Telehealth in Emergency Situations

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ABSTRACT

The author will explore the ways in which telemedicine can assist in responding to public emergencies and disasters. The publication begins with an overview of how to obtain licensure for telehealth practice in the United States and then explores the delivery of medical care during Hurricanes Katrina and Ike. The author then assesses how telemedicine could have mitigated some of the health crises during these disasters. This publication concludes with policy recommendations for implementing telemedicine in future disaster relief planning.

INTRODUCTION

Under the Public Health Service Act, a public health emergency exists when:

(1) A disease or disorder presents a public health emergency; or

(2) A public health emergency, including significant outbreaks of infectious diseases or bioterrorist attacks, otherwise exists.

Stroke specialists based at the University of Pittsburgh are able to treat stroke patients in emergency rooms that are located elsewhere and that lack the resources to keep full-time neurologists on staff.iii “Picu-Bots,” telemedicine stations equipped with remote-controlled digital cameras, medical scopes and video conferencing capabilities, allow pediatricians at Massachusetts General Hospital to consult with children in intensive care from their homes.iii

Technological advances are also furthering the proliferation of telehealth emergency services. For example, as broadband services across the United States improve, patients in rural communities are able to get treatment through telehealth. Congress, through the American Recovery and Reinvestment Act of 2009 allocated resources for this purpose by distributing $482.4 million in grants to improve access to healthcare through high-speed internet.iv

As the actual tools for delivery of telehealth continue to develop, so too should the scope of its use.

Public health emergencies are prime candidates for the array of benefits telemedicine can provide. While not yet widespread, the use of telemedicine in public emergencies is not unprecedented. For instance, Hurricane Ike, the third largest hurricane to hit the continental United States in recorded history, devastated the city of Galveston, Texas by displacing thousands of people and crippling the entire hospital and medical school complex at the University of Texas Medical Branch.iv
Thanks to excellent advanced planning and forward thinking, however, the university’s telemedicine program began serving patients 48 hours after the hurricane hit and, within two weeks, operated at full capacity. The university attributed this success to a combination of pre-planning, utilization of wireless technology and cell phones to provide non-routine medical care.

While telemedicine provided access to care in the immediate aftermath of Hurricane Ike, delivery of these medical services faced several obstacles that diminished its effectiveness. Many medical professionals were forced to evacuate or relocate. Others were unable to access the licensure and credentialing information necessary to substantiate their ability to practice medicine. The medical infrastructure in Galveston was also not prepared to absorb and verify the credentials of volunteer physicians.

This paper will explore the ways in which telemedicine can assist in responding to public emergencies and disasters. The paper begins with an overview of how to obtain licensure for telehealth practice in the United States and then explores the delivery of medical care during Hurricanes Katrina and Ike. This paper then assesses how telemedicine could have mitigated some of the health crises during these disasters. This paper concludes with policy recommendations for implementing telemedicine in future disaster relief planning.

TELEHEALTH TODAY

The United States has a sophisticated system of licensing, credentialing and granting privilege to practice medicine. Under non-emergency circumstances, it might take weeks for a hospital’s human resources department to call a state’s medical board to verify a practitioner’s license to practice medicine, to check the authenticity of the practitioner’s academic records and to grant privilege to practice a specific-kind of medicine in a particular hospital. In an emergency situation, where a doctor travels to a foreign state or treats a patient in a foreign state via a telecommunication system, how do you ensure that the practitioner is licensed and earned the credentials to practice medicine?

TELEMEDICINE: INTERSTATE REGULATION

As telehealth services are increasingly utilized for non-emergency medical care, individual states have already adopted or are considering various methods of regulating the licensure of doctors practicing out-of-state but delivering care in-state. The following provides an overview of the types of telehealth licensure laws:

Reciprocity
Reciprocity allows one state to recognize the license of a physician in another state if the physician holds the license in good standing. The license is granted to a telemedicine practitioner after completing a simplified application and paying a (reduced) licensing fee. Only three states have adopted this model: Alabama, California and Oregon. All three states allow reciprocity only for physicians practicing telemedicine, explicitly stating that the licensee is forbidden from practicing in-person medicine. Practitioners holding a reciprocity license are subject to the jurisdiction of the state where the patient resides.

Restrictive
A restrictive license requires an out-of-state physician to be fully licensed to practice in
another state. However, those states that allow for restrictive licenses typically make exceptions when interstate telemedicine is used in the course of a medical emergency or natural disaster.vii

**Nurse Licensure Interstate Compacts**

Endorsed by the National Association of State Boards of Nursing, Nurse Licensure Compacts (NLC) are created by individual states’ professional nurse licensing boards. NLCs honor the licenses of foreign states’ nurses, thereby allowing the practice of electronic medicine across state lines.viii To validate a nurse’s license, an employer or emergency professional can go to a national databank at www.nursys.com to validate a nurse’s license. As of June 2010,ix the following states are members of the NLC:

- Arizona
- Arkansas
- Colorado
- Delaware
- Idaho
- Iowa
- Kentucky
- Maine
- Maryland
- Mississippi
- Missouri
- Nebraska
- New Hampshire
- New Mexico
- North Carolina
- North Dakota
- Rhode Island
- South Carolina
- South Dakota
- Tennessee
- Texas
- Utah
- Virginia
- Wisconsin

**Visiting Physician Temporary License**

The rules for this type of license vary per state. Typically, this limited or emergency license is granted for one to two days to permit a doctor to perform a certain procedure, consult on a patient, or for education purposes. Such a license can be extended at the discretion of the executive director of a state medical board.

**THE EMERGENCY MEDICAL ASSISTANCE COMPACT (EMAC)**

EMAC establishes a firm legal foundation: Once the conditions for providing assistance to a requesting state have been set, the terms constitute a legally binding contractual agreement that makes affected states responsible for reimbursement. Responding states can rest assured that sending aid will not be a financial or legal burden, and personnel sent are protected under workers compensation and liability provisions. The EMAC legislation solves the problems of liability and responsibilities of cost and allows for credentials to be honored across state lines. (http://www.emacweb.org/)

The first intrastate medical disaster assistance compact to be ratified by Congress since 1950, EMAC was signed into law in 1996 (Public Law 104-321) to allow for intrastate medical help during natural disasters and other emergency situations.x Fifty states, the District of Columbia, Puerto Rico, Guam and the U.S. Virgin Islands have enacted legislation to become EMAC members. EMAC provides a legal structure for a state facing a catastrophe to request emergency assistance from compact–member states, without fearing legal and financial obstacles. The Compact assures reciprocity in recognizing professional licenses and provides liability protection (in certain areas) to foreign medical professionals. The Compact also outlines reimbursement and compensation provisions. EMAC is administered by the National Emergency Management Association (NEMA), a professional association of state emergency managers.

The framework for telemedical practice has been established and proven many times over to be a valuable resource in the ordinary course of providing medical care. Where the service is remote robotic surgery or an emergency room sending x-rays to a radiology center abroad for immediate consultation, telemedicine has proven to create access to quality care in both a timely and cost efficient manner. Given the scope and impact of many public disasters, telemedicine offers great potential in treating victims of these disasters even
when a sufficient number of doctors are not present at the scene. The following study of how healthcare was delivered during Hurricanes Katrina and Ike highlights problem areas in the delivery of medical care in emergency situations. Understanding where healthcare is needed in emergency situations and what the logistical problems are in accessing it, is crucial to understanding where telemedicine can solve the problem.

HURRICANE KATRINA

On August 29, 2005, the entire medical infrastructure of Louisiana was virtually destroyed. Hospitals were leveled, medical professionals were forced to evacuate, supplies and medications were lost and all communications systems were down. The Louisiana State Board of Medical Examiners was not spared. Located in New Orleans’ Central Business District, the offices were flooded and remained closed for nearly six weeks. Like state boards of medical examiners across the United States, Louisiana’s Board of Medical Examiners tracked the licensure of physicians practicing in the state. Without phone, fax, internet, or even cell phone use, the main repository for licensing information was completely out of use.

Nearly 6,000 physicians evacuated Louisiana as a result of Hurricane Katrina. Simultaneously, as many local doctors were forced to leave the gulf region’s affected areas, in the aftermath of Katrina, doctors and other medical professionals from across the United States began pouring into the region. These two phenomena – a mass exodus of doctors and an influx of thousands of others – created several significant problems. First, though the desire of doctors rushing to the gulf region was overwhelming, none of these well intentioned professionals could practice without a license. The lack of electricity, however, prohibited medical personnel in New Orleans from verifying the credentials of the influx of volunteer medical professionals. Even Louisiana-based doctors who chose to stay faced problems accessing their licensure information because it was either stored electronically and there was limited access to a computer, or the paper trail was destroyed by the storm. As for the doctors who were evacuated, many of them were absorbed as refugees in Texas and Mississippi. These doctors lacked access to the Louisiana Medical Board’s licensing homepage, where they could verify their licenses. Moreover, while the licensing databases in Texas and Mississippi were not affected by the storm, their resources were flooded with doctors from Louisiana and other states applying for temporary licenses to practice.

Another crippling factor for many Louisiana physicians was the loss of proof of their medical education and postgraduate training. Homes and offices housing paper documentation were completely destroyed. While medical schools and hospitals might have had electronic records of a physician’s license or enrollment, there was no immediate way to access the information.

Simply put, in the immediate aftermath of the storm, when medical care was so badly needed, many physicians could not prove their eligibility to practice medicine. One way that this problem was addressed was to eliminate the need to verify medical licenses altogether. The governor of Louisiana issued a declaration that doctors licensed in any state could practice in Louisiana. Similarly, on September 5, 2005, the Department of Health and Human Services declared a public health emergency. Michael O. Leavitt, then Secretary of the Department of Health and
Human Services, issued a waiver for health care delivery which included waiving (absent fraud or abuse):

The requirement that physicians and other health care professionals hold licenses in the State in which they provide services, if they have a license from another state (and are not affirmatively barred from practice in that state or any State in the emergency area).xiv

The waiver was retroactive to August 24, 2005 in Florida and from August 29, 2005 in Texas, Mississippi and Louisiana.xv

Waiving the requirement to verify medical licenses was well-intentioned and encouraged more volunteers to rush to the Gulf, but also created the problem of non-licensed physicians and physicians with disciplinary histories attempting to practice medicine.xvi The Federation of State Medical Boards (“FSMB”) worked to circumvent this issue by mobilizing to ensure the licensure of the physicians pouring into Louisiana and the surrounding Gulf States. FSMB created a website offering 24-hour capabilities to verify Louisiana-physician licensures to state medical boards, disaster aid facilities and hospitals. In August and September 2005, this system was able to verify the licenses of over 1,200 displaced doctors.xvii

The FSMB’s system was crucial to delivery of medical care for victims both inside and outside of Louisiana. Fortuitously, the Louisiana state medical board had sent an updated list of the licensees in late July 2005 to FSMB’s All Licensed Physician Database. Texas and Mississippi also used the FSMB website to verify the licensure of the refugee doctors from Louisiana who poured into each state. The Gulf States also relied on the American Medical Association (AMA) for physician profiles and records of disciplinary history. Between the FSMB system and information from the AMA, state licensing bodies were able to identify any applicants with disciplinary issues or revoked licenses.

States in the gulf region further addressed the problem of verifying doctors’ licensures in the aftermath of Katrina by extending the duration of temporary and emergency licenses. For instance, the executive director of the Texas Medical Examiner’s Board extended the length of the visiting physician temporary license privilege, normally granted only for a couple of days, to 45 days, often extending the privilege the same day as the application. In Mississippi, the Board of Medical licensure issued emergency temporary licenses for volunteers to practice for the duration of the federally declared state of emergency. Louisiana doctors who were displaced by the Hurricane and who filed for permanent licensure in Mississippi were granted emergency licenses good for 120 days and were able to begin practicing immediately until permanent licenses could be granted.

Long after the public emergency caused by Katrina abated, medical credentialing remained an issue. Many physicians, residents and medical students, lost all hard copy proof of their education, training and residency. The Federation Credentials Verification Service (FCVS), under the FSMB, helped to mitigate this problem. FCVS was established in 1996 as a way to ensure license portability, housing a permanent repository for “core” medical credentials for physicians and physician assistants including medical education, postgraduate training, examination history, board action history, board certification and identity. Physicians and physician assistants who had registered with FCVS could establish their medical history in a matter of hours.xviii However, doctors who were not registered and lost all proof of their licensure faced a serious challenge.
After Katrina the Louisiana State Medical Society established a website for Healthcare and Disaster Planning, they interviewed many doctors who treated victims of Katrina, reported that a common concern was the difficulty in verifying credentials of the large numbers of medical personnel who came from other areas to aid in the relief efforts. Dr. Minsky addressed this concern as follows:

"Credentialing was a huge issue. The credentialing process failed. . . Local hospitals have this in place. All the hospitals, in fact, had come up with emergency credentialing venues. What was not anticipated was the large number of physicians and medical people that would come from outside of the area to help, very generous people came. We had physicians sitting in the bleachers at the Assembly Center with nothing to do."

"I had to have personal cell phone numbers of some of the people at DHH in order to be able to communicate and get information passed by the port [authority]. I think it's imperative that we have a plan of action, a hotline or a place where physicians can call before they come and we can say, "You know, we do need your 20-physician team, but we don't need you until Wednesday. We don't need you until Thursday. We don't need you today. The patients are not here today, but we are anticipating this to occur tomorrow."

"[We also need a place to] credential medical professionals when they get here, and then to schedule them. For the first week or so, Our Lady of the Lake Hospital was very gracious in scheduling our local physicians. We knew the number to call and our local physicians could call and volunteer. This proved very efficient." Dr. Louis Minsky (April 18, 2008), Medical Director for the Office of Homeland Security and Emergency Preparedness in the Baton Rouge region.xxvii

HURRICAN IKE

Hurricane Ike is a prime example of the necessity of and tremendous benefit offered by a telemedical program in an emergency situation. Within 48 hours of the hurricane's landfall, victims received much needed medical care. Access to telemedical care was a critical factor in reducing casualties and mitigating injuries caused by the storm.

A few days before the storm hit, the University of Texas Medical Branch (UTMB), activated its Incident Command System and Emergency Plan, which called for nonessential personnel and patients to evacuate.xxvi Because of the medical personnel evacuation, UTMB's telemedicine patients did not have access to non-emergency care. UTMB was able to mitigate this problem by using cell phones to establish physician primary care consultations.xxvii Within the first two weeks of post-Ike recovery, a statewide primary care telephonic physician consult service was established and patients were able to call a primary care physician for non-emergency issues.xxviii

Another reason the telemedicine program was able to succeed post –Ike was because of UTMB's fault-tolerant grid, which keeps disruptions to parts of the grid localized, so that the whole system does not necessarily collapse.xxviii Telemedicine relies on power and communication capabilities to properly function. In this case, and in this geographical region, storm tolerant power grids were the primary reason patients had almost immediate access to healthcare after the hurricane.

From a legal and safety perspective, the infrastructure that was put in place to provide telehealth services in the aftermath of Hurricane Ike, suffered from similar vulnerabilities as those identified with respect to Hurricane Katrina. As during Katrina, verifying licensure and credentials of medical professionals impeded the delivery of care. Chapter 778 of the Texas Health and Safety Code and EMAC required Texas to permit doctors licensed in other signatory states to render emergency aid in Texas, but verifying doctors' licenses...
from other states was a challenge because of the lack of updated and available records.

Mirroring the response to Katrina, across the country, states waived licensure laws to absorb displaced doctors. Massachusetts’s Board of Registration in Medicine issued emergency regulation establishing an emergency restricted license and an emergency restricted limited license for qualified physicians or physicians-in-training who were displaced by a federally declared disaster. Displaced physicians could apply for an emergency restricted license, so long as they were sponsored by an active, unrestricted Massachusetts licensee. The emergency licenses were granted for the sooner of three months, or whenever a full unrestricted license or limited license was granted.xxiv

At the time of this writing, Alexander Vo, an associate professor in preventive medicine and community health and the executive director of the Center for Telehealth Research and Policy at the University of Texas Medical Branch, stated in a 2010 dialogue hosted by the Brookings Institution that state licensure issues remain barriers to widespread use of the technology. In an interview with iHealthBeat, Vo said, "It would be nice if in the near future there [was a] provision allowing telehealth cross state consult in the cases of disaster and emergencies."xxv

LESSONS LEARNED AND POLICY RECOMMENDATIONS

Telemedicine may provide an answer to the licensing and credentialing problems experienced during Hurricanes Katrina and Ike. Medical professionals practicing via telemedicine must be afforded licensing and credentialing waivers to practice out of state during an emergency. Indeed, telehealth offers the tools to provide care as well methods for state governments and hospitals to provide licensing privileges to out of state physicians within days, if not hours, after a public emergency. Nevertheless, the use of telecommunication systems to mitigate medical disasters is still in its infancy. Every state must establish a prominent and well funded plan for implementing telemedical care as part of disaster relief services. The following policy recommendations delve into what systems need to be in place in order to ensure that the enormous promise of telemedicine is realized in treating victims of public disasters.

Access to Records

Keeping electronic records of proof of licensure, credentials and privilege updated, accurate and safely stored by more than one credible institution is of paramount importance and therefore must be a key component of any disaster relief plan. The FSMB website is a great place to start, but states must keep their own accurate and routinely updated records as a backup and also to ensure ease of access in an emergency. Additionally, physicians should keep personal electronic copies of their information stored online in case the state or federal databases are not accessible, with backups in locations as easily accessible as email accounts.

The database should include all medical professionals licensed to practice in state, including those living out of state but licensed to practice in state, via telecommunication systems. All medical professionals licensed to practice in state must register with the state’s central licensing body and verify their information annually. Registration information must include:

1. Proof of Licensure
2. Proof of Graduation from Medical Program
3. Proof of Credentials
4. Area of Practice
5. Willingness to be contacted in an emergency situation both in state and out of state (including cellular phone number, home phone number and personal email address).

All medical databases must be:
1. Routinely updated;
2. Routinely backed up on multiple servers which are stored in multiple locations; and
3. Multiple individuals must be capable of administering the databases.

Access to these databases in times of emergency is essential to ensuring quality of and access to care. As evidenced during Katrina, if medical personnel have to make contact with an actual person to access a database housing licensure and credentialing information, a logjam in verifying credentials is inevitable. During any emergency, databases must be publicly searchable so that central administrators are not overwhelmed with requests to verify a single doctor’s information. Medical professionals also need access to a dossier of their privilege and credentialing information. At the same time, electricity is a major concern during an emergency. Though the database must be publicly searchable, a live person(s) in remote locations must be available as backup in the case of power outage.

Access to Database for Doctors Delivering Emergency Care via a Telecommunications System
While each state must maintain its own medical professional database, access to foreign states databases is required to run an efficient telemedical practice in an emergency situation. Access to the information of doctors practicing via a telecommunications system is equally crucial to delivering immediate care. Current licensure laws limit a doctor’s ability to practice by state, but public policy must demand these laws be waived in emergency situations. Specifically for healthcare delivery remotely, states must follow the EMAC model of waiving licensure requirements and liability for those who wish to practice with a valid out of state license while the affected area remains in a state of emergency.

Logistics
As evidenced by Katrina, coordination and organization make the facilitation of care infinitely easier for those administering it while simultaneously improving access and quality for the victims. Pre-emergency, a team of medical personnel must be designated as emergency logistic coordinators. During the emergency, this team will determine what help is needed on the ground and which treatments can be conducted via telecommunication. This team would be responsible for administering the telemedical program, making sure that the equipment gets from the storm-proof shelter to the site of the emergency and that it actually gets utilized.

Before the emergency happens, this team needs to be trained in which medical services can be affectively administered via telecommunication systems. Then, when the emergency hits, they can request the help of volunteer doctors on the ground for patients in need of in-person care, and can request that doctors who can see patients remotely, provide medical care from remote locations away from the disaster site.

In a catastrophic emergency situation, volunteer medical professionals are essential but can also prove to be a burden to states’ already sapped resources or can duplicate efforts unnecessarily. Food,
shelter and resources are likely to be scarce, any additional people coming to the scene, even doctors or other emergency responders, need to be fed and housed. Before medical professionals rush to the scene, they should be able to call the central organizer to find out if they are needed.

In this situation, states and federal lawmakers should consider the tremendous benefit care via telecommunication systems can afford not only those needing care in an emergency, but also the state itself. Doctors practicing via telecommunication do not need to be housed and fed at the site of the emergency. There is little if any lag time due to travel. Medical personnel are familiar with their home environment and are aware of the resources available to them.

Logistical coordination of disaster planning must also take place on a federal level. As Hurricanes Ike and Katrina proved, massive devastation due to natural disasters can necessitate medical services that exceed the capacity of any individual state. States must establish reciprocal relationships whereby doctors have been trained to treat victims of public health emergencies via a telecommunication system, so that when disaster hits one state, the neighboring state is ready to offer care.

**Electricity and Electronics**

Telemedicine requires electronic equipment to function. Storing the necessary equipment safely, in a protected and accessible location, as well as ensuring adequate power in the immediate aftermath of a large-scale disaster is a significant logistical challenge. Computers, global-satellite internet, cameras and backup power are the core tools required for telemedical practice. Disaster planning must include the storage of these requisite items to active telemedicine as soon as possible post-disaster.

Cell phones are a primary means of delivering care post-disaster. As evidenced by the relief efforts from Hurricane Ike, cell phone provide immediate access to non-emergent primary care. Cell phones are also vital for triage and coordination of medical care on the ground and remotely via telecommunication. In planning for a disaster, emergency cell phones must be designated, charged at all times and preprogrammed with all of the requisite phone numbers for the city and state disaster relief services, medical centers, the state board of medicine and the designated telehealth coordinator.

Backup generators, batteries and access to power sources are as essential to telemedical care as computers, electronic medical equipment, internet and cell phones. The electrical needs of telemedical care have to be built into the overall electricity scheme when planning for a disaster. An important lesson learned from Hurricane Ike is the tremendous asset a functioning power grid is not just to the delivery of healthcare, but to every aspect of disaster planning. Additionally, any designated-telemedical equipment in addition to cell phones, for examples lap top computers, should be stored with charged batteries where possible. These batteries should be checked and recharged periodically.

**Pre-Emergency Triage: What Types of Care Will Be Delivered by Telemedicine**

Knowing how and where to direct care during a public health emergency is crucial to treating victims. Pre-emergency triage for the actual delivery of care is essential to fully utilize the benefits of telemedicine. Radiology, for example, is an area of medicine that has embraced telemedicine
with enormous success. If someone at the site of an emergency takes an x-ray, the radiologist reading the scan does not need to visit the scene of the disaster. The key to success in this instance is designating a treatment center in a remote location which can begin to treat patients simultaneously to the responders on the ground. Designating treatment centers in advance, and establishing formal agreements to treat patients in the case of disaster, will make all the difference if and when the time comes that these services are actually needed.

CONCLUSION

In everyday practice, the scope and reach of telemedicine is rapidly expanding. Public policy and public opinion will determine the future of telemedicine in disaster relief planning. The benefits of telemedicine are known, but the practice is still in its early stages. Educating law makers and informing consumers will ultimately determine the extent of telemedical practice in disaster relief planning.

To ensure that telehealth is fully utilized in the event of a public health emergency the following provisions must be in place.

- Licensure and credentialing information must be instantly attainable from an independent database that can ensure the authenticity of the records.
- The state facing the public health emergency should grant a temporary license to any out of state medical professional holding a license in good standing to practice via telemedicine.
- Telemedical equipment must be stored in storm-proofed shelters and emergency responders must be trained in how to set-up and use the equipment.
- Disaster relief planning must make provisions for backup electricity in the event that the power grid malfunctions.
- Funding for telemedicine during a disaster is a priority in ensuring direct access to quality care.

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Information contained in this report is current up to the date listed on the report. Note that the information is subject to change following action taken by a state's legislature, state agencies, state medical boards, or other applicable state government agency or body. CTeL will make every effort to provide the most current information.

The views and opinions expressed in the forgoing publication are solely those of the author and do not necessarily represent the views and opinion of the Center for Telehealth & e-Health Law, its Board of Directors, or its staff.

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ABOUT CTeL

The Center for Telehealth & e-Health Law (CTeL) enjoys a national reputation as one of the preeminent organizations in the field of telehealth and e-health related issues.
CTeL was founded in 1995 to overcome the legal and regulatory barriers impacting the utilization of telehealth and related e-health services. CTeL, formerly known as the Center for Telemedicine Law, was created under the vision and leadership of a number of individuals and organizations, including Dr. Yadin David, Bob Waters, the Mayo Foundation, the Cleveland Clinic, the Midwest Rural Telemedicine Consortium, and the Texas Children’s Hospital.

Over the years, CTeL has established itself as a leader in the telehealth community and is known for its ability to compile and analyze complex legal, regulatory, and public policy information. CTeL provides vital support to the community by providing critical analysis and information regarding legal and regulatory issues on topics such as: Medicare and Medicaid reimbursement, physician and nurse licensure, telecommunications, FDA regulations, privacy, and accreditation.

Today, CTeL supports health care providers, industrial corporations, law firms, associations, universities, insurance companies, and venture capital firms that work to overcome legal and regulatory issues related to telehealth. CTeL also offers its members access to legal research and consulting services through CTeL’s membership benefit packages.

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ENDNOTES
i Telehealth takes off as evidence grows that it can improve care, save money
ii Id.
iii Commerce Department Funds Telehealth Networks, Nicole Lewis, 9/16/2010
iv University of Texas Medical Branch: Telemedicine Disaster Response, Lessons Learned from Hurricane Ike and Recovery Alexander Vo, et al.
http://telehealth.utmb.edu/presentations/UTMB_Telemed_Disaster_RespRecov.pdf
viii http://www.nh.gov/nursing/licensure/compact.htm
ix http://www.nh.gov/nursing/licensure/compact.htm
x http://www.emacweb.org/?9
xii Id.
xiii Id.
xv Id.
xvii Id.
Sources

Telemedicine Policy Priorities: 2010

Licensure Portability: Position Statement and Recommendations
American Telemedicine Association Approved March 2007

Responding in Times of Need: Katrina and Beyond

Public Health Emergency Powers in the Aftermath of Hurricane Katrina
By Dan Bustillos, J.D.

Disasters and the Licensure and Reimbursement of Displaced Physicians
By Laura Hermer, J.D., LL.M.
lhermer@central.uh.edu

University of Texas Medical Branch: Telemedicine Disaster Response, Lessons Learned from Hurricane Ike and Recovery
Alexander Vo, et al.
http://telehealth.utmb.edu/presentations/UTMB_Telemed_Disaster_RespRecov.pdf

New Toolkit for Disaster Response: Social Media, Mobile Tools & Telehealth