water Take a sunshine break Stick to a good sleep routine

Checklist: Communication for Personal Resilience

Before

- ❑ Connect people with similar interests through organizations, meetings, and websites to match skills with pandemic "chores."
- ❑ Give step-by-step directions to follow.

During

- ❑ Help people help others.
- ❑ Focus people on a goal: "Keeping my family safe."
- ❑ Remind people that they have overcome past struggles (especially community specific struggles).
- ❑ Remind people about core societal values: We value our independence. We value resourcefulness.
- ❑ Show how people "just like me" are managing.
- ❑ Challenge people to do their best.
- ❑ Remind people of their individual value to the community.

After

- ❑ Acknowledge that negative life experiences have meaning and we can learn and grow.
- ❑ Show respect by acknowledging losses in a personal way (e.g, the mini biographies published of those lost at the World Trade Center).
- ❑ Acknowledge the shared misery and direct people to acts of hope.

Checklist: Communication for Community Hardiness

Before

❑ Do a community hardiness assessment.

❑ Identify unifying symbols, shared history, that can be used to remind people they are part of a community.

❑ Educate partners, media, and civic leaders about the role of community hardiness in better response and quicker recovery from catastrophes (mental health community leaders should lead this role; however communication professionals will be able to help magnify the actions mental-health leaders may believe are important).

❑ Identify community influencers and engage them in community hardiness planning activities.

❑ Consider community meetings to discuss the protective aspects that exist in the community and its vulnerabilities.

During

❑ Highlight success in the community as it shoulders the burden of the outbreak.

❑ Provide a forum for community members to discuss problems that may arise during the outbreak (i.e., community meetings may not be feasible but a community blog could be.)

❑ Recommend ways that the community can help safeguard its most vulnerable members (e.g., extra volunteers for the meals-on-wheels program).

After

❑ Document the community's survival through memorials, collecting items to archive for their historical value, and collecting oral/visual accounts of the event.

❑ Acknowledge the shared misery.

❑ Try to recapture traditional community events as soon as possible to help the community return to a sense of the familiar (e.g., go forward with the annual picnic or note the long-standing rivalries between high school football teams)

Topline* Assessment of Community Hardiness by Selected Domains

Community hardiness relates to its existing protective qualities and vulnerabilities that will determine the ability of the community to take deliberate, meaningful, and collective action against a public health emergency, including a severe influenza pandemic.

Protective Qualities**		**Vulnerabilities*****	
Socioeconomic	+	**Socioeconomic**	-
Few at or below poverty level		Substantial number at or below poverty level	
High level of literacy		High level of illiteracy	
Low number of people with disabilities		High numbers of people with disabilities	
High education levels (high school diploma/college)		Low education levels/less than high school	
High number of self-reliant adults who work - Unemployment decreasing		High number of unemployed, increasing	
Most are 2-parent families		High # single-parent families	
Most speak English as first language		High # speak little or no English	
Most live in single-family dwellings		High # multi-family dwellings (more than one family in a home/apt. or more than 2 generations living together)	
Incomes have consistently been increasing		High number of babies and children under 5	
Health/Access to Health Care	+	**Health/Access to Health Care**	-
High proportion of hospitals, trauma centers, emergency rooms		Limited hospital capacity, no trauma center, limited emergency rooms	
High proportion of physicians		Low proportion of physicians	
High proportion insured		High proportion uninsured	
Private health care dominates		Public sector health care dominates	
Pharmacies abundant		Few pharmacies, poorly spaced	
High quality of care typical		Quality of care sporadic	
Population much lower than U.S. average for chronic illness/immunosuppressed		Above U.S. average for chronic illness (e.g., high % of diabetes in population/ high % undergoing cancer chemotherapy)	
Population much lower than U.S. average heart disease, obesity		Above U.S. average for heart disease, obesity	
Low number of frail aged		High number of frail aged	
Low number rely on technology for life support		Higher than average number require technology for life support	
Much higher than average vaccination rates (children and elderly)		Well below average vaccination rates (children and elderly)	
Emergency Response Services	+	**Emergency Response Services**	-
High % of EMS		Below adequate EMS	

Highly trained emergency response		Poorly trained	
Highly experienced		Less experienced than typical	
Conduct community drills/exercises		Does not conduct drills/exercises at community level	
Emergency response volunteer organizations robust and experienced		No emergency response volunteer organization or few with few resources	
Business/Industry	+	**Business/Industry**	-
Major businesses belong to the community and share an altruistic perspective toward the community		Little business or industry exists	
Small business owners are well organized and have contingency plans in place/insurance for emergencies and losses from shutdowns		Small businesses are primarily "mom and pop" with little insurance and little likelihood of surviving extended shutdowns	
Civic/Faith-based Support	+	**Civic/Faith-based Support**	-
Community events common and well attended		Few or no community events	
Pride in identity (e.g., best cheese makers, best high school football team)		Little pride or no community identity	
High number of civic organizations with active chapters		Few civic organizations	
Neighborhood associations common		Few or no neighborhood associations	
Volunteerism valued and expected		Volunteerism is a luxury and not expected	
Community spirit includes competition with neighboring communities		Community is socially isolated from neighboring communities	
Community has a well-known and invoked motto		No community identity other than name/no motto	
Diversity celebrated as point of pride		Racial/ethnic strife exists/easily incited	
Lower than average crime rates		High crime rates	
Much lower than average drug/alcohol rates		Much higher than average drug/alcohol rates	
A strong network of faith-based organizations exist in the community		Places of worship are insulated from each other or mistrustful of each other	
Faith-based volunteers are well organized and trained for emergency response		Faith based volunteers are few or poorly trained with little belief they should reach beyond membership	
Democracy and local representation	+	**Democracy and local representation**	-
Community members believe they are represented by local government		Community members believe they are *not* represented in local government	
High percentage of eligible voters vote		Low percentage of eligible voters vote	
Community meetings well attended, especially when important topics covered		Community meetings ignored unless a highly divisive issue arises and, then, discourse is only confrontational (them versus us)	
No "hot" issues divide the community from each other or other communities		Community infighting over "hot" issues are ongoing or the community is fighting with other communities (e.g., local water rights)	
No pending legislation is dividing the community		Pending or recently passed legislation is creating community strife	

Civic/Political Leadership	+	**Civic/Political Leadership**	-
Community leaders work together across jurisdictions		Community leaders are distrustful of each other	
Community leaders have experience solving critically important and time-sensitive issues		Leadership has little experience with problem solving in a critical situation or crisis	
Community has demonstrated that politics is set aside during crises		Political infighting and grandstanding is common, regardless of urgent issues	
Political leaders held in some esteem and are sought out for advice		Political leaders are ineffectual and mostly ignored by community	
Community leadership matches the community demographics well		Leadership does not demographically match large portions of the community membership	
Media/Communication	+	**Media/Communication**	-
Multiple media outlets—print and electronic		No daily electronic or print media available to the community	
Local media highly trusted		Local media not trusted to be right/fair	
Well above average Internet access		Well below average Internet access	
Media literacy (ability to discern motives related to sources of information) is very high		Media literacy is very low and messages are accepted at "face" value without skepticism	
Community "worldviews"	+	**Community "worldviews"**	-
Justice will ultimately prevail		Justice is for those with power	
We can help ourselves		Help seldom arrives in time	
Being connected to each other is important		My business is my business—no one else needs to know	
Endurance, self-reliance, humor, and innovation are shared attributes		Suffering, victimization, resistance to change, and inability to visualize success are shared attitudes	
Guidelines and recommendations from authorities are based on the greatest good for the greatest number		Directions from authorities will benefit the "in-group" and hurt those who do not belong.	

* *A topline assessment* is a starting point and the sum of the +/- signs from this assessment will not provide an estimate of community hardiness because each factor will weigh differently in a community. This assessment is meant to highlight features of a community that, if they exist, could be protective qualities or increase vulnerability. Further analysis and community discussion is needed for more meaningful results.

** *Protective qualities*: are characteristics of the community that add to its robustness (ability to withstand stress), redundancy (substitutable critical systems), resourcefulness (ability to identify problems, determine priorities, and achieve goals), and rapidity (ability to respond in a timely way to reduce harm to individuals and the community as a whole).

*** *Vulnerabilities*: are characteristics of susceptibility related to the community's ability to maintain its sense of community, give shelter, provide sustenance, maintain security, and grow as a society from the adversity.

Personal Resilience and Community Hardiness Support Community Mitigation Strategies

A pandemic influenza strain vaccine can not be manufactured in pandemic quantities until the pandemic influenza strain emerges. Also, antivirals can not be stockpiled in pandemic quantities because some strains of influenza viruses are resistant to the antivirals. This leaves public health officials with the quandary of how to help protect people from the influenza virus during the early phase of a pandemic when vaccine and antivirals will be in extremely short supply. The answer at this time is the implementation of nonpharmaceutical interventions or NPIs.

The NPIs currently under consideration require changes in individual and community behaviors. Genrally, the NPI behaviors are meant to limit the spread of the pandemic, reduce illness and deaths, and lessen the impact on societal infrastructures such as reducing workplace absenteeism and numbers of hospitalizations. Briefly, CDC has identified the following four pandemic mitigation interventions: isolation of ill people in their home or the hospital; voluntary home quarantine of non-ill family members for at least 4 days (i.e., two transmission periods) when a household member is presumed ill with pandemic influenza; dismissing students from school attendance and closing child care programs; and social distancing to reduce contact among adults (e.g., cancel large public gatherings and telecommute to work). Retrospective studies of behaviors by individuals and U.S. cities during the 1918 pandemic suggested that this approach would achieve the stated goals. For this strategy to be effective in a severe pandemic, individuals and communities would have to adopt these behaviors early once the virus arrived in their community and be willing to sustain them for as long as 12 weeks.

Individuals, families, communities, schools, employers and other organizations who know what the community mitigation strategies are and believe themselves capable of carrying them out are more apt to plan to implement these strategies before a pandemic and actually implement them during a pandemic. The Centers for Disease Control and Prevention, U.S. Department of Health and Human Services, collaborated with several federal agencies and public and private partners to form the interim pre-pandemic planning community mitigation strategy guidance (See http://www.pandemicflu.gov/plan/community/commitigation.html). The ideal response remains a well-matched pandemic strain vaccine, but likely that option will not be available early in the pandemic. Without these nonpharmaceutical mitigation measures, deaths and hospitalizations would likely

dramatically increase even during a less severe pandemic. In a severe pandemic, the disease burden would likely overwhelm health care services and community support organizations. These mitigation interventions can make the difference.

There are three main goals of the community mitigation strategy: 1) slow the growth of cases in the community to buy time for production and distribution of a well-matched pandemic strain vaccine, 2) decrease the epidemic peak (i.e., fewer cases of disease at the same time in the community which could more quickly overload the health care systems), and 3) reduce the overall number of illnesses and deaths in the community. In fact, reshaping the demand for health care services through the use of mitigation strategies is a vital part of the overall strategy and data from the 1918 pandemic indicates this is indeed possible.

For the strategy to be most effective, the interventions should be layered (use as many of them as feasible), they must be initiated early and, for severe pandemics, must be maintained consistently during the epidemic wave in the community. Communication professionals should fully understand the measures, their limitations, and plan to educate their communities about both. Time must be allowed for communities to consider these strategies within their own daily realities and to explore ways to overcome obstacles and build consensus.

The four primary mitigation interventions are the following:

1. Isolation and treatment (as appropriate) with influenza antiviral medications of all persons with confirmed or probable pandemic influenza. Isolation may occur in the home or healthcare setting, depending on the severity of an individual's illness and/or the current capacity of the healthcare infrastructure.
2. Voluntary home quarantine of members of households with confirmed or probable influenza case(s) and consideration of combining this intervention with the prophylactic use of antiviral medications, providing sufficient quantities of effective medications exist and that a feasible means of distributing them is in place.
3. Dismissal of students from school (including public and private schools as well as colleges and universities) and school-based activities and closure of childcare programs, coupled with protecting children and teenagers through social distancing in the community to achieve reductions of out-of-school social contacts and community mixing.
4. Use of social distancing measures to reduce contact between adults in the community and workplace, including, for example, cancellation of large public gatherings and alteration of workplace environments and schedules to decrease social density and preserve a healthy workplace to the greatest extent possible without

disrupting essential services. Enable institution of workplace leave policies that align incentives and facilitate adherence with the nonpharmaceutical interventions (NPIs) outlined above.

These measures are meant to be taken along with individual infection control measures (e.g., handwashing and cough etiquette).

An important addition to the community mitigation strategies is the development of a Pandemic Severity Index to help individuals and communities determine which strategies to take and the length of time to engage them. Future pandemics will be assigned to one of five discrete categories of increasing severity that correspond with appropriate steps to take (Figure A/Table A). For example if the case-fatality rate during a pandemic is less than 1 percent (with estimated deaths nationwide under 90,000), the pandemic would be considered a category 1 and the only recommended community measure would be voluntary isolation of ill persons. However, communities could choose to take additional measures. In contrast, a category 5 pandemic (i.e., case fatality rate of 2 percent or higher and estimated deaths nationwide of nearly 2 million) would warrant recommendation of all of the community mitigation strategies. Communication professionals must learn and be able to communicate the categories of the Pandemic Severity Index and their mitigation recommendations. In addition to the 1-5 categories of the index, triggers for the timing of interventions have also been developed. Communities should become comfortable with the concepts of *Alert*, *Standby*, and *Activate*. Importantly, because pandemics spread quickly, the time between these three modes may be short, therefore, preplanning in communities is vital so that everyone is aware of their role and responsibilities, including individuals in the community.

Figure A. Pandemic Severity Index

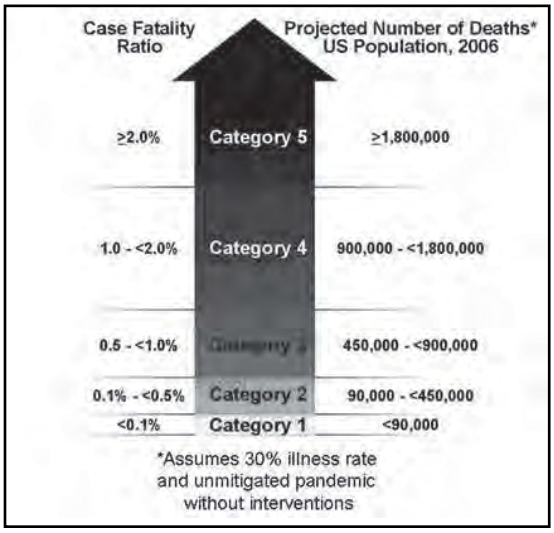

Table A. Summary of the Community Mitigation Strategy by Pandemic Severity

	Pandemic Severity Index		
Interventions by Setting	**1**	**2 and 3**	**4 and 5**
Home			
Voluntary isolation of ill at home (adults and children); combine with use of antiviral treatment as available and indicated.	Reommend	Reommend	Reommend
Voluntary quarantine of household members in homes with ill persons (adults and children), consider combining with antiviral prophylaxis if effective, feasible, and quantities sufficient.	Generally not recommended	Consider	Reommend
School			
Child social distancing dismissal of students from schools and school based activities, and closure of child care programs.	Generally not recommended	Consider ≤ 4 weeks	Reommend ≤ 12 weeks
reduce out-of-school social contacts and community mixing.	Generally not recommended	Consider ≤ 4 weeks	Reommend ≤ 12 weeks
Workplace/Community			
Adult social distancing decrease number of social contact (e.g., encourage teleconferences, alternatives to face-to-face meetings)	Generally not recommended	Consider	Reommend
increase distance between persons (e.g., reduce density in public transit, workplace)	Generally not recommended	Consider	Reommend
modify, postpone, or cancel selected public gatherings to promote social distance (e.g., stadium events, theater performances)	Generally not recommended	Consider	Reommend
modify work place schedules and practices (e.g., telework, staggered shifts)	Generally not recommended	Consider	Reommend

Importantly, the duration of implementation, especially, during a severe pandemic must be communicated and carefully considered during planning. As long as susceptible individuals (e.g., persons have not become ill and have not been vaccinated with a pandemic strain vaccine) are present in large numbers, disease spread may continue. Stopping the interventions too soon could reduce the overall benefit to the community. In fact, research from the 1918 pandemic indicated that the duration of implementation was significantly associated with overall mortality rates (i.e., the longer the interventions were consistently maintained, the lower were the community's mortality rates from the epidemic wave).

The benefits of these strategies do come with challenges and costs. All segments of society and all levels of government should be involved in the planning to implement community mitigation strategies. Importantly, communities must consider which segments of their population will have the greatest difficulty implementing these strategies (e.g., elderly, people who are poor, homeless, and recent immigrants). Considering steps to build self- and group efficacy to improve individual resilience and community hardiness should be part of this process. After all, a well-coordinated implementation plan affords individuals, communities, and the greater society the best chance of securing the benefits this strategy provides.

To learn more about community mitigation strategies, visit: http://www.pandemicflu.gov/plan/community/commitigation.html.

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Module 4 • The Stigma of Pandemic Influenza

The Stigma of Pandemic Influenza

stig·ma·ti·za·tion (stĭg´mə-tĭ-zāshən)
n.
The production of stigmas, especially of hysterical origin.

Severe Pandemic: What is Different?

- The universal threat of a severe pandemic to all members of the society, both in-groups and out-groups equally.
- The level of uncertainty may increase the use of alternative coping strategies to avoid illness or death.
- Media technology will bring the outbreak into homes worldwide when it is still localized to a few communities.

Throughout time, infectious diseases have been a menace for humans. Only since the late 1800s and the advent of the germ theory have modern people had to face the anxiety of a threat they cannot see, smell, or hear. When every object around an individual, including the very air they breathe, could carry the threat of death, there is ample opportunity for strong emotional reactions to infectious diseases. Are "germs" shameful? Ask the TB patient sent to a sanitarium in the early 1900s, ask the AIDS patient of the 1980s, or ask the child who is tagged with the "cooties" of a disliked playmate on the play yard. Just preceding, and early in an influenza pandemic, people who can be singled out and associated with the threat this virus will pose will be at risk of being stigmatized. Communication professionals must balance communicating the real risks that exist with needlessly associating an identifiable group of people with that risk. Communication professionals will also need to take an active role in dispelling misperceptions in their communities and correcting faulty assumptions made by the public and decision makers.

Objectives:

- Define stigmatization.
- Recall the four discernible characteristics of stigmatization.
- Evaluate how stigmatization may occur in the community.
- Formulate ways for communication professionals to counter stigmatization.

The following are recent examples in public health where stigmatization occurred during an infectious disease outbreak. In March and April of 1997, CDC determined that strawberries from Mexico, processed by a company in southern California, were associated with a hepatitis A outbreak among school-age children in at least six states. The southern California processor had packed and frozen the strawberries in 30-pound containers for commercial use and then distributed the strawberries to U.S. Department of Agriculture (USDA)-sponsored school lunch programs. During that incident, the public health investigation clearly reported that the risk of hepatitis A was associated with specific lots of strawberries from Mexico that had been frozen. Nonetheless, sale of fresh strawberries sharply declined and the fruit growers associations had to wage a strong marketing campaign to help regain public confidence in a product (i.e., fresh strawberries) that did not pose the risk with which it was associated.

In 1997, Hong Kong experienced the first reported human outbreak of avian influenza H5N1. The first death was a 3-year-old boy who attended a day care which allowed baby chicks to mingle with the children in the garden. During an intense month when cases increased in the city, the media reports took on a "worst-case," sensational tone. During that time, any location associated with a case of "bird flu" was shunned by the community. This included day-care centers, apartment complexes, and hospitals. The lag between understanding how the virus was transmitted and how to protect oneself from the virus created a window of time to allow for this stigmatization to grow. The majority of cases occurred among guest workers who were hired for domestic help in Hong Kong homes. Some reports suggested that these workers were at fault for the outbreak and they were shunned. No reports confirmed that any workers lost their jobs. However, the parks and areas where these guest workers gathered on their days off were also associated with the H5N1 cases and were avoided.

In 1999, the first cases of West Nile virus in the Western hemisphere were reported in New York City. Not long after, race horses in the state were hard hit by the disease. While the medical community and most of the public were aware that mosquitoes transmitted the virus, during the following year Europe banned New York's race horses from being shipped to Europe for the racing season. In this case, an animal was stigmatized despite clear scientific evidence that they were not at risk for transmitting the virus. Also, West Nile virus is endemic in Europe and has been for sometime, although it was not known to be as virulent as what was being experienced in the United States in 1999 and 2000.

During the 2003 SARS outbreak, which appeared to originate in China, many Asian communities in the United States were likewise stigmatized. People were afraid to visit popular Asian neighborhoods to eat and shop. The situation was so disruptive in Honolulu that the Governor of the state visited and ate dinner in Honolulu's Chinatown area with media in tow to demonstrate the lack of risk. In Oregon, reports showed that women were avoiding nail salons, managed primarily by Vietnamese women, because they feared SARS. The nail salon owners asked for help in dispelling a fear not based in science but on ethnicity, which for some became linked to the threat of SARS from China.

Toronto's severe acute respiratory syndrome (SARS) outbreak was confined to a few travelers, hospital workers and household contacts of hospital workers. Nonetheless, a precipitous drop in tourism occurred and it took the city months to recover their tourism trade. According to the Canadian Broadcasting Company in July 2003, the SARS outbreak was "taking a devastating toll on the tourism sector even before the World Health Organization released its advisory against non-essential travel to Toronto."

- Cancellations at Greater Toronto Area hotels led to an estimated $39 million in lost revenues during the month of April 2003 alone.
- Audiences at theatres dwindled.
- Bus and tour companies were hit – more than 800 bus tours were cancelled, with an estimated economic loss of $5 million to $6 million.
- Fewer people were dining at restaurants – restaurant business was down between 20 and 30 percent.
- Conventions were cancelled – the cancellation of one health-care convention probably cost the region about $6 million.

It took the Rolling Stones, in an outdoor concert in late July 2003, to make the point that Toronto was free from SARS and open for tourism.

Stigmatization can affect a product, an animal, a place, and an identifiable group of people. One is stigmatized by an infectious disease when the risk is not present but the association of the risk with your

population group is. There are two routes to eliminating stigmatizations in a severe pandemic: raise awareness and understanding among the dominant group about stigmatization or wait for the pandemic to become so pervasive in the dominant group that it eliminates the distinctions by race, ethnicity, profession, or other identifiable characteristics. Even if the dominant group is swept up by the pandemic and stigmatization lessens, in the resolution phase of the pandemic the stigmatization is still there and may resurface. As misery and anger turn to fault finding, the perceived "progenitors" of the pandemic could be stigmatized once again. Therefore, communication professionals must intercede.

The Psychological Roots of Stigmatization

Stigmatization can be defined as a mark or sign of disgrace or discredit. There are four characteristics of stigmatization:

> First, there must be a problem which can cause a stigmatizing response that can somehow spare the stigmatizer from the problem or allow him to control it. Second, the party stigmatized must be distinguishable. Third, the stigma must be associated with the party stigmatized. Fourth, there must be a reaction which distances the stigmatized from the stigmatizer. (Constantinescu, 1999).

Stigmatization occurs for several reasons; in a severe pandemic it will likely be for the perception of protection and social control.

The concept of stigma involves the joining of deviance and prejudice. The group of people being stigmatized must deviate in some way from the dominant group who, ignorant or in denial about the actual risk posed by the stigmatized group, allows prejudice to guide their behavior and perceives the stigmatized group as a threat (Heatherton, Kleck, Hebl, & Hull, 2000).

Peril gives rise to the type of stigmatization that could come about early in a severe influenza pandemic. If the stigmatizing condition associated with the person or group is dangerous or lethal to others, stigma arises. Naturally, the more dangerous the condition is, the stronger and swifter stigmatization will take hold. In addition to peril, the degree of stigma will depend on how visible it is (e.g., if based on ethnicity, it would depend on how easily the person can be identified with the stigmatized group), and the controllability of the origin of the stigma (i.e., if vaccines and antivirals were readily available early in a severe pandemic, the stigma may not be as great or as lasting).

Uncertainty is the big wild card for stigmatization in a severe pandemic. The less certain people are about how to protect themselves the more likely they will take steps that seem logical but have little basis in scientific fact. During the 1997 outbreak of hepatitis from the frozen strawberries, much of the media coverage centered on the limited supply of immunoglobulin to protect people from illness. People who were strongly risk averse took the extra step of avoiding fresh strawberries because they feared that treatment was not available. In another example, while scientists were trying to identify what was causing SARS and its origin, many people in China began to suspect their household pets put them at risk. Some reacted by abandoning and killing their pets. The psychological urge to protect oneself and one's family from a threat is primal and may not easily be restrained with science's obtuse logic or public health's unanswered questions.

The Function of Stigmatization

What is the difference between stigma and simple prejudice? Stigmatization occurs when there is a perception of threat and it is accompanied by a social sharing of this perception by the dominant group. In other words, individuals in a severe pandemic may behave with prejudice but it takes a wider community for stigmatization to occur. With media technology today the "community" sharing the stigmatizing belief could be quickly expanded.

Stigmatization is a psychological short cut or stereotype in that one uses a visible marker of the persons to infer something about them. For example, in the case of the nail salon owners during the SARS outbreak, the visible features of their ethnicity was used by some to infer that they were more closely associated with the origin of the SARS threat. Therefore they should be avoided even though they had not visited China or Toronto during this time or had friends or family from those areas.

Stigmatization occurs in a social context and humans are susceptible to it. "Stigma is a powerful phenomenon, inextricably linked to the value placed on varying social identities" (Heatherton, 2000, p. 3). Stigmatization may transpire from a pervading anxiety that arises in others if they are around the stigmatized person or group. Consider, the world is at WHO Pandemic Alert 5 with pockets of sustained human-to-human transmission occurring in a distant part of the world. An individual in the United States is bombarded with images of the threat and dreads the real possibility that in just days, weeks or months that threat will occur in his community. What if health professionals ban travel to and from those places? What if news reports vividly account

Stigmatization occurs when there is a perception of threat and it is accompanied by a social sharing of this perception by the dominant group.

the horrible clinical course of the disease and the increasing spread? What if that person has the choice to interact or not with someone that is physically similar to the people he sees dying of the very thing he so dreads? What if he becomes more anxious around this person, who is different from him, because she reminds him of the threat and this increases his anxiety? What if he resents the feeling of vulnerability and impending mortality she invokes in him? Could he engage in social isolation and rejection, even if he would never have thought of himself as "that type of person"?

In a severe influenza pandemic, one is more likely to see stigmatization come about because of emotional elements, at least initially. One's emotions are more primitive, basic, and occur faster. In time, thinking about and acting out the stigmatizing behaviors could follow. For example, what if during the hepatitis A outbreak, the raspberry industry had marketed their product as the "safe alternative" fruit? Thought and behavior would be involved in the raspberry grower's actions as they consciously chose to use the stigma to gain power, going much farther than an emotional response such as personally avoiding the fruit. While an unchecked emotional response or a slower thought out response are both serious, they do create different problems for the stigmatized group.

Human groups create "reciprocity-based" bonds. One sees this in altruistic behaviors such as sharing food with others. There is strong in-group preference in creating these reciprocity bonds. Although people may be strangers, if they both enjoy in-group membership the stranger in need is more likely to receive help or preferential treatment. When valuable resources are limited, stigmatization may ensure that in-group persons are given those resources first, especially if members of the out-group are thought to pose a real threat to the in-group. As competition increases for a limited "pot," the potential for stigmatization increases.

In a severe pandemic, when resources are limited, any population associated with the threat and stigmatized may be at real risk of being either last in line or banned from the line. Response officials, policy makers, and communication professionals must guard against decisions based on this in-group and out-group thinking (if even subconsciously) and ensure that such perceptions, if not true, are countered in messaging early. After all, vulnerable members of the out-group will be sensitive to any slights and may obstruct response efforts in return. For example, during the hepatitis A-strawberry outbreak, the mayor of one city insisted that the kids in his community receive immune globulin despite the fact that the children had been exposed 28 days or more before and immune globulin would only work if the exposure was 14 days or less. He perceived that the in-group decision makers were deliberately

making choices to benefit other in-group members and not helping his community because they were out-group members. This controversy became national headlines despite the biological facts to the contrary.

The Toll of Stigmatization

If a population group becomes stigmatized, members of this group will experience emotional pain from the stress and anxiety of social avoidance and rejection. More frightening, research has shown that stigmatized persons were also hurt through limited access to health care, education, housing, and employment (Heatherton et al., 2000). Even worse, stigmatizers may react with physical violence against the stigmatized group.

Cultural and stigma

Cultural issues make a difference related to stigma, minority status, and self-esteem. The more the minority group fights against the stigma in organized macro-level ways, the less impact the stigma has on individual self-esteem. The research suggested that in-group comparisons were more important to self-esteem than out-group stigma. Generally, African Americans score higher for self-esteem than do Euro-Americans, and Euro-Americans score higher than do Hispanics, Asians, and American Indians, suggesting cultural relationships to individual self-esteem. In a severe pandemic, however, the population being stigmatized may not have prior personal psychological defenses or organized ways to quickly confront and fight against the stigma. The stigmatization may arise unexpectedly and may involve a group with less protective self-esteem. This is significant because self-esteem is associated with higher levels of survival in disasters, so any affront to a group's or individual's self-esteem during a severe pandemic could contribute to a loss of resilience in that group or person.

Potential for group conflict

In a multicultural world and nation, dissimilarities can lead to negative stereotypes and prejudices (Brehm et al., 2005). Group core beliefs or worldviews influence how group members interpret shared experiences. Culture is expressed through shared habits of response, unexamined assumptions, and shared thinking (R.J. Eidelson & J.I. Eidelson, 2003). These shared beliefs can be perceived by group members as basic truths and may be held with strong conviction. These strong convictions, however, can wreak havoc on intergroup relations. Within this framework, one or more of five cognitive domains are present in group conflict: helplessness, distrust, vulnerability, superiority, and injustice. A group-level ethnocentric worldview can lead to a sense of moral

Fast Facts

1918-19 pandemic, [influenza type A (H1N1)], caused the highest number of known influenza deaths. More than 500,000 people died in the United States, and up to 50 million people may have died worldwide.

1957-58 pandemic, [influenza type A (H2N2)], caused about 70,000 deaths in the United States. First identified in China in late February 1957, the virus spread to the United States by June 1957.

1968-69 pandemic, [influenza A (H3N2)], caused about 34,000 deaths in the United States. This virus was first detected in Hong Kong in early 1968 and spread to the United States later that year.

Sometimes a novel strain of influenza virus emerges in humans, but unexpectedly causes relatively few cases of serious illness or death. The 1976 swine flu disease in this country was such an example.
(www.pandemicflu.gov)

superiority and entitlement within the group and negative views of outgroup members as being immoral and inferior. “Chosenness appears to be an especially important component of this collective superiority worldview, and it is quite common among ethnically based identity groups” (R.J. Eidelson & J.I. Eidelson, p. 184).

Conclusion

With the ability of mass media to influence ideas of millions of people nearly instantaneously and the fact that the United States is a heterogeneous society, the potential for stigmatization in a severe influenza pandemic is high. Any triggering event early in the pandemic that lights the fuse could fire a cascade of hurtful and harmful behaviors toward a group.

“Although the general message—that germs are dangerous and must be avoided is consistent. . . popular discourses about infectious diseases always contain many contradictory elements” (Tomes, 2000, p. 196). Scientists, traditional and new media, Hollywood and marketers will all give different meaning to the pandemic virus when it begins to threaten the United States population. Communication professionals involved in the public health response will face a communication landscape that will offer many different perspectives on a virus. How well we can discourage stigmatization may depend on the work that is done long before a virus arrives.

Checklist: Inhibiting and Countering Stigmatization

Before

- ❑ Remember: products, animals, places, and people can be stigmatized.
- ❑ Avoid geographic mentions of past infectious disease outbreaks, instead substitute dates (e.g., Toronto SARS outbreak versus the 2003 SARS outbreak; the Spanish Influenza Pandemic versus the 1918 Influenza Pandemic)
- ❑ Avoid constant use of visuals that portray only one ethnic group in briefing and education/outreach materials. (Media reports are different and set in time.)
- ❑ Avoid typefaces and symbols that evoke a specific ethnic group (subconsciously you may think it's relevant when it's not) For example: *Avian Influenza H5N1* (this typeface appears Asian-like and is readily available in basic MS Word)
- ❑ Ask staff who share the ethnic background of persons experiencing the earliest outbreaks whether the proposed materials are offensive (if no staff share the ethnic background, reach out to trusted partners)
- ❑ If a particular parasite, virus, bacteria, or toxin evokes an instant association with a particular ethnic/racial/age/gender group—stigmatization is all ready occurring (e.g., When you read the next words "head lice" stop! Now who/what comes to mind?)
- ❑ Teach response officials and communication staff as broadly as possible about the harm that results from stigmatization—people may literally hide their illness to avoid the stigma, which could hamper containment measures.
- ❑ Share with media the concern about stigmatization and work together to create visuals that tell the story without targeting one group.
- ❑ Address the issue in preplanning community checklists and guides. The more people are aware that this could occur, the more people can help guard against it.
- ❑ Have a mechanism in place that allows people to seek the help of public health experts in determining real risks versus imaginary or theoretical risks.
- ❑ Have a mechanism in place to allow people who are feeling stigmatized to express their concern and ask for help.

During

- ❑ All of the above continue to apply.

- ❑ Ensure the environmental scanning process being used is able to discern and alert communication staff to stigmatizing visuals, statements, or behaviors.

- ❑ Monitor misperceptions in the community regarding real risks versus imagined or theoretical risks in relationship to products, animals, places, and people.

- ❑ When stigmatization occurs in the community, counter it immediately with emotional appeals for fairness, justice and sound scientific facts. For example: When nail salon owners who were Vietnamese appealed for help from the health department during the SARS outbreak because women feared they would get SARS at the salons, the health department was able to allay public concern about increased risks and shorten the negative emotional and fiscal impact of the stigmatization).

- ❑ Engage respected political and civic leaders in countering stigmatization (e.g., the governor of Hawaii visited Honolulu's Chinatown during the SARS outbreak).

After

- ❑ Continue to do all the activities above.

- ❑ Ensure that historical accounts of the event do not unfairly show any one ethnic group. The potential is high for historical accounts that cover the early part of the outbreak to unintentionally perpetuate the stigmatization.

- ❑ If stigmatization does occur in the community, reach out to the stigmatized community to learn – believe me, they will know – when it started, what led to it, how it manifested, and how they coped or countered it themselves. Learn the lessons and engage them in the future for help.

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Module 5 • Reaching Special Populations

Reaching Special Populations

spe•cial (spĕsh´əl)
adj.
1. Surpassing what is common or usual; exceptional: *a special occasion; a special treat.*
2. Distinct among others of a kind: *a special tube of paint; a special medication for arthritis.*

Severe Pandemic: What is Different?

- Everyone is at risk, the chronically ill, poor, and powerless more so than others.
- The limited resources for prophylaxis or treatment (i.e., vaccine and antivirals) will be allocated using criteria that may not be easily accepted by some and could be perceived as unjust.
- Voluntary or required isolation and quarantine has been used only rarely in our lifetimes and could be used during an influenza pandemic.

While the very nature of a pandemic influenza virus strain involves nearly universal susceptibility to the virus, emergency planners are concerned that some portions of the U.S. population could be at greater risk of illness and death. From a biological perspective, people with suppressed immune systems and serious chronic health conditions could be at greater risk. From a societal perspective, people who are poor, disenfranchised and powerless could be at greater risk because of disparities in access to health care and inadequate support to take individual measures to reduce the opportunity for exposure to the virus (e.g., remaining home for extended periods). Every public health emergency has specific characteristics that will challenge the work of public information and health-risk education professionals. The obligation for communication professionals is to balance limited communication resources with the unique communication needs of special populations so that this segment of the community, in addition to the overall public, has reasonable and timely access to meaningful information to help protect themselves and their families.

Objectives:

- Employ consistent concepts regarding special populations to ensure that appropriate assessments are conducted, planning done, and resources appropriately allocated.
- Distinguish which populations will be unable to receive general public health emergency messages—related to pandemic influenza-through mass communication channels during the initial phase of a public health emergency.
- Recognize that communication alone may not remove all barriers to preventing illness, injury, or death among population groups.

For which population during a crisis is a specialized message or communication product required, if any? Are cultural differences among non-dominant group members of the United States significant when attempting to communicate health and safety information during a public health emergency? Are communication messages from government authorities involved in the disaster response received differently by non-dominant groups? The answers to these questions should help inform crisis communication planning to ensure equitable support to all members of the community.

If these questions are not answered, two extreme possible outcomes could occur: 1) persons belonging to some non-dominant group cultures or who are impaired would not receive emergency messages in a form or time-frame in which they could make use of the information, thereby increasing their risk of illness, injury, or death; or 2) the responding organizations could spend critical funds creating and disseminating targeted communication products that are unnecessary or confusing to populations (e.g., changes to basic messages could be conceived as "different" messages to populations groups, raising trust and credibility concerns — "Why are we being treated differently?"). More likely, the influences of changing or not changing messages would be less extreme but could still be significant.

Attempt to identify

Before attempting to identify special populations, these assumptions about emergency communication should be considered:

- The initial objectives for public information releases from response authorities early in a crisis are to: 1) prevent further illness, injury, or death; 2) restore or maintain calm; and 3) engender confidence in the operational response.

- Emergencies are chaotic and planning should be directed at simplifying roles and responsibilities to achieve the greatest good for the greatest number while maintaining enough resources to reach those who can't help themselves.

- To avoid confusion early in a crisis, accurate, relevant, simple, fast and *consistent* messages are best.

- Nonetheless, "one size fits all" never fits all people equally well.

- Public health resources for public information activities during a crisis will be limited and must be prioritized, especially early in the crisis.

- Individuals and communities must be empowered to help themselves and each other.

Targeting messages and segmenting audiences on psychosocial, socio-economic, and other demographic criteria are valid for almost all public health activities directed at behavior change. Early in a crisis, these activities must be truncated, but they may be employed or expanded as the incident evolves and during the recovery phase.

Public information officers (PIOs) in public health agencies are responsible for only a portion of public information disseminated during most public safety emergencies. Messages related to general mental and physical well being and health risks are typically the responsibility of public health PIOs. However, the public information responsibility during the incident is also shared with other agencies at all jurisdictional levels. Therefore, public health PIOs must coordinate their public information and health-risk communication planning with jurisdictional partners to ensure consistency and reduce the misallocation of resources. This is particularly important when attempting to communicate with special populations. (Consult the U.S. National Response Plan ESF #8 and Publication Public Affairs Annex #15 for information regarding PIO responsibilities and your state or local emergency response plans.)

Increasing government credibility

A key function of language is that it allows information exchange within significantly larger interaction groups than is possible without language. Importantly, language allows people to learn without first-hand experience. This is both positive and negative, especially related to communication among different groups and between individuals or groups with unequal power and authority. The potential for miscommunication or errors in understanding multiply, especially with greater physical and emotional distance between groups.

Language evolves and is shaped by the situation in a number of ways:

- The inherent nature of the audience and speaker or writer;
- The relationship that exists between the two;
- The purpose of the communication;
- The nature of the topic; and
- The channel being used.

Importantly, language allows people to learn without first-hand experience. This is both positive and negative.

Relationships can be very individualized and may differ across societal roles and group identities. These elements are dynamic and change as the situation changes. Research tells us that public suspicions of scientific experts and government are increasing for a variety of reasons (Peters, Covello, & McCallum, 1997; Seeger et al., 2003; Tomes, 2000). These reasons include access to more sources of conflicting information and challenges to the accuracy of research studies, a reduction in the use of scientific reasoning in decision making, and political infighting. However, trust and credibility are essential elements of persuasive communication (Brehm et al., 2005). Confidence in government, traditional social institutions, and industry has severely eroded in the last 30 years. Peters et al. argued that "perceptions of commitment to a goal are . . . based on perceptions of objectivity, fairness, and information accuracy" (p. 43). Their research shows that the more respondents know about efforts to openly share accurate information, the more they trust the government or industry as the source.

When power is shared, as in a democracy, two-way communication between the government and the people is more common than when power is not shared (Norris, 2002). For example, the early English monarchs between 1500 and 1800 typically engaged in "instructional" and one-way communication. As the English Crown lost power, between the reigns of Elizabeth 1 and George III, the instructional model of communication gave way to a more modern model, a two-way communication or give and take between the sender and receiver. Also, as more information became widely available (i.e., the printing press), the monarchy was increasingly required to consider the receiver's point of view. George the III adhered to modern models of communication—"seeking to influence his citizens/subjects persuasively through the marketplace of print rather than instructing them in the meaning of the events" (Norris, p. 348).

Because most institutions and government not only share power with their constituents, but hold a negative stereotype with the public, it is important for the government to defy their negative stereotypes (e.g., by providing accurate and balanced information in a timely way) to increase credibility and trust. Crisis messages from officials are judged based on the receiver's perception of the trustworthiness of the communicating official or institution, by the speed of communication in response to a disaster or event (which implies competence), and the relevance of the message to the individual. The relevance of a message is directly related to the degree to which it answers important questions about actions to take and reduces uncertainty. Messages that are empathetic (take the emotional perspective of the audience), appear honest and open, and come from a trusted source are most effective in a crisis (Reynolds et al., 2002). When authority figures who are members

of the dominant cultural group communicate to persons in non-dominant groups, the possibility for skepticism, wariness, and mistrust increases.

Differences that Matter

D.W. Sue and D. Sue (2003) present a model that encapsulates levels of similarity and differences among humans with the following three points: "all individuals are, in some respects, like no other individuals . . . all individuals are, in some respects, like some other individuals . . . [and] all individuals are, in some respects, like all other individuals" (p. 12). At a universal level, as Homo sapiens, people are alike in their: ability to use symbols, shared life experiences, self-awareness, and biological and physical similarities. At the group level similarities and differences begin to appear in the following areas: gender, race, sexual orientation, socio-economic status, age, geographic location, ethnicity, disability/ability, culture, religious preference, and marital status. For humans, uniqueness at the individual level occurs in terms of genetic endowment and non-shared experiences.

Understanding the role of culture

Specifically tailored messages for diverse populations may be more effective during the pre-event stage than during the initial phase of a crisis (Reynolds, 2004). Nonetheless, although specially tailored messages early in a crisis could cause confusion or mistrust, there may be times when it is appropriate to do so. One possible reason to alter emergency messages is cultural difference. Culture is defined in many ways, but is essentially the norms and shared history that help form group and group members' attitudes, beliefs, values, and public behaviors (Bond & Smith, 1996; Brehm et al., 2005). Cultural systems vary widely. They are persistent, have tremendous influence on individuals and induce conformity. However, cultural influence related to basic emotions may be more superficial than previously understood. Soto, Levenson, and Ebling (2005) found that the people of Mexico and China, two very distinct cultures, each experience the same internal emotions but expressed their emotions differently due to cultural norms. Researchers have made strong claims that personality traits are universal across cultures (McCrae & Terracciano), even transcending age and gender. Despite differences in culture, language, history, and religion, persons accurately perceive others and their own traits. McCrae and Terracciano surveyed persons among 50 cultures including groups underrepresented in personality and cultural research, such as African and Arabic cultures. Their research supported that "features of personality are common to all human groups" (McCrae & Terracciano, p. 547).

Messages that are empathetic (take the emotional perspective of the audience), appear honest and open, and come from a trusted source are most effective in a crisis.

Zaltman (2003) noted that culture does explain a large portion of behavior, but that cross-cultural research often focuses only on differences. He noted that a body of research from anthropology catalogs pages of traits that are common to all cultures, including the use of metaphors, feelings of empathy, use of figurative language, expressing emotions with their faces, and lying. Differences are more about the degree of expression of these traits than true internal differences.

Collectivism and individualism

Some cultural learning may influence group and individual behavior as it relates to preparedness and crisis survival. There are arguments for and against the importance and magnitude of cultural differences among humans (McCrae & Terrociano, 2000; D.W. Sue & D. Sue, 2003). Nonetheless, cultural differences in areas important to crisis response do exist. For example, high self-esteem, which differs across cultural groups, is recognized as contributing to increased disaster survival and well-being. In addition, strong, fearful thoughts about death influence groups by increasing within-group biases and conformity to cultural beliefs (Pyszczynski et al., 1999). Cultures that are more individualistic tend to be more willing to help out-group members than are members of cultures that are more collectivist.

Empathy was also important in effectively communicating to persons during a crisis (Norris, 2001). For persons from more collectivist cultures where threatening situations increase within-group bias, empathy expressed by out-group members may not be acknowledged or perceived as such.

All cultures include persons who tend toward either collectivism or individualism in their thinking about self and others (Brehm et al., 2005). However, some cultures do tend toward one identity structure which can lead to generalized differences between cultures. Asian and American Indian cultures are believed to be more collectivist than Euro-American and African American cultures. Persons who are more individualistic tend to score higher for self-esteem and to be less influenced by minority-group status stigmas (Twenge & Crocker, 2002). This can be an important factor in a pandemic because persons with high self-esteem are more likely to take steps to protect themselves.

In addition, cultural differences in collectivism or individualism have direct bearing on issues of conformity among the individuals within the group (Bond & Smith, 1996). Bond and Smith found in their meta-analysis of 133 studies involving 17 nations that conformity in groups is moderated by a number of variables in the group, including the size

of the majority, relation of the participant to the majority (the greater the similarity, the more likely the member conforms), anonymity of response, and stimulus materials. In a pandemic outbreak, persons who are more collectivist will more likely follow the accepted norms in their "in-group." Pressure to conform will be high. This may be useful if the desired public health behavior is accepted by the group. If public health behavior goes against the cultural values or beliefs of the collectivist cultural group, the tipping point to change the behavior may be set much higher and may require persons from the "in-group" to persuade the rest of the members to change.

Importantly, group conflicts can arise, in part, based on group core beliefs and shared interpretation of experiences (Brehm et al, 2005). When core beliefs across groups or cultures differ significantly and are perceived by the groups as "basic truths," messages that conflict with those truths may be rejected (R.J. Eidelson & J.I. Eidelson, 2003). Social or cultural group identification may be protective in disaster situations (Norris, 2001), but may also increase in-group versus out-group thinking, and affect coping strategies.

Communicating in a crisis is different. People take in information, process it and respond to it differently during crisis situations, especially when they are under extreme stress (Clarke, 2003, DiGiovanni, 1999). In crisis situations people will attempt to simplify complex information, sometimes incorrectly, and cling to current beliefs, including cultural beliefs (Novac, 2001). At the same time, images become more important than words so that the face delivering the message may be more important than the message itself (Hill, 2002).

Cultural differences in communication style

Communication styles are "strongly correlated" with culture, race, ethnicity, and gender (Robinson & Howard-Hamilton, 2000). These differences include the following areas of nonverbal communication: paralanguage (vocal cues), proxemics (personal space), kinesics (bodily movements), and high-low context communication.

Paralanguage involves verbal expressions, silences, volume, and intensity of speech. In Asian countries, voice volume of conversation is much lower than in the U.S., allowing for the possibility that Americans' speech could be interpreted as aggressive. High-low context communication also differs by culture. A high-context culture relies less on message content and more on non-verbal cues. Low-context cultures interpret messages more explicitly. For example, "no" spoken by an American in a normal tone could be interpreted in some Arab and Asian cultures as a "yes." In Filipino cultures, the mild "yes" is

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thought to be a "no." Kinesics involves gestures and bodily movements which have different meanings in different cultures. Eye contact, for example, can be misinterpreted. Some cultures, including members of most tribal nations, may not make eye contact with an authority figure talking to them: This can be perceived as inattention to the conversation or noncompliance. In contrast African American males are often marked as hostile because of their prolonged eye contact when speaking and greater bodily movements.

D.W. Sue and D. Sue (2003) summarized the following differences in nonverbal communication styles across races/ethnicity (p. 143):

American Indians	Speak softly/slower, indirect gaze when listening or speaking, interject less [and] seldom offer encouraging communication, delayed auditory (silence), manner of expression low-keyed indirect
Asian-Americans and Hispanics	Speak softly, avoidance of eye contact when listening or speaking to high-status persons, interject less (except the Japanese, who interject frequently), mild delayed auditory, low-keyed [and] indirect
Caucasians	Speak loud/fast to control listener, greater eye contact when listening, head nods/nonverbal markers, quick responding, objective, task oriented
African Americans	Speak with affect, direct eye contact (prolonged) when speaking but less when listening, interrupt (turn taking) when can, quicker responding, affective emotional, interpersonal

Communication occurs when the sender's message is received. Understanding multicultural differences in nonverbal communication styles, word choices, and sentence structure are important to

communication. While differences exist, they may be mitigated or exaggerated depending on an individual's acculturation and role ambiguity (Nilsson & Anderson, 2004). The more dissimilar an individual's culture is from the dominant culture, the more difficulty they may experience in receiving and interpreting communication. The more time spent in a culture, the greater the extent of acculturation. Europeans in the United States have a higher degree of acculturation than persons from Asia, South America, and Africa. Difficulties in communication in a multicultural context can affect self-efficacy (Nilsson & Anderson). Role ambiguity involves the level of understanding about what behaviors are expected in a given situation. The greater the ambiguity in cross-cultural communication settings, the more anxiety is experienced.

Cultural beliefs may be more strongly held in a crisis than non-crisis situations; but, if the crisis message does not require a person to take actions inconsistent with their cultural beliefs, then the message should not be altered. In addition, trust and credibility are critical in the effectiveness of messages from authorities or institutions. If a cultural group had strong mistrust of the message's originating source, the message may need to be altered, perhaps by including encouragement from a trusted member of that group. For example, if persons living in the United States without legal status needed to present identification to receive a vaccination against pandemic influenza, they may need to be reassured that their identification information would not be used for any other purpose.

Although in some cultural contexts it seems important to tailor messages (e.g. when strong cultural beliefs may be challenged or when the cultural group has high mistrust for the message source), there is insufficient evidence that all messages in a crisis require cultural tailoring. Because messages may need to be developed swiftly, specific to an uncertain crisis situation, the effort to tailor messages could slow the information flow creating additional problems regarding credibility and trust. In addition, if messages were routinely culturally tailored in some crises, there may be potential for messages to be misinterpreted as "selective" or biased based on culture, which could increase mistrust or create a perception of stigmatization. For example, because most cases of H5N1 are occurring in Asia, if health officials tailored messages specific to Asian Americans it may be perceived by some in the population that the messages focused on their differences and separateness, making them feel stigmatized.

Fast Facts

Pandemic Planning Assumptions . . .

Most, if not all, people will be susceptible to the pandemic influenza virus.

The clinical disease attack rate will likely be 30% or higher in the overall population during the pandemic. Illness rates may be highest among school-aged children and decline with age. Among working adults, an average of 20% will become ill during a community outbreak.

Some persons will become infected but not develop clinically significant symptoms. Asymptomatic or minimally symptomatic individuals can transmit infection and develop immunity to subsequent infection.
(www.pandemicflu.gov)

Defining Special Populations in Communication

The term "special populations" has crept into public health emergency response planning documents without adequate definition. Special needs populations are defined within all emergency services professions according to the mission of the profession. Accordingly, confusion may occur when one professional group borrows the "list" of special populations from another professional group whose mission is different. For public information professionals, the definition of a special population must be based on the mission—to communicate public health information during an emergency, often using mass communication products. Our list of special needs populations may not match the lists of other segments of our organization because our objectives in a crisis are different. The American Red Cross would define a person as special needs if the individual could not be accommodated in a regular Red Cross shelter, such as a person requiring a mechanical ventilator. A mental health-care provider could identify a special needs individual as one who is suffering from pre-existing psychiatric disorders at the time of a trauma, who therefore may not respond to routine disaster mental health counseling for posttraumatic stress disorder (PTSD). For physicians planning to treat persons with antibiotics as a result of a disease outbreak, a special needs individual would be someone who is allergic to that particular antibiotic. Identifying a group of individuals as a "special population" depends on the task to be accomplished. Not all individuals have special needs in all types of emergencies and for all emergency activities.

Consider: Shortly after arriving in South Korea for a 12-month assignment, an American was walking down the street in Seoul. She could not speak or read a single word of Hangul, the language of South Korea. Without warning, an air-raid type siren sounded. It was very loud. The buses and cars stopped in the road and riders jumped out. With only modest hurry, the pedestrians started to converge on specific places along the street and then disappeared down barely noticeable steps. The streets were emptying. She followed the people around her. Some motioned for her to follow. She entered an underground space and stood with the others. After only a few minutes, a siren sounded and everyone began to empty back into the streets. She followed the group. At no time was she able to communicate in English with anyone. Not until the event had passed did she realize that she had participated in a civil defense drill. They occurr randomly

at about monthly intervals and are precautionary exercises to evacuate the streets in case of an attack by North Korea. In this situation, did the Seoul government need to worry about her or define her as a special population? Would she have been a special population if she had been in a hotel room and had no one to "motion" to her about what to do? Could a pictograph have explained it to her?

Identifying a group of individuals as a "special population" depends on the task to be accomplished. Not all individuals have special needs in all types of emergencies and for all emergency activities.

The questions and the possibilities surrounding emergency response communication may seem endless. As communicators, we must let people who *can* help themselves, help themselves. Then we will be free to help the people who can't help themselves without special communication messages directed toward them.

For public health mass communication during an emergency: a special population is any group that cannot be reached effectively during the initial phases of a public safety emergency with general public health messages delivered through mass communication channels. Barriers may be related to the channels of communication or to the receiver of messages. In identifying special populations, one should account for all elements which could severely hamper the ability of these groups to receive *and* act on beneficial health/risk information such as:

- Cognitive impairment (if a proxy/guardian is not present to receive the message);
- Language barriers severe enough that the message could be incorrectly acted on (if a proxy/guardian is not present to receive the message);
- Physical impairments (if compensating technology or human resources are not available);
- Strong challenges to important cultural beliefs relevant to the event;
- Environmental barriers (e.g., no TV, phone, or other typical communication channels); and
- Pre-existing group psychological, social, or political/legal contexts (e.g., strong mistrust of the organization sending the message or fear of retribution if the receiver acts on the information) that could interfere with honest and respectful information exchange during emergency events.

Belonging to a non-dominant group is not, in itself, a qualifier as a special population in this context. If basic emergency health messages can be communicated and received by non-dominant groups or otherwise identified special populations, then for communication purposes they would be part of the general population. Not all non-dominant groups or identified special populations would need special communication outreach during all emergency events or for all emergency messages. If one was communicating about smallpox, an Amish population would not require special outreach unless the public health message was that they needed a vaccination. (Generally, Amish persons shun vaccinations.) However, for ethical reasons any potential barriers to the reception of messages in the crisis situation must be considered.

Early in a crisis, communication resources will be limited and the potential for mixed messages that confuse the public will be great. The overwhelming evidence based on marketing and communication research is that, in an emergency, people tend to have more in common regarding their information needs than not. Therefore, a simple and consistent message would be best unless strong evidence supports it won't be effectively received by an identifiable group that should receive the message in some other, more effective, form.

Conclusion

Remember, the above definition of special populations is related to public information and health-risk communication activities only. Also, as the public safety event evolves, cultural concerns and group beliefs may become more important to ensuring messages are received and acted on. There are several important limitations in this discussion regarding the need for culturally tailored messages during a crisis. Some populations may be unable to receive general public health emergency messages through mass communication channels during the initial phase of a public health emergency; however, communications professionals must consider that emergencies are chaotic and planning should be directed at simplifying roles and responsibilities to achieve the greatest good for the greatest number while maintaining enough resources to reach those few who can't help themselves. In addition, to avoid confusion early in a crisis, accurate, relevant, simple, fast and *consistent* messages are best. Despite efforts to tailor emergency messages, response officials must also understand that communication alone may not remove all cognitive and affective barriers to preventing illness, injury, or death among population groups.

However, until more research is conducted, it appears that culturally tailoring messages during emergencies could have both risks and benefits which communications professional responsible for creating emergency health messages will have to weigh in their planning. With crises such as pandemic influenza looming, which will involve many culturally diverse groups, additional research on these issues seems urgent.

Special Populations Assessment Tool

This special populations assessment sheet may help in identifying those groups of individuals who require differing messages from the general public information message or who can not be reached through mass communication channels. In conducting the assessment, consulting individuals within a population, or representative organizations, may be helpful in understanding how the population may receive information during emergencies. Allow the populations in question to have a say in whether they do or do not need special assistance, especially early in a crisis. Be realistic about what can be accomplished early in a crisis and, remember, never promise what you can't deliver.

After conducting your emergency public information assessment, some population groups:

- May qualify as a special population for purposes related to public health's public information and health-risk communication activities;
- May have status as a special population from an operational perspective but may not qualify as a special population for purposes related to public health's public information and health-risk communication, or
- May qualify as a special population for purposes related to public health's public information and health-risk communication activities, including early in a crisis, but resources are not available within the PIO activity to meet their communication needs. Emergency management planners in the jurisdiction should be alerted to these groups to permit alternate planning.

Assessment and Planning Worksheet:

Identifying barriers to emergency mass communication

1. Describe the population group (estimated number/percent in your jurisdiction)

_____

What is different?

Primary understood language _____

Degree of English comprehension?

❏ None ❏ Simple written understanding

❏ Simple verbal understanding ❏ Proxy/guardian NOT available to receive message

Major Cultural/Religious Taboos (dietary, medical practices, human interaction) _____

_____

Unique lifestyle characteristics (tourist, homeless, isolationist, migrant, undocumented) _____

_____

Mobility (physical, transportation, civil rights) _____

_____

2. Describe the emergency event and recovery actions for planning purposes:

Would any aspect of the disaster, response, and recovery create a communication challenge for the population described above?

Disease Outbreak

❏ transmission from person to person, ❏ transmission by animals, ❏ transmission by environment

❏ no transmission between persons, ❏ transmission by insects, ❏ unknown

Natural Disaster

❏ fire ❏ flood ❏ wind ❏ earth (quake, mudslides)

❏ Nuclear/Radiological Incident

Infrastructure Collapse
- ❏ cyber terrorism,
- ❏ power outage,
- ❏ water/sewer plant contaminated,
- ❏ food contaminated
- ❏ medical resources unavailable

❏ Explosion

❏ Harmful Chemical release

Emergency event "action" recommendations:
- ❏ Shelter in place
- ❏ Evacuate
- ❏ Ingest specific food
- ❏ Do not ingest specific food
- ❏ Avoid specific animals, plants, insects, bodies of water
- ❏ Turn in to authorities or destroy specific animals, plants, insects
- ❏ Take prescribed medicine
- ❏ Remove contaminated clothing in public setting
- ❏ Receive immunization
- ❏ Report to public place to receive treatment
- ❏ Bring identification to authorities to receive treatment
- ❏ Remain at home to receive treatment
- ❏ Stay "tuned" for updates
- ❏ Avoid specific population groups (e.g., contaminated, showing disease symptoms)

3. Describe barriers inherent in the message

Will the content of the message in its present form-- if delivered--still not be received and acted on, based on assessment of the population described above?

Language: _____

_____

Action recommendation is perceived as an affront to a major cultural/religious belief _____

_____

Action recommendation is perceived as an egregious blow to economic security and/or civil rights not shared by all _____

_____

4. Describe barriers in the distribution channels for the population described above

What breaks down in the mass communication delivery systems for an acceptable emergency action message?

❏ No access to an electronic mass communication channel (TV, radio, Internet)

❏ Power outage/communication infrastructure damaged or overwhelmed

❏ No address at which to receive information by mail or automatic phone messages

❏ Not served by specialized media (in understood language)

5. Describe barriers inherent in the population, as described above

What would prevent them from receiving an initial action recommendation from authorities during a public safety emergency?

❏ Language (no English comprehension or proxy)

❏ Cognitive impairment (can't comprehend/remember message and no proxy)

- ❑ Strongly held cultural/religious taboos (action interferes with it)
- ❑ Fear of coming forward for help (outstanding warrants, child support defaults, runaways, undocumented workers/families)
- ❑ Physical impairments without compensating technology/ human resource support
- ❑ No way to identify where/how to reach the population with alternate messages or communication delivery systems (e.g., no geographic gathering place, no way to identify as "without mass communication access," no way to know person is not under constant proxy/guardian care such as an individual who is blind and cognitively impaired and lives alone with only intermittent and un-invested outside care)
- ❑ Phobias, relevant to event, that can't be overcome through mass communication

6. Describe the communication alternatives for populations that will not receive or take the action recommended and communicated to the general population

Can you, with available resources*: change the message, change the population characteristic, or change the delivery system to reach the population described above?*

- ❑ Message
- ❑ Translate into understood language
- ❑ Translate into pictographs
- ❑ Change message to respect cultural taboos
- ❑ Acknowledge cultural taboo and explain reason it is being superseded and what would happen if the offensive action was not taken (use validator)
- ❑ Channels (that serve targeted population)
- ❑ Flyers (for door to door distribution)
- ❑ Community posters (for posting in public places)

Civic/community/advocacy organizations _____

_____

Schools _____

_____

Workplaces _____

_____

Places of worship (church, hall, temple, mosque) _____

_____

Retailers _____

_____

Government services agencies (post office, community health center) _____

_____

Translators (contract or volunteers) _____

_____

Identified proxies or guardians (community leaders, family) _____

_____

7. Prioritize identified "special populations" for public health information and health risk communication activities during a public safety emergency

Which populations can public health reach through its public information and health risk communication efforts? Which populations can't be reached within public health's public information capabilities and should be referred to the jurisdictional emergency operation planners?

Percentage of the population in the jurisdiction _____%

Messages can be altered during the pre-event stage

- ❏ No
- ❏ Yes

Adequate resources can be identified, made available, and described in communication plans

- ❏ No
- ❏ Yes _____

_____

8. Identify the human resources needed to reach the population through the above selected alternate communication channels (#6) with initial messages during an intense public safety emergency

Which people will act as a communication delivery system for messages to the population described above who cannot receive emergency messages intended for the general population through routine mass communication channels?

Organizations engaged to provide human resources _____

_____

- ❏ Memorandums of understanding are in place
- ❏ People are trained and can be notified during the emergency event if needed
- ❏ Persons within the population group described above accept the alternate delivery systems and believe they are necessary and will work
- ❏ Alternate delivery systems have participated in drills/exercises
- ❏ Alternate delivery systems can be sustained, if needed, for days

9. Provide jurisdictional Emergency Management Operations planners with information regarding populations you have identified who may have special communication needs, but who can not be served through public health's public information and health risk communication channels

Best Practices: Customer Communication at the POD

Make Your Job Easier With These Steps:

Reach out—Smile, touch forearms or shoulders, use names
Expect anger—Anger is generated by fear and unwanted dependence on others
Speak slowly—You have it all memorized, your customer does not
Please is pleasant—Please remember to say please every time with direct eye contact
Engage customers—Ask them to help you. Give them things to do to help others
Consistency is vital—All should hear the same thing and be treated the same way (no favorites)
Take time for yourself—Respect yourself and avoid burnout with rest breaks

Understand Your Customers' Feelings

- Crises cause fear, confusion, dread, denial
- Uncertainty is the greatest concern for most in a crisis
- They are seeking restored self-control
- Stress makes it harder to learn new tasks
- Authority figures can be intimidating
- Intimidated people say "yes" and may think "no"
- Any useful information is empowering
- Family members and pets are priorities

R.E.S.P.E.C.T and Understanding Helps You and Me

A positive POD Experience Can Help:

- Increase resiliency in the community and speed recovery
- Reduce feelings of hopelessness and helplessness
- Improve individual therapy completion (compliance)
- Allow customers to ask questions now, not later
- Save lives and reduce illness
- Validate your contribution to others' well-being

Top Tips:

- Show empathy and caring
- Be honest and open to all
- Don't over reassure
- Express wishes (I wish I had answers)
- Explain how to get answers
- Acknowledge people's fear
- Give people things to do
- Ask more of people—Ask for their support
- Under promise and over deliver
- Be flexible and tolerate differences

Special Concerns:

- Avoid jargon and acronyms
- Give directions in the positive
- Simple directions are best for all
- Consider the hearing and visually impaired
- Consider the cognitively impaired

Your Kindness Today Will be Rewarded

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Module 6 • Understanding Loss, Grief and Cultural Bereavement Rituals

Understanding Loss, Grief and Cultural Bereavement Rituals

grief (grēf)
n.
Deep mental anguish, as that arising from bereavement.

Objectives:

- Describe types of loss, grief, and bereavement concerns for individuals and communities during a severe influenza pandemic.
- Recognize the cultural differences in bereavement rituals.
- Select ways to communicate to individuals and communities empathetically about their loss.

Severe Pandemic: What is Different?

- The sheer magnitude of predicted deaths for the United States and the world.
- The certainty of deaths combined with greater uncertainty during planning regarding who is at risk because of nearly universal susceptibility to the virus and unknown virus characterizations.
- The potential for key members of the society to die, leaving critical gaps in community infrastructures and social frameworks.

During the next severe influenza pandemic, modeling estimates indicate that nearly 2 million people in the *United States alone* are expected to die if conditions remain as they are today (e.g., limited ability to produce vaccine early in the pandemic, limited supplies or efficacy of antivirals, and limited community mitigation measures taken) (HHS, 2006). In the last 35 years, during the world's worst ten natural disasters, approximately 1.3 million people died (see Box 1). In fact, after 1959, the *world's* thirteen worst natural disasters do not add up to the estimated 2 million deaths expected in the United States in the next severe pandemic. In addition, during a severe pandemic, deaths from influenza and its complications may affect a very different population than the one that bears the burden during seasonal influenza outbreaks.

Table 1. Number of Episodes of Illness, Healthcare Utilization, and Death Associated with Moderate and Severe Pandemic Influenza Scenarios*

Characteristic	Moderate (1958/68-like)	Severe (1918-like)
Illness	90 million (30%)	90 million (30%)
Outpatient medical care	45 million (50%)	45 million (50%)
Hospitalization	865,000	9,900,000
ICU care	128,750	1,485,000
Mechanical ventilation	64,875	745,500
Deaths	209,000	1,903,000

* Estimates based on extrapolation from past pandemics in the United States. Note that these estimates do not include the potential impact of interventions not available during the 20th century pandemics.

Source: United States Department of Health and Human Services Pandemic Influenza Plan.

During seasonal influenza epidemics, approximately 36,000 deaths occur, of which 95% occur among persons 65 years of age or older, usually from complications of secondary bacterial pneumonia. In a severe influenza pandemic that may not be the case. Communities and the nation will face what experts call "death out of time," as large numbers of healthy adults and children also die from the disease. The death of someone who is not advanced in age or sickly (e.g., the death of an otherwise healthy child) can be much more difficult to cope with. People communicating with individuals or communities experiencing the extreme pain and grief that accompanies loss through death must be especially aware of how grief is suffered.

Grief is experienced in a broad social context. The view of a particular society, culture, or subculture, with expectations of "appropriate grieving," influences the experience of loss and the "performance" of grief for those in that society. Grief is a universal emotion, but no two people experience grief in exactly the same manner. The grieving process includes:

- **Bereavement** – The state that results from a significant loss and encompasses a wide range of reactions, emotional, cognitive, spiritual, behavioral, and physical. Bereavement is a normal, natural experience, although it is traumatic and emotionally disruptive.

- **Grief** – The intrapsychic process of regaining equilibrium after a loss. Manifestation includes emotional catharsis and obsessive thoughts of the deceased. Re-evaluating spiritual issues and experiencing physical symptoms may also occur.

- **Mourning** – The public expression or sharing of the feelings of grief. Such rituals as funeral services or the wearing of black are expressions of mourning.

- **Anticipatory grief** – An experience that occurs before the expected death of a loved one and is a projection of emotional pain and the life change that the loss will bring.

The outcome of the grief process is ultimately growth, but is affected by both the individual and the context of the death. Contexts that have influence on the grief process include:

- The circumstances of the death

- The nature of the relationship with the deceased

- Prior loss experienced by the individual

- Secondary losses accompanying death (e.g., no longer fits into social group, loss of dream).

Growth in the grieving process is also facilitated by the burdens or tasks individuals or communities undertake in coming to terms with the reality of the loss, experiencing the pain of grief, adjusting to an environment without the deceased, and transferring emotional energy from the relationship with the deceased to new or existing relationships. In addition to the mental and emotional reactions to loss, possible physical reactions that may occur in the grieving process, include:

- Numbness

- Tightness in the throat or chest

- Shortness of breath

- Sensitivity to loud noises

- Difficulty concentrating and forgetfulness

- Restlessness and agitation.

The above variables determine whether a person experiences "normal" or uncomplicated grief, "abnormal" or complicated grief, or pathological grief.

The Complexity of Loss and Grieving

Although death is a natural human condition, it does represent a physical, emotional, and spiritual loss for individuals and for the community. The contexts in which death occurs are as influential and varied as are the internal aspects of the person left behind to grieve. Sudden, traumatic loss is an affront to a person's sense of world order. Factors that may affect an individual's grieving process include how one is related to the deceased; the perceived quality of that relationship; the type of death that occurred (e.g., sudden by accident, suicide, lingering illness); the age of the deceased; and the grieving person's personality traits, earlier experiences with death, and historical approaches to grieving (Muller & Thompson, 2003). On a rating scale measuring the cumulative stress of 43 potential stressors, the death of a spouse ranked number one (Muller & Thompson, 2003).

Societal influences on coping

How one copes with the death of an individual will also be affected by societal influences such as general attitudes about death, about the dead person's value to the community, and community cultural norms (e.g., funeral rites). During the early stage of a severe pandemic outbreak, there may be some stigma associated with the death for fear of contagion. This could complicate normal societal rituals. Persons may shun contact with the family when they would normally reach out to them. However, this complicating factor may diminish if the number of deaths in the community quickly increases.

In a severe influenza pandemic, deaths will occur in families and communities in waves, mostly within the 6 to 8 weeks the community becomes exposed to the virus. The community's grieving and bereavement rituals will likely evolve either through the sheer weight of the numbers of dead, which could truncate bereavement rituals, or through a kinship that will arise from the horrible equalizer of this shared experience. Response officials who are striving to prevent deaths may be inclined to ignore the bereavement process in their community or feel unprovoked guilt from the reality of the multiplying deaths. Public health and other response professionals must prepare themselves to confront the realities of these deaths and to assist the community in its bereavement process. In some communities, leaders may become "mourners-in-chief," and will be expected to lead community mourning events along with clergy.

Compassionate communication

Importantly, those who communicate about the number of deaths in their community should be cautious about the wording of their reports. They must show a level of sensitivity regarding the individuals who constitute the total number of deaths. As the first deaths occur, people will expect more information to characterize the deaths (e.g., age, role in the community, gender). They will be trying to assess their own risk according to the types of people who are dying. After all, there's nothing like someone who is one's age to die from a heart attack, to make one consider his or her own vulnerability.

As the death toll increases, reports to the community should provide the total number, but should also continue to acknowledge the loss of vital members of the community in general statements. Communicators must be sensitive to the "look" of the report. If reports are posted to an Internet site, the page should be respectful of the human loss, ensuring that reports of human loss come before mention of economic loss; how one enters the site and gets to the official report should also be considered. The page should be less bureaucratic looking than a county's tax adjustor numeric page. It will be important that nothing on or around the page is commercial or of light humor. Respecting the dead from a response organization's perspective must include respecting that the number reported is more than a number, it represents community members.

Understanding the grief and mourning process and the cultural realities of bereavement rituals will be critical to ensuring communication is empathetic and respectful. The reality is that the public health and response officials charged with supporting the community through the pandemic may also be experiencing loss in their family, workplace, or immediate community.

Unexpected financial loss

While it may seem odd, in developed nations economic loss must be considered within the grieving process. Persons who suffer severe economic loss, especially if the likelihood of recovery is slim (e.g., no business insurance), can experience emotional impact akin to losing a loved one (Norris, 2002). People grieving both the loss of a loved one *and* economic loss will need to begin to imagine a future life without a loved one and economic security. They will have to rebuild their life without the support of a loved one and their lost wealth. This further complicates a severe flu pandemic in which the U.S. government predicts the nation may suffer a decrease in gross domestic production by $600 billion. This figure is equivalent to the annual GDP of the

While it may seem odd, in developed nations economic loss must be considered within the grieving process.

state of Florida (Bureau of Economic Analysis, US Department of Commerce, 2006). The economic impact from the terrorist attack on Sept. 11, 2001, was substantially less than $200 billion. When public health and response officials consider the toll on their community they will have to calculate and acknowledge the loss of people and the loss of economic security. While it may be unseemly for a public official to talk about economic loss too soon after the community has suffered loss of life, at some point it will be necessary to acknowledge it. When the time is right, this communication should also be empathetic and respectful.

Theories of Grief and Mourning

Bereavement, mourning, and grief are culturally based. Although loss of a loved one in all cultures involves strong feelings of sadness, the emotions and activities surrounding that loss can be quite different. Loss is normal and most individuals resolve their grief without complications and with the aid of supportive families and social structures. However, definitions of complicated grief vary, as do the estimated numbers of persons who experience it.

Stages approach to mourning

Bowlby (1980, as reported in Broderick & Blewitt, 2003), mapped four phases in the grief process: shock, protest, despair, and reorganization. Although, therapists once expected the grieving process to occur in stages and conclude in 2.5 years, more recent research indicates that, depending on the type of death involved (e.g., especially traumatic or death out of time), grieving may persist for much longer.

Dual process model of coping with bereavement

Stroebe and Shut (2001) describe the competing forces that grieving individuals face: the need to get on with life and the desire to remain connected to the person who died. The Dual Process Model (DPM) focuses on the stressors the bereaved individual experiences, and maintains that adaptive coping with loss requires oscillation between loss-oriented versus restoration-oriented coping activities. Both inhibited and chronic complicated grief can be understood within these two processes. Interestingly, the researchers found that women may tend to cope in more “loss-oriented” ways and men in “restoration-oriented” ways. This model, for bereaved individuals, focuses on adapting to what is changing in oneself and reorganizing one’s environment to fit the new reality. This reorganization naturally occurs within familial, social, and cultural environments.

In a severe pandemic, the inclination may be to push grieving individuals and the community to move toward restoration and ignore the alternate process of loss-orientation. Public health and response officials should attend to both processes by engaging in symbolic gestures and ceremonies that acknowledge individual and community loss (when it is medically safe to do so). They should also bolster the reorientation process by helping find meaningful roles for community members who are grieving. Communication professionals, therefore, should provide dual messages to those suffering a loss—acknowledge that people want to continue to mourn their loss *and* offer them opportunities to refocus by encouraging them to help the community. Individuals who have lost a loved one may want to wear a black ribbon or other symbol of mourning. In the 1918 pandemic, black ribbons were tied on front doors so that community members could feel close to their loved one, share their loss with others, and continue to help in the response. In a future influenza pandemic new media like weblogs and personal web pages may offer individuals and communities alternative ways to acknowledge deaths.

Integrative model of grief

Most grief models are centered on the individual and ignore the role of family processes. Yet, families and their grief processes are inextricably linked to individual grief and recovery (Moos, 2001). Families are made up of interdependent members who are rule-governed, so that when a death occurs, the entire family system must go through reorganization. In contrast to individual symptoms of grief, family grief symptoms include noticeable changes in communication, such as an increase or decrease in family communication, topic avoidance, and who talks to whom. The family may experience hierarchal confusion, role confusion, and acting out by members (Moos, 2001). Individual grievers reorganize through a process of activities centered on loss-avoidance or restoration, while the family process includes acknowledgement of the death and realignment of intrafamilial roles. Moos noted that families that are less-differentiated, or more dependent on one another, are more emotionally invested in the family system and, therefore may be more emotionally reactive following the death of a family member. In a severe pandemic, where the potential exists for multiple deaths within a family, communities may face exceptional situations related to loss and reconstruction. The community as family, depending on its size and level of attachment among members, may face a similar process, including the realignment of intracommunity roles.

In a severe pandemic, where the potential exists for multiple deaths within a family, communities may face exceptional situations related to loss.

The death of a child

> Children are not supposed to die . . . Parents expect to see their children grow and mature. Ultimately, parents expect to die and leave their children behind . . . The loss of a child is the loss of innocence, the death of the most vulnerable and dependent. The death of a child signifies the loss of the future, of hopes, and dreams, or new strength . . . (Arnold & Gemma, 1994).

When a child dies, the natural order is turned upside down. Parents often work to make the life of their child, if only brief, meaningful. The grief experienced by parents who have lost a child changes them. In an influenza pandemic, where many parents may be experiencing the death of a child, it may be more difficult to make meaning out of their individual loss or they may find comfort in the shared grieving of other parents. Communication response officials must be aware of the special loss of children and create symbols and mourning ceremonies that mark the special loss of the youngest in the community due to the pandemic.

Disenfranchised grief

In most societies, those persons with an emotional or familial bond to the dead person are understood to be in mourning and are expected to participate in mourning rituals, such as wearing certain clothes or walking behind the coffin on its way to the burial ground. However, at the same time, most cultures do not embrace all deaths and do not acknowledge everyone who may be grieving the death of an individual. People who experience loss that is not socially recognized will experience disenfranchised grief, or grief that is not allowed to be expressed openly (Doka, 1996). The lack of social acceptance may be attributed to the definition of the relationship dyad, in the case of a gay couple or extramarital couple, or by the circumstances of death. In disenfranchised grief, neither the relationship, nor the loss, nor the griever is recognized. Persons experiencing disenfranchised grief, and therefore lack social support, may be more likely to seek professional counseling (Doka, 1996).

In addition, during an influenza pandemic, the community may overlook the grief of persons who lost loved ones from medical or other causes besides influenza. In the early stages of the pandemic, family members who die of cancer, heart disease or other chronic illnesses, or accidents or suicides may feel slighted by the organized attention to those who died from pandemic influenza. Therefore, people must be careful not to assume that all deaths in the community occurred due to the pandemic and should continue to reach out to persons who are suffering

losses from other causes. Communication professionals may want to acknowledge the loss of persons from the pandemic and "all families who are experiencing a loss at this time."

Death acceptance or avoidance

In the United States, the dominant culture behaves as if death is taboo (Prothero, 2001). Other cultures are more accepting of death and may often include references to one's own death in day-to-day conversations. Those involved in acknowledging deaths from pandemic influenza should strive to understand grief, bereavement, and mourning among persons of different ethnic and cultural backgrounds. They must also be prepared to approach grief within the context of acculturation, cultural norms, values, and beliefs. Those who identify more with the dominant culture may not observe some of the cultural rituals described so we must respect individual differences. Researchers have described myriad cultural contexts in which death and bereavement can be explored, including by religion, sex, age, ethnicity, and sexual orientation. In a severe influenza pandemic if cultural bereavement rituals are not possible or can not be accommodated response officials should acknowledge the cultural breach and make every effort to fulfill these rituals to the extent possible. Social distancing requirements to prevent the spread of infection may restrict travel and the coming together of family and friends to mourn their loss. Communication professionals must make clear the need and value of social distancing if it is employed without insulting either the dead or accepted mourning rituals. They should emphasize the help to the living provided by forgoing mourning rituals at the time.

Selected Cultural Contexts for Death and Bereavement

The acceptability of the bereavement process depends on the culture in which one was raised and lives. For diverse persons in the United States, cultural traditions of bereavement may conflict with the dominant group expectations. In the United States, non-dominant groups may struggle with their and the dominant group's opposing expectations around death. One's ethnicity may touch on every aspect of dying and death, including how one handles the dead body, the disposal of the body, and the rituals to mark the loss. Following is a brief survey of bereavement rituals by culture. (*Note*: these are not further subdivided by religion; nonetheless, religious differences should be considered as they relate to bereavement and mourning rituals. See Box 2 for further discussion about religious differences.):

Generic characteristics of bereavement in the United States

The Euro-American cultural orientation values youth, joy, and material accomplishments (Bolling, 1996). The dominant culture in the United States attempts to ignore death (Parkes, 1997), and most persons have little interaction with dying, death, and or the dead body (Prothero, 2001). The funeral director typically takes on the primary role of collecting and preserving the body for viewing (depending on religious affiliation) and interment. At the funeral home or at a place of worship, prayers are said, hymns are sung, and a short, uplifting, homily is given. The body is then driven to the cemetery, followed by mourners in cars with their lights on. Another brief prayer is said at the gravesite, which is usually covered in green carpet to disguise the freshly dug ground. The family and other mourners leave before the casket is lowered and the grave is filled with dirt. Flower arrangements are sent by those who could not attend and, often, families ask for donations to meaningful causes in lieu of flowers. The care given to the dead, among the U.S. dominant group, typically ends the moment the body is committed to the earth (Prothero, 2001). Some may return to the grave to pray and display flowers or other symbols of love and remembrance. An important distinction between Western attitudes toward death and that of others is that most world cultures and religions allow for a transition period during which the dead intermingle with the living, who are expected to continue to interact with them. Death, for most cultures, is spread out in time (Bolling, 1996). In Western culture, death is an affront and a failure to scientific revolution, and to be avoided. Death is more abrupt, devoid of ritual, and, for many Euro-Americans, the mourning process is more compressed in time (Bolling, 1996). Even though on an individual level, Westerners may “feel the presence” of the dead person, they may rarely discuss it for fear of being thought odd.

Secularism, and its attending beliefs, is fundamental to the way Euro-Americans, even those who may follow a particular religion, approach death, grief, and bereavement, and death is profoundly affected by secular beliefs (Parkes, 1997). With important secular beliefs, reason takes precedence over tradition so that when head and heart are in conflict, the head wins. Strong emotions of any kind are contrary to reasoned living, the sacred is divided from the secular and treated with suspicion, and rituals are distrusted. Therefore, what may be logical among the dominant culture to prevent disease transmission during an influenza pandemic (not coming together for a funeral due to social distancing recommendations) may seem illogical to some non-dominant groups who may struggle to comply with such an expectation.

African-American traditions

For African Americans, death is a rite of passage. Although there may be a wide range of views regarding death, African-Americans typically have a more accepting orientation toward death than does the U.S. dominant-culture (Barrett, 1996) and many believe in the soul's continuity after death (Bolling, 1996). Metaphors such as "going home" and "passing" often describe this process. The continuity of birth and death and the funeral are highly invested in and have high social significance. African Americans, with the legacy of slavery and a continuing struggle against racism, choose their death rituals as a way to afford individuals high respect.

For most African-Americans, emotional support comes from the place of worship, extended family, and the community. The external expression of mourning in most cultures is the funeral. Since death is a socially significant event in the African-American community, the social gathering after the funeral is a primary ritual, akin to a family reunion. Funerals among African-Americans may be held beyond the time frame of dominant-group custom in the United States, to allow for relatives travelling from distant locations to attend the funeral (Barrett, 1996). One's presence at a funeral is looked upon almost as a duty, with much family and social pressure to appear (Perry, 1993).

Although the family's role is important, death in the community context allows for a cathartic release for the entire community (Bolling, 1996). During the funeral service, archetypal hymns, such as "Let the Circle Be Unbroken," may be sung and members often openly express their grief. Today, if a funeral in the African-American community is not given prominence and sufficient time and accoutrements (e.g. an expensive casket) are not invested in, community members may comment, "'That was a very White funeral' or "'There was no soul in the service'" (Bolling, 1996, p. 157).

At the burial site, the family or friends may incorporate an African grave tradition by placing a glass of water (which symbolizes the African metaphorical description of death as going down to the river) at the grave, burning a white candle, or placing a white flower in a special place. The grave site ceremony usually ends with a prayer, and following the funeral, African-Americans may continue to visit the grave site, especially on important dates, such as the deceased's birthday.

Organized rituals, especially those that allow for expressions of violent grief, may be helpful in the grieving process and in beginning reorganization (Perry, 1993). African-American mourning rituals are

The continuity of birth and death and the funeral are highly invested in and have high social significance.

very elaborate. When the community gets the news that someone has died, community members, usually women, prepare meals and assist the mourners, along with clergy, in working through their distress. However, these rituals are more common among African-Americans who attend evangelical-type churches (e.g., Pentecostal, Missionary Baptist, and Church of God). African-Americans who live in the North, who belong to more mainstream churches, and who have become more similar to the dominant-group are less likely to engage in such distinct rituals.

Latino traditions

Hispanic groups are not homogenous and variations exist regarding grief, mourning, and bereavement (Parkes, 1997). The traditional Mexican culture is more accepting toward death because, as Kubler-Ross (1969) categorized, the population tends to be rural, poorer, and highly religious. The Mexican culture is rooted in both the ritualized human sacrifices of the Aztecs and the parading of statues of the crucified Christ down the street on holy days by the Spanish (Younoszai, 1993). Death is ever-present in Mexican culture, art, literature, and celebrations (e.g., Day of the Dead), and Roman Catholic religious traditions, such as praying to the saints:

> Death is seen as a companion, or sometimes as a lover. Sometimes death is viewed as a woman and sometimes as a man. . . Death is death. And it must always be included as a part of the Mexican reality (Younoszai, 1993, p. 76).

Mourners who are Catholic bring candles to the church to light and Novenas (prayers) are said during the nine-day morning period after the death. While open expressions of grief and crying are acceptable for everyone (Van Barresen, 2002), during a wake, less emphasis is placed on grief and the deceased and more on the social aspects of the coming together of friends and family. Even as more and more Mexican-American mourning rituals and religious services resemble those of Euro-American Roman Catholic services (Younoszai, 1993), the participation of extended family members is still important and family are more likely to make the attempt to be at the funeral than Euro-Americans.

Asian traditions

Religious shrines and temples densely populate all parts of Asia, and Asians place great importance on religion. Family and family unity are very important in Asian cultures, and this importance continues into death. Ancestor worship is a strong tradition, undertaken to maintain

family cohesion by incorporating images of deceased kin as symbols of perpetual family memory (Parry & Ryan, 1996). Asian cultural beliefs and rituals surrounding death and dying do vary by region.

Chinese-American traditions

Chinese persons mix their religious belief systems and rituals from Taoism, Buddhism, and Confucianism. Chinese believe that the family, along with the physician, are responsible for the care of the dying and, less like the Euro-American tradition, the family should have a strong say in decisions about the individual family member's care (Tanner, 1996). Chinese have a strong belief in the afterlife. They believe that the soul has two forces, good and bad, or hot and cold. When a person dies, the soul separates from the body. However, if the funeral rites are not lavish enough or carried out correctly, the negative force of the soul will reenter the body and haunt the living relatives of the deceased. To what extent these beliefs perpetuate is not well known; however, lavish Chinese funeral rites continue in the United States (Tanner, 1996) where Chinese families use funeral homes that understand their cultural needs. There the family places blue and white flowers around the coffin before the funeral. This is the only time where it is acceptable for Chinese men to openly express their grief. During the funeral, the women wail and the men remain silent. Drums, music, and firecrackers make up the funeral procession. The length of the procession is indicative of the wealth and esteem of the family. Three days after the burial, the family picnics on the grave and leaves symbolic paper gifts, such as little houses. Ceremonies also occur on the 21st, 35th, and 49th day after the death.

Korean-American traditions

Koreans are highly spiritual. Although Korean-Americans in general may not be affiliated with any particular religious group, religion shapes their spiritual systems (Lee, 1996). Underlying all traditional Korean forms of religious practices is shamanism, which emphasizes the harmonious balance between all living things. Koreans place great value on modernization in all areas of their lives and have modified even death and funeral rituals. In an initial ceremony called *Bok*, the living call back the soul of the deceased in hopes that it will return, and wait for the soul for three to five days. A chief mourner and visitors gather around the family during this time and offer food and gifts of money for the funeral ceremony. Koreans practice ancestor worship with strong emphasis on filial piety. Annual holidays exist to honor and remember the dead.

American Indian traditions

American Indians' view of time is different from mainstream society. For American Indians, time is flowing, always with us, and relative (Sue, D.W., & Sue, D., 2003). This sense of time also influences American Indian beliefs regarding death. The American Indian medicine wheel is a representation of their circular view of life and death. Many American Indians believe that life after death is a continuation of life, that life continues in a new form, and death does not exist (Showalter, 1998). American Indians respect age and engage in important rituals around birth and death. In addition, reciprocity is important, with mutual giving and taking during the mourning process, especially of food and drink. As a collectivist society, group needs are more important than individual needs, as represented in death rituals illustrated in the following exchange:

> A non-Indian man asked an old Cherokee woman. "How long do you think it will take your loved one to eat those plates of food you set out every evening? The old woman . . . quietly replied, "Ah, I think it will take maybe the same time as it will for your aunt's soul to smell those flowers you take to the grave on Sundays." (Showalter, 1998, p. 76)

American Indians do not freely discuss their pain, discomfort, or need for grief intervention (Brokenleg & Middleton, 1993). Rather, a common custom among many American Indian tribes is to cut one's hair short following the loss of a loved one, as a ceremonious expression of grief.

Communicating About Death
One-on-One

In a catastrophic event, as many people are ill, dying, or in need of treatment, it may be your job to talk to individuals about what is happening. There is a great body of work regarding expressing empathy and empowering decision-making between the medical professional and the patient in a medical care setting; however, most of this work assumes the luxury of time that is non-existent in an emergency situation. Some people, who may not have much experience in this patient-professional dialogue, may be recruited for the first time to educate patients or groups during a crisis. In addition, if an evolving disease outbreak in a community begins to effect members of your response teams or their families, supervisors and team leaders may find themselves in a supportive role. The following are some basic thoughts about communication styles in an intimate but highly emotional health emergency situation:

Empathize with the patient and family.

- People only engage in serious, meaningful communication for short spans of time.
- Small talk and chitchat can be a treasure trove of meaningful "hints" about what a person is worried about or may want to talk about.
- Privacy is important. Assure that information shared will be kept private.
- Allow communication free from interruptions (e.g., crying shouldn't be interrupted).
- Try not to answer questions outside your area of expertise. Get permission from the individual to refer him or her to an expert.

Listen carefully.

- Place the speaker's needs above your own.
- Use open and accepting body language (e.g., no crossed arms).
- Always be honest in responding.
- Try not to interrupt or give advice.
- Accept moments of silence.
- As much as 90% of all communication is nonverbal. Look for cues in body language.

Be careful.

- Try not to misinterpret the meaning of words and gestures.
- Value judgments hinder communication. Validate what the person is saying but remain neutral in conversation.
- Teasing belittles the individual.
- Blame cuts off communication.
- Use the person's name in the conversation.
- Ask a clarifying question: "Can you help me understand?"

Fast Facts

Our assumptions for a pandemic today are that:

- Infected people will shed the virus and each infected person on average would infect two other people.
- Absenteeism from work and school in such a community will be between 15% and 35% because of exposed or sick people, but also because people will need to take care of others.
- Therefore, communities must prepare locally to respond to a pandemic. It is important for communities to work together in their planning. (www.pandemicflu.gov)

- Allow the conversation to evolve—don't push it where you hope it will go.
- Allow for silence.
- Be sensitive to nationality, ethnicity, religion, age, and feelings.
- When possible, use the same language (words) as the other person.
- When responding to someone, say "you're crying" instead of "you're sad" to allow the person to express the feeling behind the action.
- How something is said is often more important than what is said.

When speaking to grieving family members:

Your presence is more important than conversation. Family members may voice feelings with such strong emotion as "I don't know how I'm going to live without my husband," or "Why would God allow this to happen?" Short statements of condolence, such as "I'm so sorry," "This is a sad time," or "You're in my prayers," are enough of a response. If a person tenses at your touch, withdraw.

Use "death" or "dying" not softer euphemisms. Many people feel patronized by words like "expired" or "received his heavenly reward." Use the same words as the grieving person to respect cultural differences.

Refrain from platitudes—"She lived a good life," or "She is no longer suffering." These statements can trivialize the family's loss.
Avoid sharing your personal experiences of death and grief so you can keep the focus on the family member.

Avoid sending signals that you are distracted or need to do something else. Don't glance at papers, your watch, the elevator, the clock, or others in a conversation. Focus on the person and speak gently and without haste. Take time cues from the other person. They will "tell" you when they have had enough. When in doubt, ask if they would like to be left alone.

Offer support—don't wait to be asked.

Conclusion

Every society has rituals and traditions associated with loss which serve valuable functions. For example bereavement rituals provide an established structure within which to act. The rituals provide structure and a known sequence of activities, at a time when a person is disorganized and distressed. The bereaved do not have to think, they can just go along. As a clinical affliction, bereavement lacks precise diagnosis and treatment criteria, although generally, mental health professionals agree that unhealthy grief can result in deviant behavior (Feifel, 1996, p. 40). A major concern for response and community leaders must be the needs of those bereaved. If ignored, "the total cost of these unmet needs from human suffering, chronic health problems, and economic losses are incalculable" (Muller & Thompson, 2003, p. 199). There is no single formula for understanding any cultural group and, while generalizations can be helpful, they are not substitutes for individual consideration (DeSpelder, 1998). Displays of emotion such as crying, fear, and anger are nearly universally accepted in all societies among mourners, except Western society which is, in fact, highly deviant (Parkes, 1997). But among any population, losses can lead to mental and emotional problems if the grief process does not occur. Individuals from different ethnic groups or cultures may manifest symptoms of grief and undertake the grief process differently. Communication professionals should understand these differences and make allowances for them in messages related to death, grief, loss, and mourning.

Checklist: Planning a Community-Wide Memorial Service

Community-wide memorial services are an outgrowth of shared misery and the need to reconnect with others. It's also a time to reaffirm the goodness that exists in the community and to feel hope. (Hold them only when it is medically safe to do so.)

The community-wide memorial service has two major components: mourning the dead and uplifting people so they can move forward.

This is a community memorial event—smaller groups and places of worship will have other services that will allow them greater latitude—keep this one focused on community cohesion.

Do:

Location and logistics

- ❏ Select an event location that is religiously and politically neutral (e.g., a sports stadium, a convention center, and park).
- ❏ Plan the event for a date and time when the most people can attend.
- ❏ Plan the event for a date that is within a window of appropriate mourning but not so soon that it interferes with public health recommendations and personal funerals.

- ❏ Engage health, safety and security people in the planning early.
- ❏ Ensure that the location is easy to find, clearly marked, and has ample parking and access for people with disabilities.
- ❏ Ensure that signers are available.
- ❏ Discretely have available mental well-being counselors before, during, and after the event.
- ❏ Have easily identified volunteers evenly spaced throughout the grounds and the building so that attendees can find help quickly.
- ❏ Babies and children will be present—make it family friendly—have disposable diapers and diaper changing areas available and well marked.
- ❏ Bathrooms should be ample—don't make people wait in lines.
- ❏ Provide water abundantly.
- ❏ Provide facial tissues.
- ❏ If outside, provide sunscreen and paper fans, or blankets if it is cold (people are sad, distracted, and caring less about their own well-being—do it for them in ways that you can).
- ❏ The surroundings should be as devoid as possible of advertising messages and should balance between stark and festive.
- ❏ Mourning colors are different by religious groups: for example, blue, white, and black are all colors of mourning in different religions.
- ❏ Be sensitive to smells in the area (e.g., if flowers will be part of the décor then make sure they are not too fragrant, if candles are used then avoid scented ones).
- ❏ Give all of the adults and most children a copy of the memorial program as they enter.
- ❏ If logistically feasible, provide small stuffed animals or a plush toy to the children, ensuring it is safe and makes no noise (no advertising).
- ❏ Ensure the sound system is checked, checked, and checked.
- ❏ If the venue is large, use video screens to allow all participants to have a front-row seat.
- ❏ Following the event, offer a flower or memento at exits to move guests in the right direction.

- ❑ Offer safe places for community members to cluster who are not ready to leave immediately.
- ❑ After the event, have kiosks or people providing information on civic support services (e.g., depression or suicide toll-free numbers, domestic violence numbers, alcohol or drugs support groups, etc.) Make them discrete and specific for the event—personal.
- ❑ Always keep the mourners and their mental and physical well-being in mind. Every step in planning and execution should be filtered through this question: "Will our community cohesion benefit from this step?"
- ❑ Provide a designated site for the media and a secluded place for one-on-one media interviews.

Event program

- ❑ Inclusion is important: memorial services should not be devoid of religion, they should be representative of most all of the faiths in the community (all if possible).
- ❑ Include enough secular moments to make it comfortable for persons who do not identify with a specific religious group.
- ❑ Religious leaders are only one way to represent the faiths; there may be other creative ways (perhaps through dance or musical contributions—especially involving children).
- ❑ Attempt equity in the sequencing of events (amount of time per religious group). If someone is known to be long winded, have a musical interlude scheduled that can begin softly while they are finishing up to transition them from the microphone
- ❑ Have music playing as people arrive and before the start of the event—it should be soft and meaningful.
- ❑ Keep the event at 2 hours or less—it should be long enough to make it worthwhile but not so long that people become restless and fatigued.
- ❑ Vary the tempo of the event. End with something that is easy for everyone to participate in and that is uplifting and hopeful.
- ❑ Political and civil leaders will expect a role. Decide before hand who, when, and how long.
- ❑ If the community has designated someone before the service as their "mourner-in-chief" because of their role in the event or their empathetic nature throughout, let this person have a prominent role.
- ❑ Some communities will have local or national stars—they can be included if they volunteer. Keep it appropriate to the moment.
- ❑ Engage the attendees in meaningful ways—holding ribbons, or clapping to music, or singing (note: try to avoid using individual candles because of fire hazard).
- ❑ If possible, remember generational differences and appeal to children, teens, adults and the elderly through visuals, messages, songs, and music.

Communication

- ❑ Use multiple channels to announce the service.
- ❑ Announce it only a few days before it occurs. Too soon and people will forget or talk themselves out of it. Too late and people won't have time to encourage each other to attend.
- ❑ Use public buildings and any temporary display areas to announce the memorial service (e.g., library, schools, colleges/universities, health facilities, city municipal offices).
- ❑ Publicize it so that people are aware it is a secular and religious event.
- ❑ Use symbols that represent the community as a whole in materials—focus on community cohesion and coming together.
- ❑ If pictures of the dead are used, ensure families agree.
- ❑ Sometimes one person's death becomes the symbol of all the deaths in the community—if that occurs, it's appropriate for this person to be singled out.

- ❑ Communicate to neighborhoods and populations that are often left out in community gatherings.
- ❑ Consider televising the event for those who can't or won't attend. (Ensure that mourners are not intruded on).
- ❑ Ensure the media have all the information they need before hand regarding the event program and the level of access they will have during the event to program participants and the community. (Remember, the media are part of the community too—news anchors may be moderators for the event).

Don't

- ❑ Don't censor prayers, songs, or very brief sermons—keep them all short and in the spirit of respect for the dead and uplifting for the living. People know they are attending a memorial service.
- ❑ Don't let the death of one person in the community overshadow the others (e.g., a celebrity or powerful civic or business leader).
- ❑ Don't forget that people will have died during this timeframe unrelated to the mass-community catastrophe, remember to acknowledge all losses in the community.
- ❑ Most communities are heterogeneous—celebrate that if possible—but don't let one group dominate and don't make it an obvious laundry list. Combine ethnic groups/cultures in moments.
- ❑ Don't let technology intrude on this event—ensure that all the video and sound systems are flawlessly working and have backups.
- ❑ Do not go "VIP" overboard—this is about a community in mourning, if it appears that certain people are "special" (beyond security concerns), this detracts from the spirit of community cohesion. (No "them" or "us").
- ❑ Don't publicize the service as if it were a "celebrity-studded" concert—keep it simple. People should feel welcome to come not marketed to come.
- ❑ Natural, spontaneous humor during a time of intense sadness and grief can be healing—any contrived or inappropriate humor will be devastating—it's not funny.
- ❑ Do not let media demands for coverage (e.g., order of events or camera angles) dictate the event—it is first and foremost for the community members attending in person.
- ❑ Don't allow the event to be hijacked for any political, religious, or business objective.

Box 1: Worst (in deaths) natural disaster events in recorded history

2005 – South Asia
An earthquake in Kashmir, Pakistan. The death toll is more than 73,000.

2004 - South Asia
An earthquake causes tsunamis that hit Sri Lanka, Indonesia, India, Thailand and other South Asian nations. The death toll is more than 250,000.

2003 - Iran
A 6.3 quake devastated the Iranian city of Bam, killing more than 50,000 people.

1999 - Venezuela
The death toll is still unclear from the rain-caused landslides that hit Venezuela in mid-December 1999; official estimates are as high as 30,000 deaths.

1998 - Central America
Hurricane Mitch devastates much of Honduras and Nicaragua in Central America. More than 10,000 people were killed and some 2 million left homeless as mudslides swept away whole villages.

1991 - Bangladesh
Bangladesh lost more than 130,000 people in April 1991 from cyclone-induced flooding.

1990 - Iran
An earthquake triggers a landslide, causing from 40,000 to 50,000 deaths in western Iran on June 20, 1990.

1988 - Armenia
In 1988, an earthquake measuring 6.9 on the Richter scale devastates Armenia, killing over 100,000 people.

1985 - Colombia
And a small eruption of the Nevado del Ruiz volcano in Colombia on November 13, 1985 leads to a massive mudflow that covers the city of Armero and kills more than 23,000 people.

1983 - Thailand
Monsoons kill 10,000 people in Thailand over the course of three months in 1983. Some 100,000 people contracted waterborne diseases as a result of the storm.

1976 - China
A deadly earthquake of a magnitude 8.0 strikes Tianjin, China, on July 27, 1976. The official casualty figure issued by the Chinese government was 255,000 people.

1970 - Bangladesh
Bangladesh loses more than 300,000 people in November 1970 from cyclone-induced flooding.

1970 - Peru
A magnitude 7.8 earthquake at Mount Huascaran, Peru, on May 21, 1970, causes a rock and snow avalanche that buries 2 towns, killing as many as 20,000 people.

1959 - China
In July 1959, massive floods in China kill at least 2 million people.

1938 and 1939 - China
Floods kill 1 million people in a two-year period in China.

1931 - China
The massive flooding of the Yangtze River in China in 1931 caused more than 3 million deaths from flooding and starvation.

Top Ten Organized Religions in the United States, 2001 (self-identification, ARIS)
[Nonreligious, Atheist, Agnostic have been dropped from this list.]

Religion	2001 Est. Adult Pop.	2004 Est. Total Pop.	% of U.S. Pop., 2001
Christianity	159,030,000	224,437,959	76.5%
Judaism	2,831,000	3,995,371	1.3%
Islam	1,104,000	1,558,068	0.5%
Buddhism	1,082,000	1,527,019	0.5%
Hinduism	766,000	1,081,051	0.5%
Unitarian Universalist	629,000	887,703	0.3%
Wiccan/Pagan/Druid	307,000	433,267	0.1%
Spiritualist	116,000	163,710	0.05%
Native American Religion	103,000	145,363	0.05%
Baha'i	84,000	118,549	0.04%

Retrieved July 28, 2006, from http://www.adherents.com/rel_USA.html#religions

Box 2: Religion Matters in Bereavement Rituals

Unlike some countries, the United States does not include a question about religion in its census, and has not done so for over fifty years. Religious adherent statistics in the U.S. are obtained from surveys and organizational reporting. While most of the U.S. population is Christian (from 76% to 82%), other religions are also prominent in the United States. After Christianity, the three dominant religions in the United States are Judaism (1.3%), Hindu (.04 - .05%) and Islam (.05%). The religious customs for bereavement can differ markedly. Each ritual has a religious meaning and a purpose in the grief process. Forgoing any of these steps because of the realities of pandemic mitigation measures could interfere with that grieving process.

Judaism

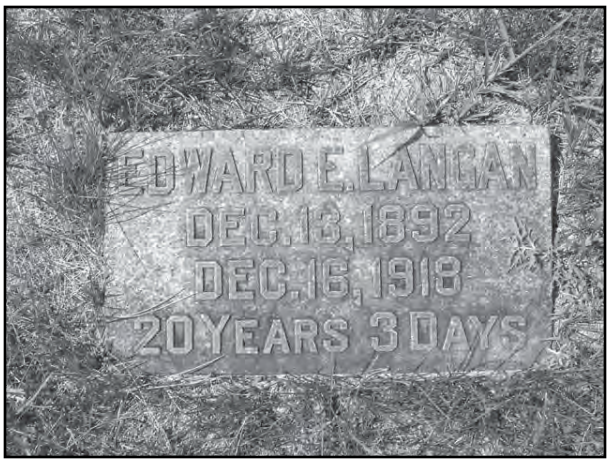
In the Jewish faith the funeral and burial rituals are very symbolic and important to the grieving process. By cutting keriah (the tearing of a black ribbon or garment before the funeral) mourners express their anguish as an outward sign of grief. At the gravesite, Kevurah is the ritual of shoveling of earth into the grave. It is often done with the back of the shovel to indicate a reluctance to perform this ritual and is a final physical act of acceptance that the loss is real. Jewish burials are usually held within 24 hours of death, but may be delayed if immediate family members have to travel long distances. Most Jews are buried in a cemetery and some communities consider cremation a desecration of the body. Many other rituals continue for days and weeks after the funeral.

Hinduism

For Hindus, death represents the transition of the soul from one embodiment to the next and is the means by which the spirit can ascend its journey towards Heaven or Nirvana. Hindus believe in reincarnation and a Hindu funeral is a celebration and remembrance service. Hindus cremate their dead and the burning of the dead body signifies the release of the spirit. The flames themselves are important as they represent the presence of the god Brahma, the creator. White is the traditional color and mourners will usually wear traditional Indian garments to the funeral.

Islam

Muslims practice funeral traditions that tend to have developed over the centuries, rather than being set out in the religion's holy book. Muslims believe that the soul departs at the moment of death, and they will try to bury the body within 24 hours of death if possible. The deceased is buried with their head facing the Muslim holy city of Makkah. The body is wrapped in a shroud of usually simple, white material. Funerals are simple and cremation is forbidden.



H1N1 Comes to Cedar Rapids, Nebraska: The Langan Boys, 1918

Cedar Rapids: Census 1910, town pop. 576, (1,885 in area); 6 churches; and a flour mill

In 1918, Thomas Langan, 25, was married to Carrie and had 5 children.

His brothers, William, 22, Edward, 20, and David, 16, lived at home.

December 1918, all four boys fell ill with influenza:
December 16, Edward died at the age of 20
December 19, William died at the age of 22
December 20, David died at the age of 16

Thomas Langan survived the 1918 pandemic and fathered four more children. Thomas lived to be 75 years old, when he died in 1966.

Photos courtesy Kim, Village of Cedar Rapids and the Langan family

1955 - Thomas, who survived the 1918 pandemic, and Carrie Langan with their 9 children

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Module 7 • The Role of Information Technology

The Role of Information Technology in Pandemic Influenza Communications

in•for•ma•tion (ĭn´fər-mā´shən)
n.
1. Knowledge derived from study, experience, or instruction.
2. Knowledge of specific events or situations that has been gathered or received by communication; intelligence or news.

Severe Pandemic: What is different?

- With the advent of increasingly advanced information and communication technologies the transfer of information through official and unofficial channels is instantaneous, horizontal, and decentralized.
- Due to the uncertainty surrounding the next influenza pandemic, opportunities abound for the public to find and receive mixed- or erroneous messages (via electronic channels) that could significantly impact their health and well-being.

Communication in the Broadband Age

Search for the phrase "Pandemic Influenza" on the top three online search engines and Google will return 1.9 million results in 0.30 seconds, Yahoo 1.2 million results in 0.12 seconds, and Ask.com (formerly AskJeeves.com) 79,000 results (search time not given). While best practices have been established in communicating crisis and emergency risk to the public (Reynolds, 2002; Seeger, 2006; Sandman, 2003; Covello, 2003), research studies and the guidelines they inform typically either address communication via "traditional" channels, i.e. television, radio, and newspapers, or electronic and alternate channels in a non-emergency period. Public health agencies and organizations characteristically offer information via their websites (i.e. the Centers for Disease Control and Prevention, Georgia Department of Public Health), in addition to providing print materials. However, some of that information may be inaccessible to the general public, due to the highly technical aspect of scientific recommendations (infection control guidelines not including hand-hygiene or cough etiquette) or absent, due to either ongoing material development (as agencies work to develop more extensive pandemic flu guidance) or conflicting debate within

Objectives:

- Recognize the multitudes of [traditional and] non-traditional ways the public can and will access information, and the speed with which electronic communications will reach innumerable channels.
- Construct a plan to reach out to non-traditional communication channels to help disseminate accurate, consistent, timely information to large numbers of people.
- Evaluate message and rumor monitoring methods to include new technologies and the ability to counteract any false information that may become widespread.

the field (mask use recommendations). The purpose of this module is to discuss the use and barriers of information and communication technologies (ICTs) when communicating with the public in a pandemic emergency. This chapter will focus specifically on the various ways of communicating via the internet. There has been some consideration of other technologies (such as text messaging, the use of personal data assistants, etc.) for use in mass communication, but this has occurred primarily in the private sector (Stuver, Keene, and Carlisle, 2004; VeriSign, 2005) and with a dearth of research support.

People are ever expanding their use of electronic communication channels. In the workplace, regardless of industry, email is a ubiquitous way of communicating with coworkers, supervisors, customers, vendors, and internal and external contacts. Two-thirds (68%) of Americans use the Internet (Fox, 2005). Approximately the same number own cell phones (Ives, 2004) and of these, 7-9% do not subscribe to land-based phone services (Pew Research Center Press Release, May 2006). According to a December 2005 survey by the Pew Internet and American Life Project, the percentage of Americans who say that the Internet has greatly improved their shopping opportunities doubled 16 to 32% from March 2001 to December 2005. The percentage of Americans who say the internet has greatly improved their pursuit of hobbies and interests likewise grew from 20 to 33% from March 2001 to December 2005 (Madden and Fox, 2006). In a health-related vein, the same survey respondents were also asked whether they had helped someone deal with a major illness or health condition within the past two years and, if they had, whether the internet played a crucial role, an important one, a minor role, or no role at all in this event. Of the respondents who found the internet to be crucial or important during a loved one's recent health crisis, 36% said the internet helped them find advice or support from other people, 34% said the internet helped them find professional or expert services, and 26% said the internet helped them find information or compare options (Madden and Fox, 2006).

Internet access and the digital divide

Communicating with the public via the internet necessarily requires communications officials to consider many of the same issues that apply to overall communications, especially crisis and emergency risk communication, in that different communications needs exist for different racial, ethnic, age, and gender characteristics of users. The percentage of Americans who report no internet use at all has remained stable for several years, but for those who do use the internet, there are gaps in access in segments of the population. Of the percentage of Americans who do go online:

- Only 26% of persons age 65 and older go online, compared with 67% of those age 50-64, 80% of those 30-49, and 84% of those 18-29.

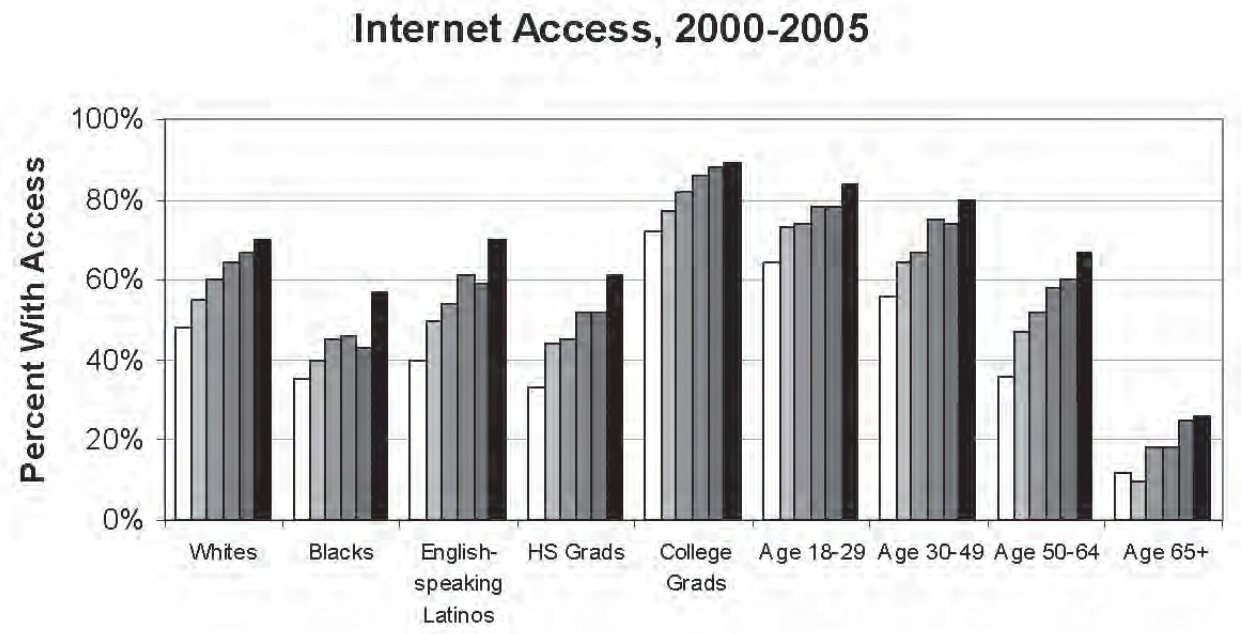
- Only 57% of African-Americans go online, compared with 70% of whites.

- Only 29% of those who have not graduated from high school use the internet, compared with 61% of high school graduates and 89% of college graduates.

- 60% of adults who do not have a child living at home go online, compared with 83% of parents of minor children (Fox, 2005).

The way in which people are connecting is also changing. Whereas the number of years one has been using the internet (see below) used to be a predictor of the frequency of internet use and types of online activities, broadband access is becoming a stronger predictor of online behavior (Fox, 2005). Given some of the technological and economic requirements of broadband access, this may serve to widen the so-called digital divide. However, while older adults, African-Americans, and those with less education lag behind the rest of American internet users, internet use has steadily increased in all demographic and age groups and in both genders from the year 2000 (see Figure 1).

Figure 1. Internet access by demographic, 2000-2005



Source: Fox, S (2005). Digital divisions. *Pew Internet & American Life Project Report*.

The number of "veteran" users, those who have been using online services for three or more years continues to grow

The internet as a communication channel in an emergency

While individuals may not forsake television, newspaper, and radio as primary sources of information during an emergency, they often look to the internet to validate information obtained from other sources. (Computer Science and Telecommunications Board, 2003; Kittler et al., 2004). In one particular study on internet use after the anthrax attacks of October 2001, 58% of respondents reported handling mail differently and 65% reported more frequent hand-washing as a result of information they received from the internet (Kittler et al, 2004). In another survey from late 2001, 34% of respondents reported obtaining information from internet health and news sites in a crisis, behind television, local or state health department, or their own physician (Pollard, 2003). Likewise, the percentage of respondents who reported using the internet as an information source grew from 66 to 74% in the two weeks after September 11th (Hobbs et al., 2004).

Even as CERC guidelines encourage and suggest communications response staff to address uncertainty (Reynolds et al., 2002), very few official websites widely advertise "not knowing" answers to public inquiries. This is all the more relevant in the case of pandemic influenza, due to the amount of uncertainty surrounding the next flu pandemic, from which strain of the influenza A virus will mutate, to the timeliness of vaccine production and distribution to recommended groups, to estimates of personal risk and potential mitigation efforts. On many websites, if the answer is not available the subject matter is not even presented to the end-user.

In addition to the sheer number of individuals who obtain information from the Internet, the number of "veteran" users, those who have been using online services for three or more years continues to grow (Horrigan and Rainey, 2002). These users, new internet users, and non-internet users largely expect to be able to find important information online (97% of all internet users and, interestingly, 64% of *non-users*) (Horrigan and Rainey, 2002) and more experienced users will undertake more extensive searches. Web-savvy individuals, especially those who have a higher distrust of government sources or who are not satisfied with the information they find on these sites, may lack the tools to evaluate non-government websites for validity and accuracy. If the information does not come from a credible source, individuals will find information elsewhere, potentially to the detriment of their health and contrary to official guidelines. Communications response officials can help the public build these skills by disseminating evaluation criteria for website content.

Although the shortcomings of the communications response during the anthrax attacks of late 2001 have been well documented (GAO, 2004; Gursky et al.; 2003, Thomas, 2003), they do illustrate the public's desire for any available information, official and accurate or otherwise, the prevalence of erroneous resources available electronically, and the willingness of the public to "buy in" to panic-bating and concomitant unnecessary stockpiling. In October of 2001 surges of ciproflaxin and gas mask purchases were reported in New York, Washington, DC, and nationwide on the internet (Hensley, 2001; Oldenburg, 2001; Tsai et al., 2002). Currently, even as the first several pages of the "pandemic influenza" Google search contain reliable, credible results from local, state, federal, hospital, and academic websites, the "sponsored links" section of the page advertises bird flu and disaster planning kits containing N95 respirators, antivirals, and the like that "meet[s] U.S government guidelines for flu protection" (LifeSecure Emergency Solutions, accessed July 25, 2006 at https://www.commercecorner.com/lifesecure/productlistLS.aspx?catid=493). (N95 respirators are not currently indicated for non-healthcare workers outside of the clinical environment. See the CDC's *Interim Guidance for the Use of Masks to Control Influenza Transmission* at http://www.cdc.gov/flu/professionals/infectioncontrol/maskguidance.htm.) In early 2006, the U.S. Food and Drug Administration (FDA) issued warning letters to nine companies marketing bogus flu products, claiming their products (of which eight purported to be dietary supplements) could be effective against preventing avian flu or other forms of influenza and prevent detrimental health outcomes. There are currently initiatives in place to deter counterfeiters and sellers of fraudulent or phony products that claim to prevent or treat avian flu. Communications staff could potentially counter available false information by using the same technologies that these companies are using to advertise their "products" .

The White House and the Department of Health and Human Services have emphasized that they will not be providing targeted help at the local level (Dateline MSNBC interview with Secretary Leavitt, April 23, 2006, accessed at http://www.msnbc.msn.com/id/12451621/page/6/) and urge local, county, and state agencies to fully undertake preparedness efforts at their level. However, where communication and health education is concerned, federal government agencies prefer that local-level agencies adapt federal recommendations and public health guidelines for their use. But while the government website, PandemicFlu.gov, provides pandemic influenza health education guidelines, information and situation updates, and preparedness checklists, it is not intended to capture local-level communication needs and much of the guidance is, at the time of this writing, in the development process (i.e. home health guidelines). Information and communication technologies may serve to more easily involve the

There are currently initiatives in place to deter counterfeiters and sellers of fraudulent or phony products that claim to prevent or treat avian flu

Examples for eHealth Solutions offered during the SARS crisis

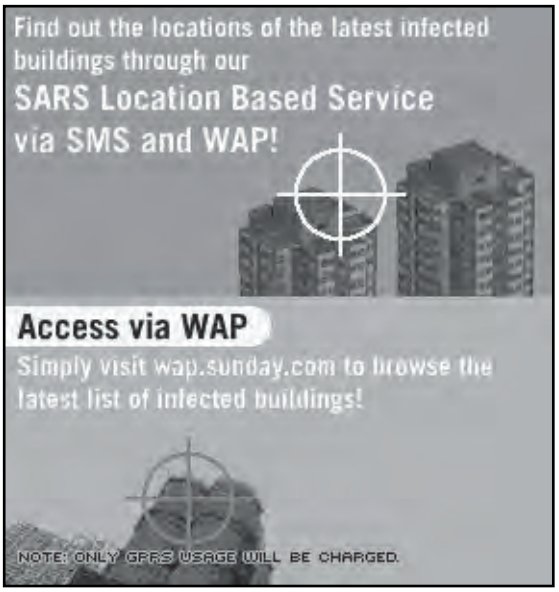
- Healthcarelink (http://www.healthcarelink.md) has developed a monitoring program that claims to detect severe acute respiratory syndrome before symptoms occur and which — by aggregating data from a large number of patients — also promises to detect bioterror outbreaks. Patients take their temperature daily in the morning and report the results by phone, fax, or Internet. The company publishes the graphs on the Internet for patients and physicians to review. The data, along with information on a person's travel history, can alert health workers to potential SARS patients and bioterrorist attacks. One of the open questions is, of course, how to motivate a large number of people to measure their temperature daily and to voluntarily enter this information into a Web form.

- Sunday Communications, a Hong Kong mobile phone operator, launched a mobile phone service that promised to alert subscribers if they are near infected buildings. Those opting for the service had their phones tracked, and would be warned by SMS (short message service) whenever they strayed within a kilometer of a building where there had been instances of SARS infections. It is unknown whether this system prevented a single new SARS case (Figure 2).

- In Singapore, health officials tested electronic tracking systems that monitor the movements of every person who enters a public hospital. Staff and visitors wear credit card-sized RFID (radio frequency identification) tags around their neck to communicate their location to sensors hidden in the hospital ceilings, thereby enabling officials to track all encounters with other persons. Hospitals will save movement records for 20 days — twice the incubation period for SARS. If one person turns out to be infected, the database allows rapid identification of all encounters — health officials say it is 10 times faster than traditional methods of asking infected people whom they had contact with.

Source: Eysenbach, G (2003). SARS and population health technology. *Journal of Medical Internet Research* 5(2): e14.

Figure 2. Advertisements of Sunday communications in Hong Kong



Source: Eysenbach, G (2003). SARS and population health technology. *Journal of Medical Internet Research* 5(2): e14.

public as a capable partner in local-level pandemic preparedness and response efforts by the sheer speed with which messages can be disseminated, but the uncertainty surrounding an impending flu pandemic makes communicating efficiently, effectively, accurately, consistently, and in a timely fashion in the pre-event period more difficult. Additionally, increased public suspicion of scientists and governments due to access to more sources of conflicting information and challenges to the accuracy of research studies, a reduction in the use of scientific reasoning in decision making, and political infighting (Peters, Covello, & McCallum, 1997; Seeger et al., 2003; Tomes, 2000) all but ensures that there are plenty of people willing to step in and try their hand at offering solutions, with wireless technology offering the perfect forum.

The Blogosphere as community

> The weblog is continuous—not a revolutionary break—with five hundred years of print culture. It is the printed page, modernized, interconnected, made two-way, but still powered by movable type (Rosen, 2003).

Weblogs, or blogs, are typically described as websites that contain users' thoughts, feeling, and opinions on any and every subject available for exploration and discussion, with links to other sites, other blogs, news, and reader comments. The distinguishing feature of blogs is that they are displayed in reverse chronology, with the latest entry first, providing the reader with insight into the most recent interests of the blogger (Gurak et al., n.d.). A blog can be either a diary/journal website full of personal musings and individualized entries, or a web journal that primarily comments on the news (or it could be a combination of both). Blogs first came to the attention of the larger media after September 11, 2001 and the subsequent Iraq War, when individuals sat down to their computers to relay their personal thoughts, feelings, experiences, and reactions to the widespread human suffering and tragedy. While the format was not new in any sense (the first blogs were launched sometime between 1994 and 1998), these blogs underscored the potential of public commentary to pull power away from "traditional" one-way formal communication to a more decentralized sphere in which information is produced, circulated, consumed, and reproduced by a shared community not dependent on marketing (Gurak et al., n.d.; Lampa, 2004).

> [T]he power of blogs to forego the institutionalization of communicative practices and offer spaces for writing that are more collaboratively constructed than other online spaces, as bloggers freely link to, comment on, and augment each other's content. In this way, blogs allow for the possibility of developing new cultural practices of online communication in relation to previously established modes of ownership, authorship, and legitimacy of content and access to information.

A 2004 Pew Internet & American Life Project survey found that 7% of Internet users had created a blog (Rainie, 2005). This number (and the relatively small number of bloggers who actually update their blogs regularly) would seem insignificant if not for the fact that the number of internet users who *read* blogs had jumped from 11 to 39% from a Spring 2003 Pew telephone survey to Pew telephone surveys conducted between July 2005 and February 2006 (Lenhart and Fox, 2006). (The number of people who report creating a blog remained essentially stable.) 37% of bloggers write about their personal lives and their experiences, with 11% writing about politics and government, and 5% blogging about general news and current events (Lenhart and Fox, 2006). Bloggers are also a fairly diverse group, with a little more than half (54%) under the age of 30 but evenly split between men and women. Bloggers are also less likely than overall internet users to be white (60% of bloggers compared to 74% of internet users). 11% of bloggers are African American, 19% are English-speaking Hispanic and 10% identify as some other race (Lenhart and Fox, 2006). Blogs, as an interactive medium, allow for the diversification of voices in public dialogue and can serve to fill the gaps that are not addressed, or are underrepresented, by traditional channels of communication and information, in a real-time feedback loop (Gallo, n.d.). Content management tools and blog websites served to lower barriers to entry to web publishing; individuals are no longer required to have mastery over programming languages and software such as HTML and JavaScript to post a blog (Gurak et al., n.d.). Blogging today is as easy as sending an email.

Critics of blogs (including portions of the journalism community) list several reasons why they (blogs) should be considered a less credible source of information than traditional media:

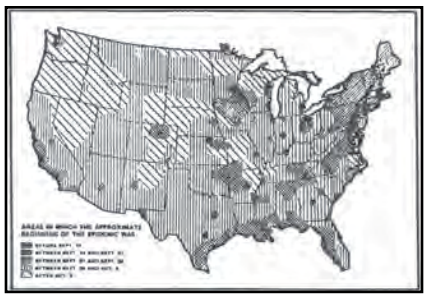
- Anyone can create a blog and post information.
- Bloggers are not bound by ethical and professional standards of traditional journalism (or public service agencies).
- Bloggers are not required to remain objective - most have strong views that they express openly and fervently.

- Many bloggers use pseudonyms, making it difficult to judge the credibility of the information on the site (Johnson and Kaye, 2004).

However, blogs *do* rely on peer review of sorts, by allowing comments from readers, to point out mistakes that can be easily corrected, which they are, usually in a prominent fashion. Bloggers and their readers are likely to consider blogs a highly credible source of information (Johnson and Kaye, 2004), perhaps partially because they are independent rather than controlled by corporate or government interests. Bloggers have the ability to discuss sensitive information or issues from which governments and traditional media may shy away, without fear of reprisal. Blogs often contain thorough and thoughtful analyses of news missing from mainstream media. But rather than focusing on what is absent and ignoring the rest, bloggers rely heavily on traditional sources of web information and often provide links to traditional sites on their blogs in an effort to lend authority to their postings (Johnson and Kaye, 2004).

> "Why do you become a critic of media?" asks InstaPundit's [Glenn] Reynolds. "At least in some sense, it's because you like it. If you don't read the paper, you don't get mad at the paper." Or the 11 o'clock news….[a] favorite…(and one of more than 200 inspired by InstaPundit.com to create their own blogs after September 11) is Sgt. Stryker, a pseudonymous U.S. Air Force mechanic who began Sgtstryker.com after his wife got sick of hearing him yell at the TV.
> –American Journalism Review "Online Uprising," July 2002

Journalists likewise increasingly rely on blogs for information and stories from all over the world. Those individuals who may not have a blog, read others' blogs, or access the internet frequently, may still receive information from these alternative channels simply by tuning in to the local or cable news. Many journalists and news organizations (MSNBC, CNN) also host their own blogs, and blogs have become more and more popular in business, especially in the technology, marketing, media and law sectors, with industry professionals using them to connect with suppliers, customers, and employees (Easen, 2004).



In a severe influenza pandemic, with its attendant high rates of illness and death, potential disruption of critical infrastructures, and limited or no social contact for optimal prevention of illness, blogging may serve as an appealing way for individuals and communities to share their personal experiences and ask for, receive, or offer support in coping with crisis or in the face of the illness or death of a loved one. [The possibility of disruption in electric, cable, and other services in

Blogging is also a way of connecting individuals domestically and internationally.

a pandemic exists, thereby affecting the ability of individuals to gain access to electronic news and health information and/or establish or update blogs. However, this possibility is most likely relatively small for an illness pandemic. Even in the aftermath of the terrorist attacks of September 11, 2001, disruptions in Internet and other communications networks were limited to New York City but were remedied either through automatic rerouting at the physical or network levels or with new equipment or reconfiguration of the system within hours or days of the attacks (Computer Science and Telecommunications Board, 2003).] Blogging is also a way of connecting individuals domestically and internationally. In the more than two weeks since the Israel-Lebanon conflict began (at the time of this writing), bloggers in Lebanon writing about the fighting report that not only have their blogs helped them to reach out to the Lebanese community but have also provided a forum for dialogue with Israelis on the other side of the war zone, even as a holdover law from the Syrian occupation forbids contact between Lebanese and Israelis for reasons of national security (Farivar, 2006). The blogosphere provides a way around that, to allow these disparate groups of people forge connections with supposed "enemies".

Wiki-mania

> A wiki is a type of website that allows users to easily add, remove, or otherwise edit and change most available content, sometimes without the need for registration. This ease of interaction and operation makes a wiki an effective tool for collaborative writing. The term wiki can also refer to the collaborative software itself (wiki engine) that facilitates the operation of such a website, or to certain specific wiki sites, including the computer science site (and original wiki), WikiWikiWeb, and the online encyclopedias such as Wikipedia. The first wiki, WikiWikiWeb, is named after the "Wiki Wiki" line of…buses in Honolulu International Airport, Hawaii… ."Wiki-wiki" means "hurry quick" in Hawaiian.
> —From Wikipedia, the free encyclopedia (http://en.wikipedia.org/wiki/Wiki)

Wikis, like blogs, are web pages, however, they are unique in that they offer editing capabilities to all users and previous versions of pages can be viewed at any time (Wagner, 2004). Wikis typically link to numerous other websites in their quest to provide thorough information, and may also include tools that allow users to easily monitor information and provide a space in which to resolve disputes, namely regarding content (Wikipedia, 2006). Wikis provide a way of organizing and managing the conversational knowledge and online communities that grow beyond the technological boundaries of listservs and online discussion forums (Wagner, 2004). Wiki pages, like blogs, do not require knowledge of programming languages, and can be easily created and updated in real-time, which can lead to the posting of erroneous information. However, "wikis are generally designed with the philosophy of making

it easy to correct mistakes, rather than making it difficult to make them" (Wikipedia, 2006). They provide a way to verify the accuracy of recent additions to a page primarily through a specific list of recent edits or a list of edits made within a given timeframe. Some wikis, like Wikipedia, also provide a list of information sources at the end of the entry, much like the modules in this training guide provide a list of scholarly resources by which the included information is supported.

Perhaps the most familiar wiki to most communications staff involved in influenza pandemic preparedness is FluWiki, originally published in June 2005 by Melanie Mattson, who "makes her living as a risk communicator" (FluWiki, 2005). FluWiki is monitored and edited by Melanie and her staff of three, in addition to any number of site visitors who feel the need to contribute to either the information contained therein or to the discussion forums accompanying the site. FluWiki states:

> The purpose of the Flu Wiki is to help local communities prepare for and perhaps cope with a possible influenza pandemic. This is a task previously ceded to local, state and national governmental public health agencies. Our goal is to be:
>
> - a reliable source of information, as neutral as possible, about important facts useful for a public health approach to pandemic influenza
> - a venue for anticipating the vast range of problems that may arise if a pandemic does occur
> - a venue for thinking about implementable solutions to foreseeable problems
>
> No one, in any health department or government agency, knows all the things needed to cope with an influenza pandemic. But it is likely someone knows something about some aspect of each of them and if we can pool and share our knowledge we can advance preparation for and the ability to cope with events. This is not meant to be a substitute for planning, preparation and implementation by civil authorities, but a parallel effort that complements, supports and extends those efforts.
> —From Flu Wiki Main Page, last modified July 26, 2006

At a glance, Flu Wiki appears to provide a great deal of thorough information and links, including the WHO's avian and pandemic pages, the CDC's avian flu page, Peter Sandman's risk communication website, the Public Health Agency of Canada, the Singaporean Ministry of Health, and others. But, there are also links to other, more unfamiliar, websites, such as DiseaseFree.Com and Brinkster.Com. There is also no mention of the PandemicFlu.Gov website to be found in the "Pandemic

A defining feature of the SARS response was the rumor monitoring undertaken by the World Health Organization.

Preparedness" section, even under "personal and family preparedness," where it might be reasonable to link to the checklists that HHS has developed for a pandemic emergency. One *can* link, however, to the National Chicken Council website. One of the challenges to this site and in this manner in general, is that to cycle through the information presented seems a rather daunting task. The division of subtopics is helpful, as is the search function (a key feature of wikis in general), which enabled this author to locate the link to PandemicFlu.Gov. The website does link to blogs, and does point out that certain sites may be suspect, although they leave the evaluation of those sites to the reader. However, the sheer amount of information and the large volume of outside links contained within the website make it difficult to evaluate both the wiki content and the external sites for accuracy and consistency, or even to keep track of pages and sites already visited.

Media and Rumor Monitoring

Local, state, and federal public health departments and agencies, as well as response officials from the public and private sectors, must address not only the uncertainties inherent in a forthcoming flu pandemic but also the sheer amount of information available to the public through the internet and its various information and communication technologies. Most agencies involved in communications response efforts, whether they are work in or liaise with an emergency operations center (EOC), perform media and rumor monitoring to some extent. A defining feature of the SARS response was the rumor monitoring undertaken by the World Health Organization, which enabled the agency to effectively assess and address, in real-time, the concerns of the public in the regions affected by the crisis, by surveying traditional and non-traditional sources of information (World Health Organization, 2003). Joint Information Center integration into the National Incident Management System's Incident Command Structure takes care to include rumor monitoring as one of the seven essential JIC operational criteria (National Response Team, 2000). The how of media and rumor monitoring of these technological channels, however, is left to the communications staff involved in the response.

Public communications officials can expand their existing monitoring mechanisms to incorporate evaluation of blogs and wikis in several ways. The website Technorati (http://technorati.com/), for example, currently tracks approximately 50 million blogs, in addition to video blogs (vlogs), podcasts, and amateur videos and movies. The website contains ranked lists of top blog posts, top term searches, and top "tags," (topics about which bloggers are writing). They also feature member blogs and the top "favorited" blogs, or blogs that other bloggers

have declared their favorites and linked to in their pages. At the time of this writing, the top search term listed by Technorati is "Israel," followed by "Lebanon," "WordPress" (a blog-editing software), and "[George] Bush" (http://technorati.com/pop/); two-thirds of the top 15 search terms have to do with either war or the Middle East. Public communications officials could reasonably expect search terms and blog posts related to illness to appear on these lists in the event of an influenza pandemic and monitor accordingly. They might also establish their own blogs, like MSNBC or CNN did, and they could also monitor wikis for pandemic influenza information and edit as appropriate. Most local, city, or state health organizations have websites and could address rumors on their sites and attempt to provide accurate and consistent information by (as many of these sites already do) either advertising other agency sites, like PandemicFlu.Gov, linking directly to those sites, or posting health information directly. Public health agencies can also provide the public with information on evaluation criteria for assessing websites that individuals may find during their own internet searches. Local-level organizations, with their significant understanding of both the demographic makeup of their populations and their information needs, are the best source for advising the public on where and how to find the best information to suit those needs.

Evaluating Health Information on the Web

By the Medical Library Association (http://www.mlanet.org/resources/userguide.html#3)

Content Evaluation Guidelines

Sponsorship

Can you easily identify the site sponsor? Sponsorship is important because it helps establish the site as respected and dependable. Does the site list advisory board members or consultants? This may give you further insights on the credibility of information published on the site.

- A government agency has .gov in the address.
- An educational institution is indicated by .edu in the address.
- A professional organization such as a scientific or research society will be identified as .org. For example, the American Cancer Society's Website is http://www.cancer.org/.
- Commercial sites identified by .com will most often identify the sponsor as a company, for example Merck & Co., the pharmaceutical firm.
  - What should you know about .com health sites? Commercial sites may represent a specific company or be sponsored by a company using the Web for commercial reasons—*to sell products*. At the same time, many commercial Websites have valuable and credible information. *Many hospitals have .com in their address.* The site should fully disclose the sponsor of the site, including the identities of commercial and noncommercial organizations that have contributed funding, services, or material to the site.

Currency

- The site should be updated frequently. Health information changes constantly as new information is learned about diseases and treatments through research and patient care. Websites should reflect the most up-to-date information.
- The Website should be consistently available, with the date of the latest revision clearly posted. This usually appears at the bottom of the page.

Factual information

- Information should be presented in a clear manner. It should be factual (not opinion) and capable of being verified from a primary information source such as the professional literature, abstracts, or links to other Web pages.
- **Information represented as an opinion should be clearly stated** and the source should be identified as a qualified professional or organization.

Audience

- The Website should clearly state whether the information is intended for the consumer or the health professional.
- Many health information Websites have two different areas - one for consumers, one for professionals. The design of the site should make selection of one area over the other clear to the user.

Additional Help

The Health on the Internet Foundation Code of Conduct (HONcode) for medical and health Websites (http://www.hon.ch/HONcode/) specifies eight principles intended to hold Web site developers to basic ethical standards and to make sure consumers always know the source and purpose of the data they are reading. Participation is voluntary throughout the world, but sites displaying the foundation's symbol are generally considered credible sources of information. Unfortunately, the number of sites participating is small.

Much of the health-related information that you find may seem to be written in a foreign language because of the highly technical terminology used in the health professions. *To help you use and understand medical terminology on the Web, the Medical Library Association has published a brochure called "Deciphering Medspeak" which is available without charge* in individual copies from MLA by sending an email to info@mlahq.org.

Health sciences librarians at hospitals and academic medical centers throughout America stand ready to help consumers with do-it-yourself search assistance or will assist by performing professional searches of the Web for consumer and professional medical literature. If you don't know whether your community has a health sciences library, you can find out by calling the MLA at (312) 419-9094.

Ten Things Radical about the Weblog Form in Journalism

Jay Rosen, PressThink, October 16, 2003

Retrieved July 29, 2006 from http://journalism.nyu.edu/pubzone/weblogs/pressthink/2003/10/16/radical_ten.html.

1. The weblog comes out of the gift economy, whereas most (not all) of today's journalism comes out of the market economy.

2. Journalism had become the domain of professionals, and amateurs were sometimes welcomed into it— as with the op ed page. Whereas the weblog is the domain of amateurs and professionals are the ones being welcomed to it, as with this page.

3. In journalism since the mid-nineteenth century, barriers to entry have been high. With the weblog, barriers to entry are low: a computer, a Net connection, and a software program like Blogger or Movable Type gets you there. Most of the capital costs required for the weblog to "work" have been sunk into the Internet itself, the largest machine in the world (with the possible exception of the international phone system).

4. In the weblog world every reader is actually a writer, and you write not so much for "the reader" but for other writers. So every reader is a writer, yes, but every writer is also a reader of other weblog writers—or better be.

5. Whereas an item of news in a newspaper or broadcast seeks to add itself to the public record, an entry posted in a weblog *engages* the public record, because it pulls bits and pieces from it through the device of linking. In journalism the regular way, we imagine the public record accumulating with each day's news— becoming longer. In journalism the weblog way, we imagine the public record "tightening," its web becoming stronger, as links promotes linking, which produces more links.

6. A weblog can "work" journalistically—it can be sustainable, enjoyable, meaningful, valuable, worth doing, and worth it to other people —if it reaches 50 or 100 or 160 souls who like it, use it, and communicate through it. Whereas in journalism the traditional way, such a small response would be seen as a failure, in journalism the weblog way the intensity of a small response can spell success.

7. A weblog is like a column in a newspaper or magazine, sort of, but whereas a column written by twelve people makes little sense and wouldn't work, a weblog written by twelve people makes perfect sense and does work.

8. In journalism prior to the weblog, the journalist had an editor and the editor represented the reader. In journalism after the weblog, the journalists has *(sic)* (writerly) readers, and the readers represent an editor.

9. In journalism classically understood, information flows from the press to the public. In the weblog world as it is coming to be understood, information flows from the public to the press.

10. Journalism traditionally assumes that democracy is what we have, information is what we seek. Whereas in the weblog world, information is what we have—it's all around us—and democracy is what we seek.

Ten Things Conservative About the Weblog Form in Journalism.

Jay Rosen, PressThink, October 17, 2003

Retrieved July 29, 2006 from http://journalism.nyu.edu/pubzone/weblogs/pressthink/2003/10/17/conserv_ten.html.

By "conservative" I do not mean "affiliated with the GOP," or "listener to Rush Limbaugh," or coming from the right wing. To ask what's conservative about weblogs as a form for journalism is to ask: what's "old" about the new? Which known truths (about media, journalism, truthtelling, life) tend to be verified by the weblog form— even with its radically different and transforming features? "Conservative" here says the old rules still apply, ancient wisdom is indeed wise, the authority of the ages holds— and that sort of thing. So in that sense, and only that sense, here are:

1. Weblogs deal in the golden rule, modified to read: link unto others as you would have them link unto you.

2. As an entrant in the marketplace of ideas, the weblog obeys—and does not repeal—the ancient laws of supply and demand. The "news" from some sites will be in demand more than the stuff from others. Just as most new businesses fail, most new weblogs fail. That's the marketplace.

3. In the weblog world, charity—giving it away—leads to heaven.

4. Age has advantages over youth. People who have been at this a while know a lot, (so do their weblogs.) A wise move for newcomers is to learn from what's been done, honoring those who have come before—your elders in Net time.

5. A weblog in revolt against journalistic authority will discover that it needs itself some kind of authority, (even if it's among like-minded rebels) and thus the revolt is always a limited and partial one.

6. The quality of any weblog in journalism depends greatly on its fidelity to age old newsroom commandments (virtues) like check facts, check links, spell things correctly, be accurate, be timely, quote fairly. And as Roy Peter Clark says, if you're telling a story and there's a dog, *get the name of the dog*.

7. People still want to know: how do you know this? What expertise, body of knowledge, authority, or direct experience lies behind a weblog's statements about the world?

8. As with all journalism, being first counts. Good weblogs break news, even if it's just news of another good weblog born or a nugget of information newly available.

9. The weblog is continuous—not a revolutionary break—with five hundred years of print culture. It *is* the printed page, modernized, interconnected, made two-way, but still… "powered by movable type."

10. Without faith in a higher power (some call it the blogosphere), an individual life of weblog freedom is impoverished.

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Module 8 • Understanding the NIMS/ICS Structure

Pandemic Influenza:
Understanding the NIMS/ICS structure and the role of communications in Pandemic Response Efforts

struc•ture (strŭk´chər)
n.
1. Something made up of a number of parts that are held or put together in a prticular way: hierarchical social structure.
2. The way i which parts are arranged or put together to form a whole; makeup: triangular in structure

Severe Pandemic: What is different?

- Uncertainty during planning efforts due to potential universal susceptibility to a virus with unknown characteristics.
- The federal government has adopted the NIMS/ICS structure for effective management of emergency events; this will be the organizing principle in a national influenza pandemic response.

It is mid-December, 2006. Avian influenza (H5N1) disease in humans has been monitored on the ground in Indonesia during the past several months. DHHS/CDC has posted surveillance and laboratory experts there, so that the Indonesian government and WHO can recognize as early as possible when/if disease spreads efficiently among humans in a sustained manner, that is, easy, on-going spread from person-to-person, without halting. Four weeks ago a child with flu-like symptoms that progressed rapidly to respiratory failure died quickly; she was buried without any official laboratory-based diagnosis of illness. Within days, two of her immediate family members became ill with similar symptoms and one person died. Laboratory isolates from these two cases tentatively identified, and later confirmed, the disease as avian influenza (H5N1). Follow-up genetic analysis indicated a minor modification of the organism from that identified in other ill patients during the past six months in that country. Five other persons in the village, representing three families, have become ill, and three have died. WHO has increased its pandemic threat level from III to IV, indicating small clusters of disease, without sustained transmission. Additional laboratory

Objectives:

- To provide public communications officials an overview of the National Incident Management System (NIMS)/Incident Command System (ICS) structure and how it will function in the case of an influenza pandemic.
- To clarify how the role of the public communications team and the communications response effort fit in to the overall ICS.
- To provide an overview of the Joint Information Center (JIC).

support was recently sent from DHHS/CDC to Jakarta, including trained personnel and equipment. Reports of disease among families, affecting a total of 15 people with 10 deaths, have been received in the capital and field teams have been dispatched to determine whether or not H5N1 avian influenza is the cause.

Late last week, an American trade representative to Asia was admitted to a Los Angeles hospital with symptoms of flu and respiratory failure requiring mechanical ventilation. Seasonal flu has already begun in California, but this is the first case noted by the LA County Department of Public Health this year that has resulted in hospitalization of a young adult, and the progression of disease appears to be more rapid than in those with strains of this season's routine influenza. The man returned from a trip to Indonesia the week before, during which time he spent most of his time in offices in Jakarta, although he did note that he visited a "wet" market on at least one occasion. In October he received his annual seasonal influenza vaccination.

Two days ago, a nurse and a sanitation worker in the same LA hospital, each known to have visited the patient's room, became ill with flu-like symptoms. They stayed at home, but were each recently seen in the hospital emergency department; one was admitted for pneumonia requiring oxygen support. One other family member in the nurse's home has become ill with symptoms of flu. Laboratory samples from all patients and their household contacts have been obtained to identify the causative agent.

The following agencies and organizations have been actively monitoring the situation and have been busy internally developing their response plans.

1. **LA County Department of Public Health**
   The health department has a traditional role in isolating cases of contagious disease and preventing its spread to other community members. In doing so, it has assigned an epidemiologist from its Acute Communicable Disease Control/Influenza division and a senior laboratorian/administrator from its Public Health Laboratory/Virology division to evaluate the problem and report back daily to the Director. Thus far, this is known: (1) the first patient has had influenza A identified, with PCR confirmation of H5N1 strain; (2) isolates from that patient have been shipped under careful protective measures to CDC/Atlanta for viral culture; and (3) other laboratory samples from the nurse and sanitation worker and their families are being tested for H5N1 today (by PCR), with tentative (unconfirmed) results available by COB today.

2. **City of Los Angeles, Office of the Mayor (Antonio R. Villaraigosa)**
   The Director of Public Health notified the Mayor several days ago of the potential for a serious public health threat; the mayor assigned one of his medium-level staff members to assist in any way needed. A briefing is scheduled for 11 am today between the two offices.

3. **California Health and Human Services Agency, Office of the Secretary (Kim Belshé)**
   This California agency was notified through informal networks of the potential problem in Southern California. The Director, Division of Communicable Disease Control, is anticipating a phone call from the Mayor's office following their briefing today.

4. **Centers for Disease Control and Prevention (Atlanta), Dept of Health and Human Services**
   HHS/CDC is aware of the hospitalized case and potential other cases in detail through its Epidemic Intelligence Service Officer posted in the LA County Department of Health, as well as through the laboratory services of its Influenza Division. HHS/CDC has offered its services to Los Angeles County and the State of California, as needed. A daily update is being provided to the agency director, who is determining on a day-by-day basis what resources are needed locally and nationally, as well as whether the Emergency Operations Center should be activated. All-department briefings have moved from weekly to daily (15 min) to keep Washington up-to-date.

Is this a public health emergency?

At this point, the above scenario is not a public health emergency. Only three people are ill, and there is no large group of "walking wounded," nor seriously ill people requiring hospitalization, nor "worried well" seeking emergency department care for minor respiratory symptoms. *However*, the potential exists that a major contagious disease with high mortality will occur. Therefore, prophylactic measures should be aggressively put into place. Decisions concerning antiviral treatment and/or quarantine of non-ill exposed persons, explanations and reassurances to the media, and enhanced surveillance by the medical community, among other things, will need to be made.

What is the most appropriate organizational structure to use if this is a public health emergency?

NIMS/ICS (See below)

At what level (local, state, national) does ultimate authority belong?

To be determined by the Incident Commander in charge of all operations (below).

If the outbreak spreads, how would this change the nature or content of the organizational structure?

Fortunately ICS is readily expandable to manage increases in scope or breadth of response activities. A multidisciplinary team is needed to address these disparate issues. Decisions will need to be made at the hospital and public health department levels. A command-and-control structure is preferable to an organic (homegrown) one, since the media and the public will hold the public health department, elected public officials, and bureaucrats highly accountable for any missteps or inactions, as they did with Hurricane Katrina. Such a structure is already available through the National Incident Management System. If the disease spreads to the point where an epidemic is declared, a system is needed that can be enlarged in a manner that incorporates more resources efficiently without changing its fundamental basic command-and-control nature.

If the outbreaks spread, how would the structure of communications change?

The present communications needs are the passing of frank information from the hospital to the health department and media without violating issues of confidentiality, and on-going assessment of the possibility of a broad-scale pandemic occurring in Los Angeles or within the continental U.S. Future communication needs hinge on whether or not open, collaborative communication engages the public in efforts to contain the disease through individual and family actions. These messages should be, at least in part, pre-scripted and, if possible, pre-tested on a pilot audience. If the disease spreads, the existing communications team should be subsumed into a larger group that understands the communications issues.

If the outbreaks spread, how can regional or federal resources be put to best use to help manage the patient surge?

If the disease spreads within Los Angeles or to another locale, a number of public health disciplines will need to be locally augmented. A plan is needed that can accommodate changes on an on-going, daily basis. The Incident Command System of the National Incident Management System is designed to satisfy that requirement.

The National Incident Management System

The United States Government has adopted the National Incident Management System (NIMS) to achieve unified, single- and inter-agency management of emergency responses (information on NIMS/ICS can be found at the Federal Emergency Management Agency's NIMS Homepage, see references for website address). A separate federal entity, the National Disaster Medical System (NDMS) (Department of Homeland Security, 2006), provides professional personnel such as doctors, nurses, pharmacists and others to help local jurisdictions in time of need.

Under NIMS, the principal framework of operations is the Incident Command System (ICS). The central purpose of ICS, and hence its value, is to ensure a comprehensive national framework designed to efficiently support incident management, regardless of the size, nature, or complexity of the event. ICS defines a clear chain-of-command using an organizational framework that can expand or contract to meet existing and changing needs. ICS is a framework, rather than a plan, that incorporates the concept of a daily (or more frequently, if needed) Incident Action Plan defining the actions to be carried out "by whom, what, when, where, and how."

Although emergency response is now a defined role for United States public health agencies, these agencies, even during disaster events, must still maintain essential, non-emergency public health services for the communities they serve, to avoid both neglecting consumers unaffected by the event and aggravating the effects of the disaster or outcome of the response. The NIMS/ICS structure recognizes this duality and often, for organizational purposes, incorporates essential public health services into the ICS as a separate module, lest they be forgotten or their importance under-recognized.

ICS Structure

The main components of the ICS are the command staff and the general staff or functional sections (FEMA, 2006). The ICS may exist in its full form or in a truncated form, for more minor events in which certain pieces of the structure are not necessary. In the full form, the ICS command staff is composed of the Incident Commander and special staff positions. The Incident Commander (IC, or Agency Incident Commander, if the disaster involves several agencies working together) is in charge of the incident. He/she is responsible for the development of an Incident Action Plan, allocation of resources, and assuring that the necessary sections operating under it are activated (and subsequently deactivated at the end of the crisis). The IC is responsible for development of the mission and goals, and synchronization with other responding agencies and jurisdictions. This person has the authority to make decisions and ultimately execute the incident action plan.

The Liaison Officer is responsible for coordinating all activities with other agencies and groups involved in the response. The Safety Officer is responsible for scene safety, availability and appropriate use of personal protective equipment, and basic human needs (rest, nutrition, and hydration). The Public Information Officer (PIO) is responsible for assuring that appropriate information is provided to the public, as well as to government officials and collaborating agencies. This information must be accurate, timely, and internally/externally consistent across agencies. All information provided to the public during an emergency is to be cleared through the Public Information Officer. The Documentation Officer is responsible for recording all activity that occurs in the agency Emergency Operations Center (EOC), particularly meetings, phone calls, and other logistic matters.

There are four operations sections residing at the single level below the command structure—planning/intelligence, operations, logistics, and finance/administration. Each may have its own Section Action Plan based on the overarching Incident Action Plan. Each section is headed by a section chief, who often works with a deputy, and assists the Incident Commander with the Incident Action Plan. The Planning and Intelligence Section is responsible for collecting and organizing data, making projections and forecasts about the event, and reporting these to the Incident Commander. The Operations Section is responsible for carrying out the specific tasks and objectives of the local public health agency. It provides the day-to-day services outlined in the Incident Action Plan, i.e., those principally related to clinical care, epidemiology, and maintenance of environmental health. There is typically a Public Health Emergency Response Branch and a separate

Essential Services Branch under the jurisdiction of the section, the latter of which maintains the public health of the community on other fronts. The Logistics Section is responsible for supporting the other sections. Logistics is responsible for acquiring space, supplies, and equipment, which may include rental space for a vaccination clinic, delivery of vaccine and syringes, and essential supplies for a shelter. The Finance/ Administration Section is responsible for contracts and procurements, interpreting human resource policies in the emergency setting, tracking of goods, and in some cases, assurance of availability of resources to address the physiological and psychological needs of agency personnel and volunteers.

As the work of a section increases in complexity, branches and units are added sequentially. For example, in the Operations Section, there may be three branches, namely, the Emergency Public Health Operations Branch, the Medical Operations Branch, and the Continuity of Public Health Operations Branch. The first branch may include the Community Health and Outreach Unit, the Epidemiology/Surveillance Unit, the Public Health Laboratory Unit, the Vital Records Unit, the Shelter Operations Unit, and others. The second branch may include an EMS unit and a Clinics and Hospitals unit. In this manner, the ICS is readily expandable and contractible.

The ICS, with its command positions, sections with section chiefs and deputies, branches, and units provides some standardization in a difficult and sometimes chaotic field environment. With the ICS structure and the daily (or more often) Incident Action Plan, each member of the team has a clear understanding of his/her role and limitations, the reporting structure, and the expectations of each other section. Personnel assignments are better understood, the possibility of "mission creep" is minimized, and feedback/evaluation is built into the development of the next day's Incident Action Plan. The standardization of [names and definitions of] sections, units, and roles of ICS structural elements across emergencies assures that, as other agency command structures dispatch personnel to the field, their roles are automatically understood by their predetermined position in the organizational chart, and that correct command-and-control is established within and across agency deployments. Note that these descriptors for personnel are specific to ICS and emergency functions, and are not related to the nature of a person's previous everyday job title. This is done purposely to ensure that personnel are assigned to positions in which they will be most effective, and to avoid confusing the present emergency situation with aspects of competency, appropriateness, or assumptions of seniority in their everyday job.

Emergency medical, nursing, and veterinary services

The National Disaster Medical System (NDMS) is a federally coordinated system operating under the National Response Plan and the Federal Emergency Management Agency (FEMA) within the Department of Homeland Security (DHS, 2006)). NDMS provides supplemental emergency care to designated domestic disaster sites in need of medical, nursing, and/or veterinary professionals to manage patient and community care during an acute crisis. NDMS assets may be dispatched during a variety of emergencies including, natural disasters, technological disasters, major transportation accidents, or acts of terrorism.

Under this system, Disaster Management Assistance Teams (DMAT) consisting of medical and para-professional medical personnel use their experience, equipment, and supplies in the field to triage casualties, provide medical care in adverse environments, prepare patients for evacuation, and/or provide or augment local primary care in established medical care centers when emergency needs overwhelm hospital resources. About 100 national DMAT teams are available on a 14-day rotating basis, and carry supplies sufficient for a 72-hour period.

Several other types of teams may be dispatched as needed, including Disaster Mortuary Operations Teams to provide mortuary services, Veterinary Medical Assistance Teams (VMATs) to provide veterinary services, and National Nursing Response Teams (NNRTs) for situations that require clinical assistance but not necessarily full DMATs. Situations calling for the assistance of these teams might include assisting with mass chemoprophylaxis (a mass vaccination program), or a response to a weapon of mass destruction event that overwhelms the nation's supply of nurses. Additionally, National Pharmacy Response Teams (NPRTs) are used in situations such as those described for the NNRTs but where pharmacists, not nurses or DMATs, are needed, and National Medical Response Teams (NMRTs) are equipped and trained to provide medical care for potentially contaminated victims of weapons of mass destruction. For each of these five types of teams, multiple units of each type may be needed simultaneously, or in tandem to relieve each other on a two-week rotating basis.

Communications

How does the ICS incorporate communications? The Public Information Officer (PIO) as a command position, rather than a section or general staff position, reports directly to the Incident Commander.

The PIO is also responsible for working within the framework of the Joint Information System (JIS). This system includes plans, protocols, and structures for providing information to the public through the use of a Joint Information Center or JIC, which enhances the likelihood that information released to the public will be accurate and coordinated across agencies. The JIC, a physical site located in the EOC prepares, and releases information as needed. One or more JICs may be operating under the JIS, and may be large or small and may not house all communications staff. The base of operations for a JIC may be federal, state, or local, and its resources may flow from any of these sources. As with the ICS, the JIC may be scaled to fit the situation by enlarging or contracting its services and resources. A large JIC may have a research and media team as well as a logistics team. The former would include a spokesperson, hospital liaisons, media monitor, State PIO, and State Medical Advisor, all working under the ICS-PIO. Under its logistics team, a large JIC may include audiovisual and production support, web management, briefing room staff, and others. As with all disaster planning, communications services personnel are advised to practice protocols in advance through tabletop exercises specific to communications issues.

Integration of concepts

At the beginning of this chapter, a realistic scenario was established for Los Angeles based on what is known of avian influenza (H5N1) as of July 2006. Any state or local entity conducting a tabletop exercise based on this proposed situation will recognize that the issues described below commonly arise and can be addressed by a system established to manage the emergency. Please take the time to review the questions below related to the impending Los Angeles outbreak and provide responses. In many cases, alternative answers, all appropriate, can be proposed; please indicate such alternatives as well.

Issues to be considered:

1. If you are the selected Public Information Officer of the ICS and main JIC, what structures would you need to put into place immediately? Within a week?

2. Where would you find a set of questions the media commonly ask in emergencies? How would you proceed to prepare your spokesperson (which may be yourself) for such questions?

3. What media outlets would make the best sense to use during the initial period (first few days) of the crisis? What media outlets would be more appropriate for use later in the crisis?

4. What do you want the public to know at this point? What should they do with this information?

5. How would you handle differences in messages provided to the public by multiple (well-meaning) sources?

Conclusion

NIMS and the ICS structure were developed by experts in emergency fieldwork because the usual type of superviser-employee relationship did not provide the immediate command-and-control and feedback that a busy and rapidly changing environment required. As it develops further through use in public health emergencies, modifications will be needed, and these are welcome at both the level of the public health worker as well as the public health administrations, local and federal. It is anticipated that, by having all emergency workers use one structure (the ICS), we will have established the basis of accurate communication of needs and work done by the appropriate people, that support of the field workers will be considered up-front and continually, and that plans for the next immediate period of time will be transparent to all.

References

Federal Emergency Management Agency (2006). *National Incident Management Homepage*. United States Department of Homeland Security. Available from http://www.fema.gov/emergency/nims/.

National Response Team Response Subcommittee Workgroup (2000). Joint Information Center Model: Collaborative communications during emergency response. *United States National Response Team*. Retrieved July 2006, from http://www.nrt.org/Production/NRT/NRTWeb.nsf/AllAttachmentsByTitle/A-55JIC/$File/JIC.pdf?OpenElement.

United States Department of Homeland Security (2006). *National Disaster Medical Systems*. Available from http://www.oep-ndms.dhhs.gov/index.html.

Suggested readings:

1. National Response Plan, available for download at the Department of Homeland Security Website at http://www.dhs.gov/dhspublic/interapp/editorial/editorial_0566.xml

2. National Incident Management System and Incident Command System, available for download under http://www.ualbanycphp.org/pinata/phics/. Federal specifications for implementation are available under http://www.nimsonline.com/.

3. Information on various Joint Information Centers, available for download under
   - http://oep.berkeley.edu/pdf/OtherResources/BAII_JIC.pdf
   - http://www.cdc.gov/NCIDOD/SARS/guidance/G/communications.htm
   - http://sph.osu.edu/cphp/5022.cfm.