Trauma Network Comes to Kentucky

CHP LEADER A DRIVING FORCE

BY SR. DORIS GOTTEMOELLER, RSM, Ph.D.

Three years ago, trauma victims injured in a rural Kentucky community faced a two- or three-hour ambulance ride to the nearest trauma center, or a 25-minute helicopter ride — and that was on days when roads were clear and weather permitted helicopters to fly.

Too often, the long distances meant people who might have been saved were lost. In trauma cases, the victim's chances for survival drop drastically after the first hour, a time period often referred to as the "golden hour."

Traumatic injury is the leading cause of death in Kentucky for persons between the ages of 1 and 44 years, killing more people within this age range than cancer, heart disease and stroke combined. Further, statistics show that victims of traumatic injury in rural areas have a three times higher rate of death than their urban counterparts. Research has shown that comprehensive statewide trauma systems have decreased motor vehicle crash deaths by 9 percent and increased survival rates by 15 to 20 percent among those seriously injured.

Yet, in 2007, Kentucky was one of 14 states that did not have an organized statewide trauma system. Only four trauma centers operated in Kentucky, and most of those were clustered in the middle of the state. There was no regional or statewide system for the transfer of the injured from the scene of the injury to any hospital. The resulting fragmentation of care led to intolerable delays and inconsistencies.

Over the previous 10 to 15 years, efforts to pass a bill that would create a statewide trauma system had failed. Several barriers stood in the way, including lack of funding resources, the political climate, insufficient physicians to provide call coverage for trauma patients and lack of trust and collaboration among many different health care entities.

In 2007, though, the climate had changed and a grassroots effort to get a trauma bill through the state legislature was underway. A new education program correctly portrayed traumatic injury as a public health crisis. Informational materials demonstrated to the public and to elected officials the significance of traumatic injury's impact on the community. Trauma surgeons at the University of Kentucky and University of Louisville led the initial effort.

Also in 2007, Susan Starling, chief executive officer of Catholic Health Partners' Marcum & Wallace Memorial Hospital in Irvine, Ky., was elected president of the Kentucky Rural Health Association. She committed herself to improving the chance for survival of victims of life-threatening injuries. Her commitment, backed by her hospital, ensured that passage of a trauma bill became a top priority.

The hospital joined the grassroots effort early on, and through Starling's efforts, about half of the state's 33 critical access hospitals became involved. Many of these hospitals were willing to develop trauma programs on site. Marcum & Wallace Memorial Hospital developed a one-day trauma-center orientation program and invited several critical access hospitals to participate. Representatives from eight attended the session.

Marcum & Wallace Memorial Hos-

Members of the Marcum & Wallace Memorial Hospital trauma team perform a mock response to a trauma alert as staff from Ephraim McDowell Ft. Logan Hospital look on.

pital scheduled meetings with local officials and state legislators, and members of the hospital's team traveled to Frankfort, the state capital, to meet with legislators and promote passage of the bill. The effort was successful and the bill passed, creating the mechanism to develop a statewide trauma network. The legislation required formation of the Kentucky Trauma Advisory Committee to carry out the details.

The first order of business for the state's new committee was to develop criteria for Level IV trauma centers. (Trauma centers may be designated Level IV to Level I, the highest, depending on the medical resources and the number and type of medical services provided. The American College of Surgeons publishes criteria and verifies compliance for Levels I through III, but leaves it to the states to address Level IV.)

Over the previous three years, Marcum & Wallace had been working diligently to become a trauma center. During this time, the hospital had developed a trauma care program that mimics the Level IV criteria in several surrounding states. The program includes clinical staff orientation in the form of meetings, simulation drills and classroom instruction. In addition, program leaders developed a 19-minute video that demonstrates the trauma team response.

After many months of preparation and training, on August 15, 2008, Marcum & Wallace initiated its trauma program serving a four-county area of approximately 40,000 residents. Three of the four counties do not have a hospital and have limited after-hour coverage by primary care physicians.

Within the first 10 hours of the program's initiation, emergency medical services in an adjoining county called the trauma team for a victim wounded by a gunshot to the chest. A few weeks later, a man brought in his 3-year-old son who had been critically injured after falling under the blade of a lawn mower. Within 23 minutes, the boy was stabilized and en route to Children's Hospital in Cincinnati via helicopter. Although he lost the lower part of one leg, the child is alive today because of the team's skilled response. Over the past two years, the trauma team has been activated more than 120 times.

Organizing the trauma program required a statewide vision of the problem. John Isfort, director of business development and physician services at Marcum & Wallace Memorial Hospital, and a licensed paramedic, worked with Starling to both organize their hospital's program and to stimulate development of the network. Starling serves on the Kentucky Trauma Advisory Committee, and Isfort serves on its subcommittee on hospital verification. The advisory committee provides oversight and recommendations to the state commissioner of public health; it is composed of representatives from hospitals, medical associations, nurses' associations and emergency medical services.

Implementing the trauma program at Marcum & Wallace began with a resolution of intent from the board of directors and the medical staff, followed by the organization of the local planning committee. Phase I required approximately 100 hours of special education and training for staff and the development of policies and procedures governing activation criteria, treatment protocols, and transfer agreements. In Phase II, after the program was activated, the trauma team began data collection and process improvement activities. Phase III involves a site visit from the state verification committee for official designation as a Level IV trauma center. The site visit was expected to occur in August 2010. If successful, Marcum & Wallace Memorial Hospital will become the first Level IV trauma center in Kentucky.

Representatives of the hospital have not stopped there. They have spent countless hours advocating for better trauma coverage in other rural areas and disseminating information to other hospitals throughout the state and at national meetings. They can back up their presentations with their own experience of lessons learned and goals achieved.

People in rural Kentucky now have a much better chance of survival due in no small part to the staff and leadership at Marcum & Wallace Memorial Hospital.

SR. DORIS GOTTEMOELLER, RSM, is senior vice president for mission integration, Catholic Health Partners, Cincinnati.

JOURNAL OF THE CATHOLIC HEALTH ASSOCIATION OF THE UNITED STATES www.chausa.org

HEALTH PROGRESS®

Reprinted from *Health Progress*, September-October 2010