Does Dentistry Have a Role in a Mass Disaster or Bioterrorism Event?

by Anthony “Rick” Cardoza, DDS

The events that occurred on September 11, 2001, were defining moments in our lives. Since that disaster, a great amount of time and resources have been devoted to achieving an adequate state of preparedness for dealing with a possible future terrorist event. It is my opinion that this state of preparedness has redefined the role that dentistry can play and it has been determined that dentistry can add considerable resources to this response. The potential threat of terrorism and the recent dramatic demonstrations of natural disasters have proven the limited ability of our emergency health-care system. We now live in a world where everyone needs to be educated in the importance of disaster preparedness.

William Morlang, DDS, a noted forensic odontologist, was one of the first to discuss this topic. Many years ago, Dr. Morlang published a paper in the Journal of the California Dental Association titled “Dentistry’s Vital Role in Disaster Preparedness”. In June 2002, the American Dental Association (ADA) held a consensus workshop at its headquarters in Chicago, Illinois. This workshop, “The Association’s Role in Bioterrorism,” was attended by representatives of state and federal agencies, the military, dental organizations and ADA staff. From this workshop the ADA developed a template for dental societies to use as a guide for designing its own local plan. This template outlines topics such as recruitment of members for the team; establishing liaisons with the local and state emergency response organizations and the Department of Public Health; specific activities in which dental professionals can serve (i.e.: orofacial injuries; forensics; medication distribution; triage; medical care augmentation; education; surveillance; diagnosis and monitoring; and the use of dental offices, clinics, or dental schools for regional distribution sites). The consensus was reported in the September 2002 issue of the Journal of the American Dental Association.

In late March 2003, the ADA and the U.S. Department of Public Health held a two-day meeting in Washington, D.C. The topic of this meeting was how dental professionals can utilize their skills in a bioterrorism event. The keynote speaker was then Surgeon General Richard Carmona, MD. In addition to Admiral Carmona, speakers included representatives from the United States Army Research Institute of Infectious Diseases, the National Institute of Allergy and Infectious Diseases, the Center for Disease Control, U.S. Department of Public Health, Department of Homeland Security, forensic odontologists, and several major universities and dental schools. At the conclusion of the meeting, the general consensus was that dental professionals can act as first responders but it would take training and education – not only for dental professionals – but for the medical community and the emergency systems personnel to recognize the dental profession as a resource.

Two topics the ADA did not address at either conference were the scope of licensure and professional liability. The ADA has stated that these issues need to be resolved at the state level, most likely by amending their individual dental practice acts. Illinois was the first state to address this issue and amend its dental practice act. Continued on page 22.
with the passage of Public Act 49-409 in August 2005. The passage of 49-409 amended the state's dental practice act by stating that a dentist or dental hygienist who is a Dental Emergency Responder (DER), is deemed to be acting within the bounds of his/her license when providing care during a declared local, state or national emergency. In September 2008, California followed when Assembly Bill 2210 was signed into law. This bill amended California's act to allow a dentist for the "duration of a declared state of emergency" to provide emergency care consistent with his/her dental education and emergency training. The dentist will also be exempt from liability to civil damages as a result of any acts or omissions in rendering emergency care. Hopefully, in the future, other states will follow.

The Department of Homeland Security lists potential terrorist threats into five class categories: 1) Chemical 2) Biological 3) Radiological 4) Nuclear 5) Explosive (CBRNE). The class of terrorist threat that dental professionals could most likely be involved with is biological. Biological agents are categorized by the CDC into three major classes. Category A agents are listed as high priority agents which are the most likely to be used as terrorist weapons due to their ease of dissemination (spread) with potential high mortality rates. Agents in this category include: anthrax, botulism plague, smallpox, tularemia and viral hemorrhagic fevers (VHFs). Category B agents are less likely to disseminate and have lower mortality rates. Agents in this class include brucellosis and food safety threats. Agents in category C are designated as emerging pathogens, which can be easily produced and disseminated and have the potential for high mortality rates. Agents in this class include: Q fever, ricin, staph B, viral encephalitis and water safety threats.

So how do we, as dental professionals, fit into this picture? In other words, what if an unfortunate mass public health disaster occurred? Who will be able to help provide medical care? Many studies, including those by the American Medical Association have reported an impending national physician shortage approaching 200,000 physicians by the year 2020. In addition, the United States is already experiencing a shortage of registered nurses. This shortage could reach as high as 500,000 by the year 2025.

Dental health-care professionals are well educated with significant scientific and medical backgrounds. Every day in our practices we take and review medical histories and obtain medical consults as needed. We give injections and monitor for adverse effects from treatment rendered. We provide patient education and work with other team members to provide quality care, but for various reasons we are often overlooked as a personnel resource in public health assistance.

If we examine dentistry by the numbers, there are close to 500,000 trained dental health-care professionals in the United States. In California there are more than 70,000 dental professionals statewide with close to 15,000 in Los Angeles County alone. These numbers show that there is a potential resource pool that the Department of Public Health and other agencies could utilize in a catastrophic event.

The population of Los Angeles County is close to 10 million. There are 50 to 60 undisclosed sites that have been predetermined by Los Angeles County Department of Public Health officials as to where mass inoculation/distribution clinics will be held. DPH officials have determined that in the event of a mass inoculation (smallpox for example) it would take approximately 30 days working around the clock at these 60 clinics to inoculate every individual in Los Angeles County. More than 10,000 staffers (not including support staff) would be required to operate these clinics. Los Angeles County has approximately 3,000 to 4,000 public health personnel available in the county at any given time, definitely not enough people to respond to an event of this magnitude. Also, hospitals and health clinics will continue to need to
run daily operations in the treatment and care of ill and injured patients so not all the medical doctors and nurses may be available. Partnerships with the DPH must be established to fill the void of emergency responders. Helping fill this void is where dental professionals can contribute.

We now live in a different world where all of society needs to be prepared in some fashion. As dental professionals, we have the education, training, skills, and facilities that can be utilized in a catastrophic event. To what extent you as a dental profession could contribute will be your choice. My wish is that day never comes, but if it does... let’s roll.

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