



Tactical Communication

Successful communication is an essential component of an effective disaster response. Reports following Hurricane Katrina identified communication failures as one of the major factors that hindered successful disaster response and recovery.

What is tactical communication and how does it differ from risk communication?

Tactical communications are communications undertaken to achieve the mission of the disaster response. Tactical communications usually occur between responders and focus on gathering and conveying information essential to disaster response (number of victims, location and number of supplies, etc.). On the other hand, risk communication supports disaster response by focusing primarily on the public by informing decision-making during disasters.



What factors are essential to tactical communication?

The components of a tactical communication system include hardware, communication infrastructure and protocols. Key aspects of an effective tactical communication system include:

- **Operability:** A system needs to keep working during disasters.
- **Interoperability:** Systems and organizations need to be able communicate with each other.
- **Reliability:** A system should operate as expected and dependably transfer information between users.
- **Resiliency:** A system must be able to recover from mishaps, incorporate changes in technology, and adapt to changes in the disaster response.
- **Redundancy:** The resiliency that is achieved by duplicate components that perform a common function. For example, having back up systems to prevent communication failures, such as using cell phones, radios, and satellite phones to maintain communication.
- **Scalability:** Communication systems should be able to handle changing demands, for example, increasing numbers of users should not cause an information network to fail.
- **Security:** The system should be able to control who can access information as it moves across networks and devices. This might include authentication and verification of users and protection of the information transmitted (i.e. through password protection and encryption).
- **Efficiency:** The system should transmit information efficiently and present a good value for the capital investments and operational costs it generates.

What role do health alert networks (HANs) play in tactical communication?

HANs are secure emergency communications systems used to disseminate important tactical messages. They are available 24 hours a day, 7 days a week. Each state has a HAN, which is used to communicate among state and local public health departments as well as hospitals and other key response partners. A HAN can have a number of components that may include:

- Landline and cellular telephone networks
- Broadcast fax
- A secure web site: can be used for mass e-mails, as a bulletin board, and in a data transmission capacity
- Wide Area Notification System (WANS): can automatically message a database of individuals using cell, e-mail, pager, fax, and other communication devices.
- Satellite communication system (MEDSAT)
- Radios

What lessons can be learned from Hurricane Katrina's communication failures?

Many state and local public safety agencies suffered extensive damage to their facilities and equipment that hindered effective communication:

- Because of the devastation of the communication infrastructure, the situational awareness of the New Orleans Mayor's Office was severely impaired. This limited its ability to control rumors effectively. Erroneous media reports of widespread violence prevented the timely arrival of needed supplies and personnel and heightened residents' anxiety.
- Communications back up systems were inadequate: at one point, hundreds of New Orleans first responders were trying to communicate on a back up radio system with only two available radio channels. They were forced to wait for openings in the communication traffic to send or receive critical information, and this impaired operations.

Where can I learn more about tactical communications?

- **CDC Health Alert Network website:** This site has information on training and IT infrastructure development, as well as information on the overall HAN system:
<http://www2a.cdc.gov/han/Index.asp>
- **Federal Communications Commission Clearinghouse:** A wide range of reference documents covering best practices, case studies, communications and interoperability plans, and other materials, notably the Primer on Redundant Communications:
<http://publicsafety.fcc.gov/pshs/clearinghouse/health-care.htm>



YALE CENTER FOR PUBLIC HEALTH PREPAREDNESS

55 Church Street, Suite 801
New Haven, CT 06510
Phone: 203-764-9713
E-mail: cphp@yale.edu

<http://publichealth.yale.edu/cphp>
<http://blogs.yale.edu/roller/page/prepare>

This publication is funded through CDC Cooperative Agreement #U90/CCU124251-02. Its contents are the sole responsibility of the authors and do not necessarily reflect the views of the CDC.

Mission: As part of a national network of Centers for Public Health Preparedness that are funded by the Centers for Disease Control and Prevention (CDC), the Yale Center for Public Health Preparedness, based at the Yale School of Public Health, works to ensure that frontline public health workers are prepared to respond to public health emergencies including natural disasters, acts of terrorism, and disease

The purpose of this newsletter is to provide preparedness information to public health professionals.

If you have suggestions for future newsletter topics or to comment on preparedness issues, please e-mail us at cphp@yale.edu

To subscribe to this newsletter, please send an email to cphp@yale.edu with "public health" in the subject line.