

In Case of Emergency

The North Texas Mass Critical Care Task Force Presents Guidelines for Resource Management During Medical Emergencies

by Steven Harrell, director of communications

The Need

In 2003, the worldwide medical community was shaken by an outbreak of severe acute respiratory syndrome. The United States and Canada were among 29 countries that reported more than 8,000 probable cases of SARS, and nearly 800 people died as a result of infection. Toronto was hit especially hard, and 78 people died while physicians were forced to decide who should be given access to the limited amount of vaccinations and treatment.

On Aug. 29, 2005, Hurricane Katrina struck the US Gulf Coast. As the storm surged and moved inland, many of the levee systems failed. Within hours, more than 80 percent of New Orleans and 90 percent of most other beachfront cities were flooded. At least 1,833 people died in the hurricane and subsequent floods, and property damage was more than \$80 billion.

During crises like Hurricane Katrina or an influenza pandemic, individual physicians and nurses traditionally have been left to decide how to use their limited resources. After both these events, ethical and legal inquiries second-guessed the actions of medical staff because their decisions were made as individuals and not as part of a broader crisis response plan.

The North Texas Mass Critical Care Task Force was created to develop objective, fair guidelines for medical professionals to apply during crises. In an increasingly interconnected world, a viral outbreak can spread quickly and last for months. Also, there is always a looming threat for other public health emergencies, such as a devastating natural disaster, an act of bioterrorism, or loss of significant infrastructure.

Physicians constantly tell their patients to plan for medical emergencies or advanced care, with the hope that these important decisions can be made carefully and without the pressures of an unfolding emergency. North Texas physicians want to take their own advice and plan now for what the future might hold. Although it is hoped that this preparation never will need to be utilized, the reality is that public health emergencies are possible in any community.

Recent History of Emergency Preparedness in North Texas

In the Spring 2006, the Tarrant County Academy of Medicine Ethics Consortium began preparing for an infectious community emergency. From the outset, the physicians at these meetings believed it critical that every hospital in the county — preferably in the entire region — use the same basic approach to triage scarce resources.

“Within the Ethics Consortium, there was considerable discussion regarding the ethical dilemmas that would be encountered and how to address them, not just with patients but with staffs and the community,” says Kendra Belfi, MD, a Tarrant County Medical Society member who organized these meetings.

One of the most important results of the consortium’s meetings was the creation of policies to screen for the appropriateness of ER admission and of a detailed ventilator allocation protocol, modeled after a plan developed by the state of New York.

“Ultimately, the protocol for ICU and ventilator usage worked its way up through the Baylor Health system across North Texas, and then was taken to the Dallas County Medical Society for consideration,” Dr. Belfi explains. “After further work by the DCMS task force, Tarrant County was invited to join a combined effort now known as the North Texas Mass Critical Care Task Force.”

During the same time, officials in Dallas County were also working on a pandemic response plan. In 2006, spurred by increased awareness of the potential of a serious crisis that resulted from the outbreak of H1N1, the state of Texas hosted a three-day meeting of health officials in Austin to discuss emergency preparedness.

“I came out of that meeting with the recognition that there was not yet a statewide plan to manage scarce resources during a public health emergency,” remembers John Carlo, MD, who then was medical director of Dallas County Health and Human Services. “It was up to us at the local level to create our own protocol — not wait for the state to do it for us.”

North Texas Mass Critical Care Task Force

Upon returning to Dallas, Dr. Carlo contacted Robert Fine, MD, who had spent several years working on EPICS (Emergency/Pandemic Protocol for Intensive Care Services) for the Baylor Health Care System across North Texas.

Drs. Fine and Carlo soon saw that to be successful, any plans or protocols needed to cross county lines.

“We all quickly recognized that it doesn’t make any sense to do this sort of work separately,” Dr. Carlo says. “In North Texas, our healthcare system is designed not to make distinctions between counties. We wanted to work within that reality to ensure that, should a medical emergency occur, treatment would be identical at different facilities or in different areas.”

Dr. Fine says that the best medical decisions are based on both clinical medical science and medical ethics.

“We needed to facilitate the creation of a communitywide triage framework for guiding medical decisions during countywide public health emergencies,” he says.

In May 2010, the North Texas Mass Critical Care Task Force met for the first time. Representatives from major hospital systems — including Baylor, Methodist, Children’s Medical Center, and UT Southwestern — were present at that first meeting, as were members of the Dallas and Tarrant county medical societies, the Dallas-Fort Worth Hospital Council, Dallas County Health and Human Services Department, Southern Methodist University, and Denton Regional Hospital.

The Guidelines

Over the next three years, the North Texas MCC Task Force met to discuss how this region could manage resources fairly and care for patients equitably during a crisis, either an influenza pandemic or another disaster that caused a widespread medical emergency.

From these conversations emerged the need for a uniform set of guidelines to triage patients and manage potentially scarce resources. Although North Texas has a robust healthcare system with tremendous capacity and capability, the sheer number of affected individuals quickly could overwhelm these resources. In a catastrophe, a standard set of guidelines is necessary to ensure that the patients who are most likely to survive will receive the available limited resources in the most impartial, nondiscriminatory way.

In 2013, the Task Force approved two separate drafts of guidelines — one for adults and one for pediatrics. These guidelines create a framework that ensures a fair distribution of medical treatment, based solely on a patient’s likelihood to benefit from treatment, and which all healthcare facilities across the area will use. Task Force members hope this process will maximize survivability and save the most lives possible.

Triage Levels

The guidelines are organized in three levels of triage.

- Triage Level 1, Early in the Pandemic: As the threat of emergency increases, hospitals cancel outpatient procedures and elective surgeries, and otherwise prepare for an influx of patients.
- Triage Level 2, Worsening Pandemic: Hospitals have surged to maximum bed capacity and emergency departments are overwhelmed, with 20 percent to 30 percent of hospital staff absent due to the crisis.
- Triage Level 3, Worst-case Scenario: Hospitals implement altered standards of care, including exclusion criteria for hospital admission in order to preserve bed capacity.

Hospital and ICU/Ventilator Admission Triage

This algorithm will guide medical staff as they determine whether to admit a patient and which resources to assign him or her. Priority levels are assigned based on the patient’s chance of survival with or without treatment, as well as tools to reassess the patient daily to determine his or her continued priority for hospitalization.

SOFA Score Categories

Sequential Organ Failure Assessment scores are the key

to assigning a patient’s priority level. At triage, a score of 0 – 24 is assigned to each patient, based on a formula that considers platelet count, hypotension, creatinine levels, Glasgow Coma score, and other objective, easily assessed metrics.

“SOFA is a rubric of national, evidence-based standards which offers objective criteria to establish a treatment framework,” according to Dr. Carlo. “Standardization is the most important element of the SOFA scores because it ensures that our treatment is fair and ethical.”

Dr. Fine says that a perfect clinical scoring system for survivability in every clinical situation does not exist. However, “SOFA scores are designed to help determine as quickly and as accurately as possible which patients will have the greatest probability of benefiting medically from potentially life-sustaining interventions.”

The Next Steps

After nearly a decade of individual and combined effort on the part of medical professionals in North Texas, every major healthcare institution in North Texas has approved and adopted the NTX MCC Task Force guidelines. In September, the state of Texas sent a letter of support regarding the Task Force’s recommendations.

However, the guidelines are still in draft form. The NTX MCC Task Force is open to comments and changes, even at this late stage. Input from physicians is critical at this point, as the guidelines are not yet up for public review.

Full copies of the pediatric and adult guidelines are available for review online, as are the minutes from Task Force meetings, background on other states’ plans which were used in drafting the North Texas guidelines, a slideshow that further explains the guidelines and SOFA scoring system, and a copy of the letter of support from the state of Texas.

The following organizations have contributed to or explicitly endorsed the NTX MCC plan:

Baylor Health Care System	Dallas-Fort Worth Hospital Council	Legal Community Representative,
Carter BloodCare	Dallas Independent School District	SMU/Dedman School of Law
Children’s Medical Center Dallas	Emergency Physicians Advisory Board	Medical City Dallas Hospital
City of Dallas	Faith Community Representative,	MedStar Mobile Healthcare
Collin County Homeland Security Department	Dallas Area Interfaith	Methodist Health System
Collin County Medical Society	Faith Community Representative,	North Central Texas Trauma Regional Advisory Council
Cook Children’s Health Care System	SMU/Perkins School of Theology	Parkland Health and Hospital System
Dallas County Commissioners Court	HCA North Texas Division	Tarrant County Medical Society
Dallas County Health and Human Services	John Peter Smith Hospital	Tarrant County Public Health Department
Dallas County Medical Society	Legal Community Representative,	Texas Health Resources
Dallas Regional Chamber	Dallas Bar Association –	UT Southwestern Medical Center
Denton County Medical Society	Health Law Section	

If you would like more information or to read the draft guidelines, visit www.dallas-cms.org/community_health/mcc/ftmcc.cfm. DMJ