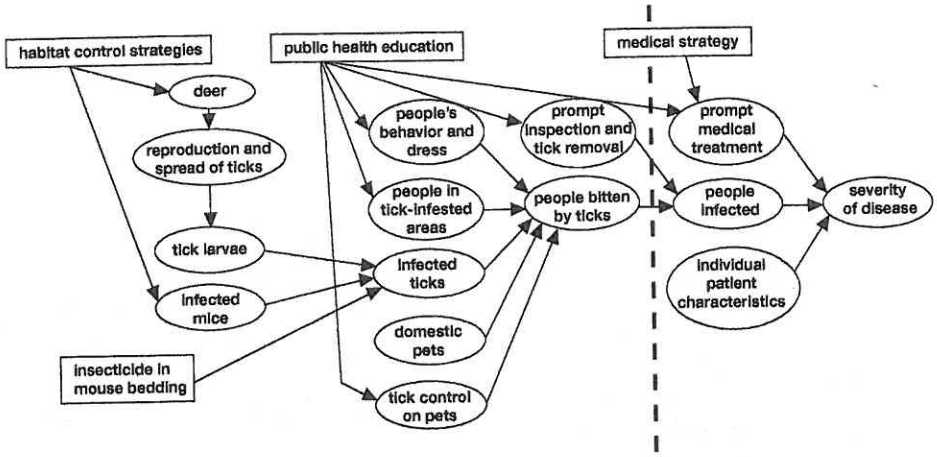

Fig. 5.3. Influence Diagram Showing Risk of Contracting Lyme Disease (Morgan *et al.* 2002)

this goal and provide a wealth of information helpful when crafting messages to be delivered verbally or shorter written messages. Morgan agrees by saying:

> A full influence diagram, developed through repeated iterations with multiple experts, can be a daunting place to begin the study of a problem. Moreover, even a rough approximation will provide much of the guidance needed for creating effective risk communication. These diagrams do not require the detail and precision required for performing quantitative analyses. Nonetheless, pushing the analyses as far as possible helps to refine thinking about a risk ((Morgan *et al.* 2002, p. 43).

MESSAGE MAPPING

As valuable as influence diagrams and the process used to create them can be, the technique requires more skill, time, and resources than is likely to be available to the typical risk communication team. The influence diagram process is also more effective when used for crafting lengthy messages in written form such as public health brochures and educational materials intended for mass distribution. Message mapping presents a more pragmatic alternative and is also a more effective technique for crafting verbal, and sometimes written, messages. It was created by Vincent Covello in the early 1990s and became a vital public health tool of the U.S. Centers for Disease Control (CDC) following the anthrax attacks of 2001. Since then, the CDC and other state and local agencies have conducted message mapping workshops for a variety of public health crises including smallpox and various water security emergencies. The technique, its benefits, and process have been well described in literature by Covello (U.S. EPA 2007; Covello 2002).

The foundations of the process address several key theories of risk communication including the risk perception model and the mental noise model (both discussed in

greater detail in Chapter 3). Risk perception factors that create significant amount of mental noise include those out of the control of the audience, are involuntary, are inescapable, and are exotic. Injuries that are dreaded and significant amounts of uncertainty are also prone to creating high levels of worry and anxiety. The message mapping process provides solutions to overcoming these barriers by developing a "limited number of key messages that are brief, credible and clearly understandable" (U.S. EPA 2007, p. 2-1).

The effective use of message mapping allows organizations to identify key audiences in the early stages of message development, determine their key questions and concerns, and fill the gap between what an audience knows and what the organization wants the audience to know in order to increase the audience's ability to make informed decisions.

The expected outcomes experienced by organizations that use this process are numerous, but most important is the ability of the organization to develop a vetted repository of messages in advance of a crisis, thus allowing them to be able to quickly get information out that is accurate, requiring only a limited amount of time to refresh content or adjust to the unique circumstances of the particular crisis. In addition, in situations when there are multiple communicators from the same or related organizations, the ability to speak with one voice is increased when the message content is pre-developed and agreed upon. For communicators, message maps provide a simple visual aid to help guide them in communication events, thus reducing the chances of making an inappropriate or inaccurate statement or forgetting a key point. Finally, the messages developed are able to condense key information into brief messages of limited words, providing excellent sound bites and quotes for the media.

A previously completed message map that was used to develop messages to help the public and media differentiate between seasonal flu and pandemic flu appears below.

The process of creating message maps involves seven steps, summarized below (U.S. EPA 2007; Covello 2002):

1. **Identifying potential stakeholders.** Each crisis will have a unique set of stakeholders and include external publics and well as internal ones. A comprehensive list can number well over 70 identified stakeholders; however, most crises have a smaller list, and if too large, the stakeholders can be subdivided according to the types of concerns and questions they may have. It is also key to note that not every stakeholder needs its own set of maps; many overlaps occur. Some examples of typical stakeholders include emergency response personnel, internal workforces, law enforcement personnel, medical practitioners, public health officials, publics at risk, scientific leaders, suppliers/vendors, and victim's families.
2. **Identify potential stakeholder questions and concerns.** This list will also be different for each stakeholder group that is identified, although some common groups can be put together. It is critical to the process to brainstorm in this step in order to develop the most comprehensive list possible; future steps will allow

for a winnowing down to the most critical questions. Covello suggests a framework for listing the questions/concerns be used that includes:

- Overarching questions—What essential information do people really need to know?
- Informational questions—What details about the crisis do people need to know?
- Challenging questions—Why should the public trust what you are saying?

Developing questions can also be a time-consuming step and if rushed can distort the actual message development. Covello recommends using research to explore and confirm the list. Some possible sources of information include media and website content analysis; review of public documents such as hearing records and legislative transcripts; reviews of organizational complaints, logs, and hotline calls; and focus groups or surveys. [Covello also provides a list of the 77 most frequently asked questions by the media (U.S. EPA 2007, p. 2-5).]

TABLE 5.3. Message Map for Communicating Differences between Pandemic Influenza and Seasonal Influenza[a]

Pre-Event Risk Communication Message Map for Pandemic Influenza		
Stakeholder: Public and Media **Question or Concern:** How is pandemic influenza different from seasonal flu?		
Key Message 1: Pandemic influenza is caused by an influenza virus that is new to people.	**Key Message 2:** The timing of an influenza pandemic is difficult to predict.	**Key Message 3:** An influenza pandemic is likely to be more severe than seasonal flu.
Supporting Fact 1-1: Seasonal flu is caused by viruses that are already among people.	**Supporting Fact 2-1:** Seasonal flu occurs every year, usually during winter. Seasonal flu occurs every year, usually during winter.	**Supporting Fact 3-1:** Pandemic influenza is likely to affect more people than seasonal flu.
Supporting Fact 1-2: Pandemic influenza may begin with an existing influenza virus that has changed.	**Supporting Fact 2-2:** Pandemic influenza has happened about 30 times in recorded history.	**Supporting Fact 3-2:** Pandemic influenza could severely affect a broader se of the population, including young adults.
Supporting Fact 1-3: Fewer people would be immune to a new influenza virus.	**Supporting Fact 2-3:** An influenza pandemic could last longer than the typical flu season.	**Supporting Fact 3-3:** A severe pandemic could change daily life for a time including limitations on travel and public gathering

[a]Covello 2008

3. **Analyze questions to identify common sets of concerns.** If the brainstorming process of the previous step was effective, a lengthy list of questions and concerns emerges with limited obvious patterns. However, upon further study, most lists can be further categorized into 15 to 25 overarching areas of concern. Some of the most common to look for include accountability, basic information and details, duration, effects on health, legal/regulatory, safety, trust/credibility, and quality of life. [Covello also provides a list of some of the most likely categories (U.S. EPA 2007, p. 2-6).]

   A fairly simple approach to categorizing the list of concerns is to simply construct a matrix that lists the major categories and the major stakeholders as viable and using simple hash marks to identify the combination of categories and stakeholders that appear most often. This process will be very useful in subsequent steps when the actual messages need to be constructed with a very limited number of words.

4. **Develop key messages.** Because each concern or question grouping will have its own map of three key messages, this step can be very time consuming. Recall, however, that the maps developed become a permanent part of an organization's repository and once completed are done except for occasional review and revision. The use of a team is necessary for this step as well and should include representatives from the organization including subject matter experts, communication specialists, policy and legal experts, and management, all led by a skilled facilitator.

   Covello recommends that the messages have a very tight structure and limited content, matching typical media sound bites. Therefore, the message length should be no longer than 27 words and/or be able to be read in nine seconds. He also suggests that those messages containing "compassion, conviction, and optimism" are the ones most likely to be used by media and repeated by the stakeholders (U.S. EPA 2007, p. 2-7). In addition, in order to develop a number of messages that can be effectively delivered by communicators, Covello suggest three key messages to address each concern/question. This leads to the 29/9/3 template he advocates.

5. **Develop supporting facts.** For each of the three key messages developed in the map, three separate supporting facts should be provided by the available research and literature. These supporting factors provide additional information for the communicator and lend credibility to the message. Like key messages, supporting facts should be research based, using the same sources noted in Step. 2.

6. **Test and practice messages.** Standardized procedures for message testing include asking subject matter experts not directly involved in the communication event to validate the message content and then participating in a practice session by delivering specific messages with groups that are representative of the key characteristics of the eventual intended audiences. Feedback should be sought from the audiences in order to opportunities to revise as necessary.

7. **Delivery of maps through appropriate channels.** The use of trained communicators is essential in this step and is addressed in greater detail in Chapter 7. Typical channels include various governmental agencies and the media through press conferences and releases, informational forums, internal staff meetings, community meetings, and written content that might appear on a website, brochure, or FAQ (frequently asked questions) sheet.

In addition to the information presented above, a number of guiding principles are helpful to keep in mind when developing message maps. These principles help understand how to craft the message content so that the audience is more likely to understand and respond appropriately to the message. They also focus on the audience's ability to understand the message in terms of relational content and the potential problems produced by high stress levels (U.S. EPA 2007).

- **The rule of 3.** Research has shown that when mental noise is high, the ability of an audience to process large quantities of information and/or specific messages is limited. Keeping the number of messages to three in high-stress situations appears to be the optimum number. Under less stressful circumstances, audiences typically can process seven separate messages effectively.
- **Primacy/recency.** In high-stress situations, audiences typically process what they hear first and last more effectively than information presented in between. Therefore, risk communicators should strive to assure that the most important information is presented in those positions.
- **AGL-4.** A typical audience in an industrialized country not under stress can process messages at the 10th- to 12th-grade level. The effects of stress are believed to reduce the comprehension level by four grade levels. Therefore, crisis messages for industrialized audiences should be at the 6th- through 8th-grade level. (Obviously, messages for nonindustrialized populations would be based upon their expected comprehension level.)
- **Triple T model.** An axiom of nearly every communication situation from classroom lectures to safety training follows the formula of: (1) tell the audience members what you are going to tell them; (2) tell them; (3) tell them what you just told them. Crisis communication events are no different. This formula also addresses and helps reduce the effect of mental noise by increasing the chances that repetition of the content will overcome the barriers produced.
- **1N = 3P.** As was discussed in Chapter 3, the negative dominance model suggests that the ability to hear positive messages in a crisis situation is generally undercut by negative messages. In order to increase the chances that positive messages will be heard, they need to be delivered in a 3:1 ratio against negative messages. This principle also cautions the communicator to strongly refrain from using highly negative words in any message such as "no," "never," "not," "nothing," and "none."
- **Anticipate, prepare, practice.** As was already discussed in Chapter 3 and will be further elaborated upon in Chapter 7, choosing a spokesperson requires an

understanding of the difficulties posed by the communication event. Even more so, crisis communicators need to spend time in preparation for the event, even going so far as to rehearse with a mock audience. At the very least, anticipating possible questions that will follow the delivery of a message and knowing how to answer them is essential. As noted above, the prepared message map is an effective visual tool for communicators and aids in helping them to "stay on message," especially when the audience is angry or highly emotional.

- **Cite third parties.** As has been reinforced numerous times throughout this text, trust and credibility of the communicator are keys to any successful message delivery event. Knowing the audience in advance of the event will help identify the trust and credibility level and determine whether or not the need to cite credible third parties in the message will help. It also goes without saying that ensuring the validity of third parties and the audience's acceptance of them as credible sources needs to occur before the message event.
- **Use graphics and other visual aids.** Chapter 7 will discuss the importance of and the use of graphics and other visual aids during the message delivery; suffice it to say at this point that visuals provide value by increasing the chance that the message will be understood by both reinforcing the content and also by sending the information content to a different part of the audience members' brains, which aids in comprehension and retention. In addition, visuals can help overcome mental noise because they are often simpler to process.

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