

Telehealth in Emergency Preparedness and Response

Technology continues to revolutionize our daily lives and healthcare delivery. From the ability to share health information in real-time to making healthcare providers and expertise available virtually, technology has the ability to help strengthen healthcare and public health preparedness and response in transformative ways.

Telehealth, or using technology to support healthcare activities from a distance, has become an essential tool for providers, planners, and responders in protecting patient access to care. The risks of disaster and disease outbreak persist while demands on healthcare increase and public health funding is variable, making telehealth an important trend in healthcare for resilience.

WHAT IS TELEHEALTH?

Telehealth is the “use of electronic information and telecommunications technologies to support healthcare delivery, health education, public health, and health administration.”¹ Telehealth then encompasses a wide array of health services such as home health care, patient education, and chronic disease management.

WHAT DOES TELEHEALTH LOOK LIKE?



Live Videoconferencing or ‘Synchronous’: Real-time interaction between a patient or caregiver and healthcare provider using audio visual technology.

Examples of Telehealth

Direct-to-consumer consults via mobile app; telepsychiatric evaluations; provider to provider consults



Store-and-Forward or ‘Asynchronous’: Transmission of health and medical information and data (such as images, pre-recorded videos, and other forms of data) through a secure electronic communications system to a practitioner.

X-rays, CT/MIR scans, EEG printouts transmitted for interpretation



Remote Patient Monitoring (RPM): Collection of personal health and medical data from a patient in one location transmitted to a provider in a different location.

Holter monitors, wearable wristbands to collect vital signs



Mobile Health (mHealth): Provision of healthcare and public health education and practice through mobile devices such as smart phones.³

Mobile phone apps for collecting health data, entered manually or automatically

How Telehealth is Strengthening Preparedness and Response

Telehealth is being used to strengthen healthcare and public health preparedness and response capabilities in many ways. Mobile apps, video conferences, and much more are being included in emergency plans in innovative ways and helping to increase resilience.



Flu on Call®
In the event of a severe pandemic, the Centers for Disease Control and Prevention has developed a national network of phone lines, Flu on Call®, that can be used to provide information and triage callers. This network of call centers engages United Way 2-1-1 help lines, poison control centers, and nurse advice lines. Callers will be assessed by healthcare providers via phone and given information as well as directed to appropriate care sites, e.g. hospital, clinic, etc.⁸

Project ECHO
Project ECHO is well known for establishing a 'hub and spoke' model to connect specialists at the 'hub' with primary care and other providers at 'spokes.'¹⁴ This model could be used during an outbreak to train and support providers.⁹

Call Centers & Phone Triage
Call centers and hotlines staffed by health professionals can be used to provide health and event-specific information to callers. Triage lines staffed by healthcare providers can also be used to screen callers, determine if they require immediate care and help callers obtain antivirals.



PUBLIC HEALTH EMERGENCIES & DISEASE OUTBREAKS
The different types of telehealth are an important resource in public health emergencies and disease outbreaks. Advances in technology continue to position telehealth to be an even greater asset for preparedness and response efforts to these events.

Decision-making Support & Expertise
Synchronous telehealth can enable consultations with disease specialists and provide support to rural and under-resourced facilities impacted by an event. It can also be used to educate care givers.
Providers can use RPM to in making decisions about interventions, transport, and treatment adjustments.

Remote Patient Monitoring
For highly infectious diseases, telehealth technologies represent the safest means of treatment for patient, providers, and community. RPM can allow specialists to provide treatment from a safe distance.
During the Ebola virus disease outbreak, specially developed treatment units at hospitals helped safeguard the community. Many of these units continue to be used in the treatment of other IDs.
Video conferencing and other RPM technologies can also allow providers, such as home health workers, monitor multiple patients from one location, effectively multiplying their capacity.⁷



Medical Supply Dispensing
Incorporating telehealth screening and consultation capabilities at points of dispensing (PODs) sites could help in instances where medically trained staff is in short supply and enhance situational awareness of POD supply availability.¹⁰
mHealth can be used to notify patients where to obtain antivirals or other needed MCMs and send reminders when multiple courses of antivirals are required.



Emergency Medicine

Pilot programs across the U.S. are equipping paramedics and EMS with telehealth equipment that can allow responders to conduct video consultations to support decision-making. These programs contribute to reduced hospital admissions and could be used during the response to a disaster to reduce impacts on hospitals. The Houston Fire Department's Project ETHAN (Emergency TeleHealth and Navigation) has helped reduce unnecessary transports to the emergency department.¹³

Photo credits: FEMA News Photos, 2017; Unsplash, 2017.

POLICY AND REGULATORY CONSIDERATIONS

Advances in technology, a complex healthcare system, and a division of authority between state and federal governments combine to create a complex policy and regulatory environment for telehealth.

Reimbursement: Reimbursement is widely considered the largest barrier for telehealth. Medicare includes strict limitations on reimbursement by location (i.e. for rural facilities only), type of provider, and type of service. Medicaid policies, though more inclusive, vary widely by state. Private payers similarly vary widely, with differences in types of services reimbursed and amount reimbursed for telehealth vs. traditional care.

Licensing: In the U.S., licenses to practice medicine are controlled and issued at the state level. This is important for telehealth as the point of care during telehealth encounters is the location of the patient. Telehealth providers are therefore required to be licensed in the state in which the patient is located and comply with that state's laws and regulations.

Credentialing and Privileging: The Centers for Medicare and Medicaid (CMS) regulations allow hospitals and critical access hospitals to credential by proxy. In this process, patient sites (the 'originating' site) can enter into a contract with a hospital or critical access hospital (the 'distant' site) for the distant site to provide telehealth services and credential those providers. Under [Joint Commission](#) requirements, practitioners providing care through live interactive systems are subject to credentialing and privileging of the location of the patient.

Privacy: HIPAA does not have distinct or separate requirements for services delivered through telehealth.

Therefore, telehealth providers must use HIPAA-compliant technology and take any additional action to meet required privacy standards. Additionally, states may have their own privacy standards and security laws that require a higher standard than HIPAA.¹¹

Malpractice Liability & Insurance: The number of malpractice liability cases involving telehealth is low and uncertainty remains as to how it would play out in an emergency context. Additionally, not all carriers provide malpractice coverage for telehealth and/or coverage may not carry over to another state.¹²

Interoperability: Ensuring health information technology (HIT) and telehealth platforms across agencies and healthcare systems can share information can be difficult but is important in ensuring providers and responders alike can access electronic health records and share information. These capabilities are vital for patient continuity of care during a disaster response.

Health IT Infrastructure: Telehealth requires certain IT infrastructure requirements to be in place or implemented in order to be practiced. An important component of this infrastructure is back-up capability, such as cloud storage. It is important that during an emergency infrastructure can accommodate a potential surge in use.

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