

**DENTISTRY'S RESPONSE TO BIOTERRORISM
AND OTHER MASS DISASTERS**

*A Template for Dental Societies to Use in
Developing a Plan for Providing
Assistance in the Response to a
Bioterrorism Attack and
Other Mass Disasters*

BACKGROUND

It became apparent following the tragic events of the fall of 2001 that the nation was not adequately prepared to respond to a significant bioterrorism attack. A great amount of time and resources were subsequently devoted to achieving an adequate state of preparedness for possible future events of this nature. Dentistry considered its potential role in responding to a significant bioterrorism attack during the first part of 2002 and reached a consensus on its role. That consensus was reported in *The Journal of the American Dental Association* in September 2002.

It was determined that dentistry had considerable resources to contribute to the response to a significant bioterrorism attack and other mass disasters. These assets are comprised of both personnel and facilities. Varying amounts of training would be needed to prepare dentists to assist as responders, but with that training dentists could become valuable additions to the responder force. Also, it was realized that a plan for preparing and utilizing dental resources must be developed and integrated into the local Disaster Response Plan.

As the design of a plan to respond to a bioterrorism attack unfolded, it became apparent that many of the resources that dentistry could bring to bear following a bioterrorism attack could be very valuable in the response to other mass disasters. Accordingly, the information discussed in this template has been generalized to apply to other emergencies during which dentistry can serve, as well as bioterrorism attacks.

Rather than have each jurisdiction in the American Dental Association expend time and resources to develop an emergency response plan, the Association has developed this template for local dental societies to use in designing their own plan. Dental societies will have varying levels of interest and resources that can be devoted to emergency response activities. This template allows for such variations.

As the local societies, constituent or component, begin planning, it is critical that they be in contact with their local emergency response agencies to ensure that the plan they develop is appropriate for their area and is integrated into the local emergency response plan. It may be advisable to have a representative from the local emergency response community serve as a consultant, or a member, of the dental society committee that constructs the dental society plan.

It is suggested that this template be used to custom design a plan for dentistry's response to bioterrorism and other mass disasters in your area.

It is important to understand that significant legal, licensure and liability issues apply regarding dentists and other dental workers providing extraordinary services as part of the response to a significant emergency. Federal and state laws are now being considered that address these issues. Local dental societies should be aware of the local legal environment, beyond "Good Samaritan" laws, that relates to this situation.

THE PLAN DESIGN

The Plan should have the following components, depending upon the local needs and resources:

- Overview and Plan Executive Summary
- Purpose
- Table of Contents
- Glossary of Terms
- Situation and Assumptions
- Organization and Responsibilities
- Command, Control and Communications
- Volunteer Coordination
- Liaison With Disaster Agencies
- Specific Assistance Activities
- Training and Exercises
- Review and Update

Discussion of Individual Sections of the Plan

PURPOSE

This section of the Plan should delineate the dental society's purpose in:

- becoming involved in activities related to the emergency response to a significant bioterrorism attack and other mass disasters; and
- developing a plan for conducting those activities.

The following suggested text for the "purpose" section can be adapted to conform to the needs of individual dental societies:

The tragic terrorist events experienced in the United States during the fall of 2001, particularly the anthrax incident, alerted our nation to the potential for bioterrorism attacks on our civilian population and our lack of preparedness to adequately respond to such attacks. The local dental society believes dentistry has important assets in personnel and facilities to contribute to the emergency response to bioterrorism attacks that can overwhelm the traditional medical and emergency response capacity in a target area, and other mass disasters.

This plan has been developed to provide a framework within which the local dental society can organize, prepare for and implement dentistry's response to major emergency situations:

- Coordinate dentistry's response within the local emergency response plan.
- Assist in the preparation of the profession to respond to a bioterrorism attack or other mass disaster.
- Provide liaison and facilitate communications with emergency response agencies.
- Facilitate the deployment of dentistry's assistance resources.
- Participate in disease surveillance activities.
- Disseminate public health information to the public.
- Other activities, as determined by the local dental society and the local emergency response agencies.

This plan will be reviewed periodically and updated when circumstances require.

SITUATION AND ASSUMPTIONS

Situation: The Plan should be implemented in the event that there is a significant bioterrorism attack or a mass disaster in an area within the jurisdiction of the dental society that is of such proportion that it could initially overwhelm the traditional medical response capability and overall medical resources of the area, or where dentistry can provide important emergency assistance. Early implementation of the Plan will be important, not waiting for the health care

system to be overwhelmed. With bioterrorism, dental participation should primarily be employed as part of the initial response to the surge in demand for health care immediately following an attack or the manifestation of the results of the attack. In addition, longer-term involvement may also be a part of the overall general response, in surveillance activities, for example. With other mass disasters, the extent, nature and duration of the assistance dentistry can provide will depend upon the nature of the disaster and the requirements of local emergency response agencies.

Planning Assumptions: The Plan should outline the assumptions that are the basis for the Plan so that it can be understood clearly. Some of the possible assumptions might be:

- The Plan applies primarily to large-scale bioterrorism attacks that could cause casualties in numbers that overwhelm local medical capabilities, or in other mass disasters where dentistry may be of assistance.
- The Plan is integrated into the general local disaster response plan and will be triggered by a previously designated responsible public official who has determined the need to mobilize dental support services.
- Both dental personnel and facilities may be utilized.
- Dental personnel have skills, experience and knowledge that will be valuable in responding to a bioterrorism attack or other mass disaster.
- There will be a significant number of dentists who will respond in a mass emergency.
- Since the dental responders will all be volunteers, their efforts must be organized and coordinated. The dental society will assist in fulfilling that role.
- There will be a need for some training of dental personnel in order for them to adequately fulfill the responsibilities they may be asked to assume.
- There will be an on-going need for communication and coordination between the dental community and the emergency response community. The dental society will fulfill that role.
- There is a need for legal protection for dental personnel acting in response to a bioterrorism attack or other mass disaster.

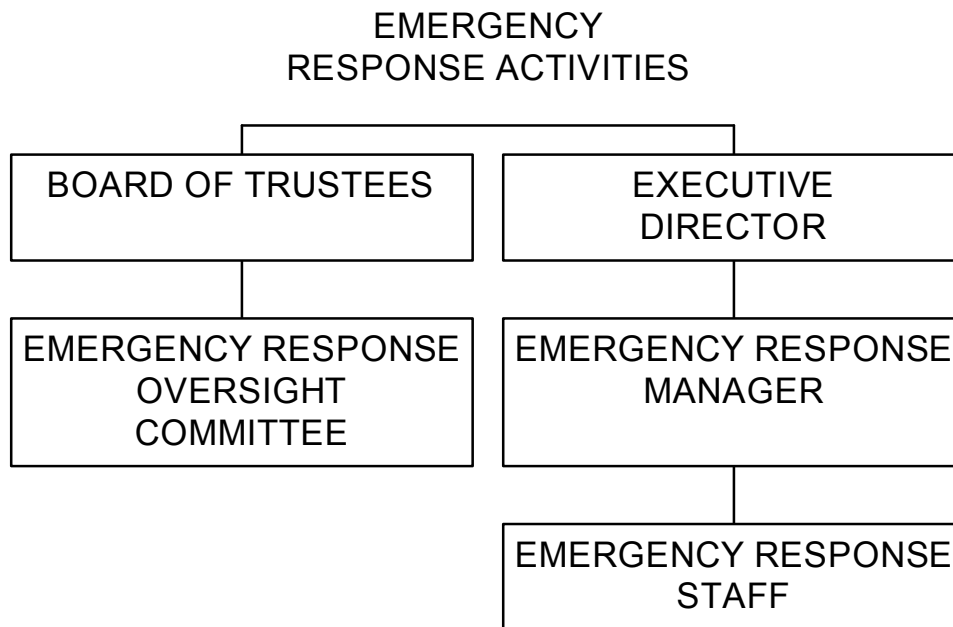
ORGANIZATION AND RESPONSIBILITIES

The dental society should develop an organizational structure to support development of the Plan, its implementation and review. A specific individual should be identified, by title, to manage the dental society's planning for and organized response to a bioterrorism attack or other mass disaster. Alternates to the person primarily responsible should also be identified, as well as criteria to be used in determining when an alternate should be designated as the primary person responsible.

Resources should be appropriated and designated for this activity. The amount of resources available obviously will vary according to the nature and scope of the response the dental society commits to provide. Smaller dental societies may have all of its bioterrorism functions managed by one individual. A committee made up of dental society staff and volunteers should be considered to oversee the society's activities in this area.

When the organizational and personnel structure has been determined, a clear delineation of responsibilities and duties of each individual involved should be made and recorded. In addition, a reporting hierarchy should be established.

The Plan should have 24-hour contact numbers for the designated emergency response manager and alternate.



COMMAND, CONTROL AND COMMUNICATIONS

The local response to a bioterrorism incident or other mass disaster is managed through a command and control structure delineated in the area disaster emergency response plan, into which the dental plan should be completely integrated. Although the dental plan may have its own designated command and control structure, it must be a sub-structure of the area plan. Overall command and control functions will be the responsibility of the state agency. It is important that dental societies be familiar with the command and control structure of the local area plan so that those functions of the dental response plan can be completely integrated into the command and control functions of the local area plan.

The command and control structure directs and/or controls the deployment of resources during an incident by virtue of explicit legal, agency or delegated authority. The structure most commonly used today is the Incident Command/Unified Command (IC/UC) model.

- IC, with a designated Incident Commander, manages the activities at the site of the disaster.
- UC is responsible for the integration of federal, state and private resources into a single response.

Whether they directly participate in the disaster or they remain off-scene, those at the dental society who are involved in the dental society's Plan should understand the management structure through which the dental response will most likely be coordinated and managed.

For the sake of efficiency, the dental society emergency response plan should describe the command and control structure to be used to manage the dental participation in the response to an emergency. The dental society should contact and seek guidance from the local emergency response agency in designing the dental plan command and control structure so that it is integrated into the overall local emergency response plan.

The Plan should describe how the dental society will coordinate planning and its command and control functions with local emergency response agencies. It should also describe how dental activities would be coordinated with local Joint Operation Centers (JOC), Joint Information Centers (JIC) and specific Emergency Operations Centers (EOC) set up in their area by state or local emergency agencies during an emergency.

Good communication is the key to being able to achieve effective command and control. It is imperative that the effective communications be established and maintained by the dental society with the state emergency response agency. The dental society should develop an efficient communications strategy, both for communications before and during the response to an incident. As soon as the potential participants in the dental response are identified, a list should be developed that contains the names and contact information (phone numbers for home, office, cell phone, pagers and fax, addresses for home, office and e-mail) for all volunteers. This list should be scrupulously maintained and updated, at least, on a monthly basis. A communications network should be developed from this information.

Communications links with the local emergency response agencies should also be developed.

A 24 hours per day, 7 days per week emergency communications capability should be developed between the state emergency response agency and the dental society, and within the dental society.

Primary and secondary contacts should be established for individuals and alternates in the command and control structure of the dental society response efforts.

Alternate means of communications should be developed, e.g., wireless communications, utilizing an emergency channel, etc., since routine means of communications may be overwhelmed in an emergency. Phone lines were jammed in the New York City terrorist attacks in September 2001 and unavailable for emergency communications.

The communications network should be tested periodically to ensure the information is accurate and current.

VOLUNTEER COORDINATION

For the most part, dentists' participation in the immediate response to a bioterrorism attack or other mass disaster will be voluntary. Some dentists, however, will be obliged to participate because of their affiliation with an outside organization that will be part of the response, for example, the United States Public Health Service Medical Reserve Corps, local emergency response organizations, military reserve organizations, etc.

Early in the planning process, dental societies should survey dentists within their jurisdiction to determine:

- their interest in participating as a primary responder to a significant bioterrorism attack or other mass disaster in their area;
- whether they have experience and training or board certification in a specialty area in dentistry;
- whether they have been trained to or have provided dental care or general emergency care in an atypical setting, for example, while in the military;
- which services (list them) would they consider themselves competent to perform in an emergency situation with little additional training;
- which other services (list them again) would they be able and willing to perform with additional training;
- which services (list them again) would they not be capable or willing to perform under any circumstances;
- what experience they have had in areas that may be related to emergency care, for example, emergency rooms, hospital operating/recovery rooms, intensive care wards, etc.; and
- in what health care facilities, other than their dental practices, are they credentialed to provide health services?

From this list a cadre of potential participants can be assembled and stratified according to training, experience, educational needs, etc. An initial list of services that dentists could

perform from the outset can also be developed. A master list of all volunteers should be developed that is cross-referenced by interest, capabilities, etc., so that information can be made available to local preparedness coordinators and deployment in the event of an incident can be facilitated.

Potential responders have many day-to-day responsibilities. To function as a team they must be motivated to devote adequate time and energy to preparation for responding to a bioterrorism attack or other mass disaster. Dentists, as well as the emergency response community, generally underestimate the potential assets dentists can bring to an emergency of this nature. Educational programs can change this perception.

Dentists who have training in dental forensics, particularly those who are members of organized forensics teams, will be included in the group identified as responders to emergencies of this nature. Because of the nature and scope of the services that dentists may be called upon to provide, particularly active treatment, the cadre of responders must be considerably larger than those trained in forensics and be able to provide a broader array of services.

LIAISON WITH DISASTER AGENCIES

It is imperative that there be an on-going liaison with the appropriate local disaster agencies. **The dental response must be integrated into the local disaster response plan.** Communications must be established and the dental emergency response plan activated concurrently as a part of the activation of the local emergency response plan.

Early on in the Plan development, the dental society should meet with the local emergency response agency to educate them about the potential assets dentistry can bring to the response to a bioterrorism attack or other mass disaster so that there is consensus on the role dentists may play and the Plan developed is consistent with the general local emergency response plan.

The local disaster response agencies can be very useful. They can assist with the design and development of the dental response plan, educational activities, training exercises and general support. It may be a good idea to have a representative of the disaster response agency on the dental society planning committee, either as a member or as a consultant.

The responsibility for planning, organizing and controlling the immediate response to a bioterrorism attack and other mass disasters is vested in the individual states, with assistance to be provided by the federal government through a variety of agencies. States have assigned that responsibility in a variety of ways. The state dental societies should contact the Department of Health in their state to determine which agency has been charged with the responsibility for developing a response plan to a bioterrorism attack or other mass disaster. There may be a state plan, only, or in larger states, there may be multiple regional or individual city response plans.

A formal liaison plan should be developed and included in the Plan. The liaison relationship should be established between the state dental society and the responsible state agency and,

where appropriate, the inclusion of representatives of the local dental society and the local response agency when response plans are being developed.

The plan should describe how the dental society will coordinate activities with and participate in the local joint operations centers (JOC), local joint information centers (JIC) and other specific emergency operations centers (EOC) established in their jurisdictions by state or local emergency authorities during an emergency.

SPECIFIC ASSISTANCE ACTIVITIES

The degree of involvement of dentistry in the response to a bioterrorism attack or other mass disaster will vary according to the interest that the profession has in this activity, its resources and the potential role for dentistry as envisioned by the local emergency response agencies. There are specific elements of the potential dental response that can be considered by the local dental society when determining the degree and nature of its activities in this area.

Each activity should be described in the plan, along with the implementation protocol, organization and leadership determination, responsibilities, periodic review and reporting mechanism. The qualifications of the participants and potential training requirements should also be listed. The following areas should be considered:

Education: Educational programs that provide information about potential biological weapons should be developed and made available to dentists through continuing education courses and to dental students as a part of the dental school curriculum. Easily accessible quick references should be able to provide dentists with a level of information concerning an identified biological agent sufficient to enable them to respond effectively. Dentists have little knowledge or experience related to agents that could be used as biological weapons, so a base level of education is critical.

Educational programs related to services dentists may provide during other mass disasters should be developed or, if available from existing sources, made available to dental personnel. Review courses on injury management for dentists who do not treat injuries in their daily practices may be helpful.

Oro-facial Injuries: Treatment of individuals suffering from oro-facial injuries in a mass disaster situation will fall primarily on dental personnel.

Surveillance and Notification: Since there is an incubation period before the clinical manifestations of diseases that could be used as weapons in a bioterrorism attack become apparent, the initial recognition that such an attack has been perpetrated may be difficult. Because dental offices are distributed across the community and individuals may visit dentists before overt clinical symptoms of a biological attack occur, dentists may serve as excellent surveillance resources. After an attack has been recognized, dentists may also function as monitors of the spread of disease or the recurrence of disease after the first wave of victims has been treated.

Dentists may also be helpful in the early detection of an attack through observations of unusual patterns of employee absences or patient appointment cancellations or failures that are not explainable by local circumstances. A common first manifestation of diseases related to a biological attack is “flu-like symptoms” which, without pattern analysis, would not alert public health personnel to anything unusual. An analysis of these patterns over a specific geographic area by the local public health agency may lead to an early recognition that a biological attack has occurred and give the medical community a head-start on treatment and prophylaxis. All surveillance activities should be directed by and coordinated with the local emergency response agencies and public health agencies as a part of the state disaster plan, and any variations from the norm reported through their surveillance mechanisms. As the local public health agencies institute more aggressive surveillance activities, the dental society may be called upon to participate.

Diagnosis and Monitoring: When the exact nature of a bioterrorism attack or a mass disaster involving the spread of disease has been determined, dentists could provide individual patient diagnosis by observing the physical and behavioral signs people manifest. This assistance can be provided with a minimum of additional training, since the disease(s) involved will be known. This assistance will be provided under the supervision of on-the-scene medical personnel.

Dentists can collect salivary and/or nasal swabs that can provide important diagnostic or treatment progress information.

Immunizations: In the event that rapid immunization or vaccination of large numbers of people is required to prevent the spread of infection by a biological agent, dentists may be recruited to assist in a massive immunization program. Dentists will require a minimum of training to provide immunizations.

Medications: Were the mass population in an area to require preventive or therapeutic medication on an immediate basis, dentists could be called upon to prescribe and/or dispense the appropriate medications. Dentists could also serve as sources of information for patients concerning these medications and could monitor patients for adverse reactions and the occurrence of side effects. A minimum amount of training would be required to enable dentists to provide these functions.

Triage: A system for establishing priorities when there are massive numbers of casualties must be established and staffed by professionals who can provide that prioritization adequately. Appropriately trained dentists could provide triage services and free-up physicians to provide

definitive care for the greatest number of casualties. Fairly comprehensive training may be required for dentists to be able to perform triage adequately.

Medical Care Augmentation: Because of their training and experience, many dentists may be able to augment and assist medical and surgical personnel in providing definitive treatment for victims of bioterrorism attacks and other mass disasters. The scope of services dentists may provide during these emergencies is extensive. The capabilities of individual dentists vary according to the specialty and hospital experience of the dentist.

Forensics: Dentistry has a long history of providing forensic assistance to local authorities in the event of a disaster. With mass disasters, the capacity of currently organized forensic teams to provide assistance may be overwhelmed. Dental societies should consider developing a cadre of dentists who have received training in forensic odontology and disaster response, and maintain a roster of dentists so trained in their area.

Public Information: A vital aspect of every local emergency response plan is accurate and timely public information aimed at effectively informing and instructing the public in a manner that prevents panic and enhances the effectiveness of the primary responders. The so-called "worried well" if not reassured could clog up the system and prevent vital care from being provided to those who need it. Dentists, because of their trustworthy reputation in a community, can be very valuable in providing reliable and credible information to the public and in controlling the "worried well" problem. They may also be utilized as subject matter experts for the media, so that the media will not have to seek out their "own experts" who may provide inaccurate or sensationalized information.

Dental Offices: Since dental offices are located throughout the community and have many of the resources that hospital facilities have, they may be called upon to serve as alternate treatment sites when local hospital facilities become overwhelmed or when concentrations of patients are to be avoided; for example, when contagious agents are employed in a bioterrorism attack. Pre-designated dental offices may also serve as stockpiling sites for the Strategic National Stockpile (SNS) for materials and supplies that will be distributed in the event of a bioterrorism attack or other mass disaster.

Little physical dental office preparation will be required to get ready to serve as an alternate community treatment facility. The dental society should establish a network of offices willing to serve in this capacity in cooperation with the local emergency response agency.

Dental Schools: Beyond the obvious educational programs dental schools can provide, they can be valuable assets during the initial response to a bioterrorism attack or other mass disaster. Since most schools are associated with academic health centers, whose hospitals may be overwhelmed with demands for care, they may be used as hospital annexes. Faculty and dental students may serve both in the dental school-hospital and in the field as primary responders. Dental schools can also be repositories for pre-stocked supplies and equipment under the Strategic National Stockpile (SNS).

Dental Auxiliaries: Dental office auxiliary personnel can provide important assistance in the initial response to a major bioterrorism attack or in other mass disasters. All are familiar with

administrative functions, managing medical records, handling patient flow and infection control. With additional training, some dental auxiliary personnel could be assigned clinical responsibilities beyond those they usually assume, provided legal and liability issues are resolved during a declared emergency. Clerical staff can provide an important communications link between dentists, other clinicians and the relevant state and federal agencies.

TRAINING AND EXERCISES

Developing the best possible emergency response plan will not guarantee an effective response unless those responding know what the plan is and can implement it efficiently. Initial and on-going follow-up training and planned implementation exercises are necessary to ensure that the Plan will be implemented as anticipated. Some of the training and exercises should be done in conjunction with training and exercises conducted by the state or local emergency response agencies.

Besides training in the workings of the Plan, there will also be a need for professional training. Certain functions that dentists or their staff may be called upon to perform in a bioterrorism emergency or other mass disaster will require no additional professional training; for example, managing patient records, patient flow, treating oral injuries, etc. Some functions will require a minimal amount of training; for example, dispensing medications, surveillance, immunizations, etc. There may be a need for significant training to prepare dentists to provide some services; for example, triage, patient decontamination, some medical care augmentation, etc.

It is appropriate that local dental societies coordinate the educational programs that will be useful to ensure that dentist-responders will be able to competently perform services that they may be called upon to provide in an emergency. Educational resources will be available from a variety of sources, local and national.

An inventory of dentists who volunteer to participate in an emergency response and their training, experience and skills can be of great value in designing an educational and training program in the Plan.

Scheduled and unscheduled drills should be planned periodically to help identify deficiencies in the plan and/or its implementation.

REVIEW AND UPDATE

The Plan should be reviewed and updated on a regular basis, but at least annually. A mechanism and a timetable for this review should be established.

The on-going relationship with the emergency response agencies will provide information regarding changes in the overall area emergency response plan that may influence the dental component of that plan.

Changes in the scope or nature of the dental response may also occur as the Plan evolves. The results of plan testing and training exercises may also indicate changes that need to be made to the Plan.

Plans should be flexible because organizational and operational problems emerge over time, gaps become apparent, and federal and/or state requirements change or are added. Updates must be timely for the Plan to remain useful and current.

**For more information about this publication
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