

Alternative Communications Systems



The U.S. Department of Health and Human Services (HHS) Office of Hospital Preparedness has initiated a program to promote the development of redundant communications systems with multiple technologies to ensure connectivity and operability in the event of a public health emergency. Alternative communications systems used by federal, state, and local governments have long depended on amateur radio systems and volunteers. This tradition continues today as evidenced by NYSTEC's recent work to help a major government organization develop an alternate, redundant communications capability.

NYSTEC has the capabilities and expertise to assist agencies to identify needs, options, and opportunities for developing a backup radio system to provide essential local and statewide communications in the event that landline, cellular telephone, and Internet connectivity are lost.



First Steps

► *Existing Capabilities*

- ❖ Determine what alternative communications capabilities are supported by state and local emergency management offices.
- ❖ Analyze existing Radio Amateur Civil Emergency Service (RACES) and Amateur Radio Emergency Service (ARES) capabilities.
- ❖ Determine if hospitals, regional health offices, local government, and health departments have regional alternative communication systems and plans in place.
- ❖ Evaluate the Very High Frequency, Ultra High Frequency, and High Frequency systems and capabilities.

► *Who needs to communicate with whom?*

- ❖ When traditional links have failed, communications needs must be prioritized. Identify who needs to communicate with whom and what types of communications traffic will need to be supported.

Developing a Plan

- ▶ In addition to existing amateur-radio voice systems, there are digital systems supported by amateur radio and the U.S. Military Affiliated Radio Services (MARS). NYSTEC has conducted field tests to compare voice with digital capabilities for health operations.
- ▶ Building local and regional support is key. An extensive outreach program to local governments, hospitals, health networks, emergency management agencies, and the amateur-radio community is fundamental.
- ▶ An assessment of local facilities to support alternative communications is also important. Issues include space for antennas, secure radio storage, backup electrical power, and operating space.
- ▶ Governance and interoperability capabilities
 - ❖ Determine jurisdictional parameters – Who within a state and county is mandated to coordinate alternative communications systems?
 - ❖ What type of teaming agreements are required to establish common policies and procedures?
 - ❖ Who will provide program leadership and guidance?
 - ❖ Develop relationships with other health agencies to foster interoperability.



NYSTEC can provide a host of services to meet state agencies HHS/DHS requirements. These include:



- ◆ Needs assessment
- ◆ Network design
- ◆ Liaison with emergency management, amateur radio, and Army MARS
- ◆ Developing governance models
- ◆ Identifying points of communications and mode requirements
- ◆ Site installation recommendations
- ◆ Equipment lists and budgets
- ◆ Training and operator qualification requirements
- ◆ Prototype tests and scenario development
- ◆ System testing