AMERICAN DIABETES ASSOCIATION STATEMENT ON EMERGENCY AND
DISASTER PREPAREDNESS:
A REPORT OF THE DISASTER RESPONSE TASK FORCE

Introduction

Recent disasters in the United States, such as Hurricane Katrina, have caused the American Diabetes Association (ADA) to focus on the association’s preparation and response to disasters. In addition, the difficulties encountered by many people with diabetes and their healthcare provider, in the wake of Hurricane Katrina (1), have been highlighted and serve as a reminder to patients with this condition to be prepared for the unexpected events, which may seriously impact their disease management. Indeed people with diabetes should always be prepared for emergencies whether natural or otherwise, affecting the nation/state or just them and their families. Such preparedness will lessen the impact an emergency may have on their condition. It is well recognized that major disasters have a significant impact on a variety of disorders, including diabetes, both in the short and long term (2-11).

Lessons from Hurricane Katrina

Hurricane Katrina was one of the most destructive natural disasters to hit the country. The disruption of a normal routine and closure of health care facilities with loss of medical records was particularly difficult for those who had to deal with chronic diseases, such as diabetes.

Physician’s offices and pharmacies closed due to evacuation, and health care professionals and their staff suffered personal loss and tragedy making it difficult for them to care for the needs of their patients. This may have led to a feeling of abandonment by patients. Furthermore, major medical centers became inaccessible – the 3 major teaching hospitals in Orleans parish were surrounded by flood water and remained closed several months after the disaster. Loss of electric power, telephones and other means of communication and closure of roads due to flooding and fallen trees, added to the complexity.

Individuals who evacuated found shelter in homes of family, friends, hotels, or for the very unfortunate, shelters consisting of gyms, schools, or civic centers. Most, if not all of them had done very little in terms of preparation for days away from home with adequate medical supplies, prescriptions, medical records etc. Thus, the most immediate concern for many of these individuals in the Katrina aftermath was obtaining the medication, including insulin and oral agents required on a day to day basis.

Obtaining the required diabetes medication was particularly a problem for those in shelters. With no medical records to review, the medical history, medication and doses used were based on
patient memory and knowledge. Replacement medication, at least initially, did not match their normal regimen and was related simply to availability of pharmacologic agents (see response of pharmaceutical industry and FDA below).

The high prevalence of diabetes was unanticipated by relief agencies or the supply chain failed to mobilize stockpiles to the shelters. The pressing need for diabetes supplies in shelters, not in hospitals, combined with the size and scope of the disaster caught the logistics chain off guard. For example, a large shelter in Louisiana, housing 6000+ evacuees, had only a handful of glucose meters in the first week of the crisis. Evacuees who brought along their insulin and supplies, had enough only for a few days, for many these were quickly exhausted. Local, chain and charity pharmacies filled prescriptions on an emergency basis, often a 7-14 day supply of medications, but did not typically provide glucose testing supplies. Fortunately, corporate generosity relieved much of the pressure on shelters and hospitals.

The abrupt change in dietary intake and/or composition, with a lack of diabetes medication and emotional stress led to significant disruption in glycemic control putting patients at risk of both severe hyperglycemia and hypoglycemia. Thus, management of diabetes in these cases obviously did not consist of aggressively treating blood glucose, but trying to prevent acute complications of diabetes such as hyperosmolar states and severe hypoglycemia. Changes in diet are likely to affect other associated conditions, such as hypertension (12).

In the subsequent weeks following the hurricane, financial loss, loss of personal belongings and occasionally bereavement led to severe depression impacting diabetes in many patients. Adequate counseling resources are a challenge to find in this situation.

Over the weeks following Katrina, additional volunteer efforts to help in diabetes care were initiated, primarily providing diabetes expertise to the affected areas. In this regard, diabetes educators were provided to the primary care disaster relief teams to help with insulin adjustment and general diabetes education.

ADA Response to Hurricane Katrina

The ADA contacted agencies such as the American Red Cross, various governmental agencies, as well as pharmaceutical and diabetes supply companies to ensure that diabetes supplies were being transported and dispersed to the devastated areas.

The Association’s network of constituents was provided with ongoing and timely Hurricane alerts with information on a variety of relief, health and safety topics. The updates were sent out regularly to ADA staff, volunteers and more than 250,000 subscribers of the ADA’s electronic newsletters such as Diabetes E-News Now!, Diabetes E-News Now! Health Care Professional Edition, Advocacy E-Alerts, and Parents’ E-Newsletter, among other ADA communications channels. Additionally, a special hurricane Web page was established and prominently featured on the home page of diabetes.org. This location became the central area where the ADA was able to provide visitors - including the news media - with timely updates about ADA’s Response to Hurricane Katrina. A special Hurricane message board was also established as a vehicle for people to share their concerns and feelings about the situation. The Joslin Diabetes Center and the Juvenile Diabetes Research Foundation both referred people to the ADA site.
In addition, the ADA worked closely with media contacts across the country to provide expert resources and information about the important health needs faced by people with diabetes. Within the first week of this crisis, messages from ADA spokespeople about the importance of providing health care services to people with diabetes were reported in news articles published by the Associated Press, USA Today and Wall Street Journal.

In response to specific diabetes needs identified by organizations not covered by the American Red Cross as well as ADA volunteers at Pennington Biomedical Research Center in Louisiana, the ADA contacted our network of medical device and pharmaceutical companies to solicit donations of insulin, glucose meters, strips and other diabetes supplies to support immediate diabetes care needs. Both LifeScan and Roche contributed substantial supplies to Pennington as well as the Louisiana State University Health Sciences Division, which operates 9 hospitals throughout the state that are often referred to as "charity hospitals" and treat indigent and uninsured populations. Pfizer also agreed to provide an unrestricted grant to assist ADA in its Katrina relief efforts. In addition, ADA worked with the American Red Cross to identify companies to help support their long-term disaster relief needs, and brought on Rite Aid to contribute to this effort.

One example of how the ADA has acted to support both the short-term and longer-term needs of our many constituents in the affected communities is through ADA’s joint commitment with our Everyday Choices For A Healthier Life collaborators - the American Cancer Society (ACS) and American Heart Association (AHA) - to contribute a combined $1 million in aid to the Bush Clinton Katrina Fund. This financial support is designed to restore the operations of hospitals, health care systems and patient support services in the devastated areas. The goal is to make sure that those who have cancer, diabetes and heart disease or who suffer strokes continue to receive quality health care throughout this crisis and in the coming weeks and months.

Recognizing that this kind of financial contribution from voluntary health organizations such as the ADA is out of the ordinary, the unprecedented destruction and suffering caused by Hurricane Katrina demanded an unprecedented response.

The ADA also tried to respond to specific unmet needs of people affected by diabetes through our network of constituents. In instances where other entities were better equipped to respond, such as the processing of health care volunteers by the U.S. Department of Health and Human Services to support relief efforts in the region, the ADA served as a conduit of credible and timely information that was provided to the public and health care professionals through our National Call Center (1-800-DIABETES), as well as our Web site at diabetes.org. All of these efforts provided a wealth of timely, reliable, and relevant information on a variety of medical and public health issues.

On the advocacy front, the ADA worked with the Senate Finance Committee in supporting their language to provide 100 percent Federal support of the Medicaid costs for one year for the affected states. This is compared to the waiver on a state-by-state basis supported by the Administration and the House. Furthermore, we monitored to determine if there were any opportunities to add diabetes specific provisions for coverage for the affected areas. However, the only disease specific provision included unlimited mental health drugs for up to one year.
Pharmaceutical Industry Support in Fall 2005

When the magnitude of the disaster became apparent a couple of days after the hurricane, several pharmaceutical companies took steps to send emergency supplies to the area. The individual companies soon came to the conclusion that bulk shipments to supply major centers could only be delivered effectively through relief agencies with a supposedly already existing infrastructure.

Unfortunately, unforeseen challenges existed. For example, when a relief agency actually managed to get 10,000 vials of donated insulin to the area, a conscientious inspector impounded it, because the shipper could not produce proof that it had remained refrigerated all the time during transit as insulin according to the label. Thus people in the affected areas were in need of a product that was already in the area, but in quarantine. This situation was unfortunate and represents an example of the bureaucratic misunderstanding that was very evident in the aftermath of this disaster. It is well established and approved by the FDA that insulin is stable for 28 days at room temperature after it leaves the pharmacy, and this particular shipment was likely be used within weeks, if not less. In addition to the bulk shipments for major treatment centers, several companies asked local staff in the area to determine what clinics were still open and upon request supplied them directly with medications – particularly insulin.

The FDA’s endocrine division director at the time (David Orloff) took a leadership role in rapidly drafting a guideline for healthcare providers and patients helping to deal with insulin therapy during emergencies. In particular, the new guideline had simple suggestions for switching between products and brands of medication recognizing the limited availability. The three major insulin manufacturers and the FDA had come to an agreement on the terms of pragmatic treatment switching in less than four hours. The guideline was used by the FDA and the companies’ medical information services and posted on web sites the same day, and remains accessible on the internet to date. Unfortunately, internet access was limited to people with diabetes and health care professionals and this information was not provided to the ADA and other relief organizations. This is a good example of how isolated successful efforts fail to translate to a major impact benefiting community in need. Coordination and communication between key constituents, including hospitals and other health care facilities that remain open, is absolutely necessary for even successful efforts to have any real impact.

It is important to recognize the good will of the pharmaceutical industry to assist during times of disaster. However, it may be unrealistic to expect pharmaceutical and medical supply companies to donate enough products for emergency use following a major disaster. Furthermore, as mentioned above the distribution of any such donated products is critical to the impact on the affected people. The effective distribution of donated products depends on coordination between volunteer organizations, such as the ADA, and relief organization such as the Red Cross and FEMA. The problems following Katrina demonstrated that despite the good will and intentions of all involved the largest obstacle is a logistical one. The pharmaceutical and device industry could be more effective, if the logistical problems could be anticipated and overcome.

Difficulties Encountered in Relation to the Response to Disaster
A. National organizations. We are unaware of any special arrangements made by FEMA or the Red Cross related to diabetes.

B. Local healthcare providers. See above

C. People with diabetes. See above

D. Impact on Research- less well publicized is the impact of such a disaster on research both basic and clinical. Since some of this research may be ADA or federally funded this becomes and issue for funding agencies. In particular, clinical trial protocols become severely disrupted and may put patients at risk. It is important that large clinical trials in future should have plans for dealing with emergencies. These may include back up computer records of patient contact information, potential satellite sites, plans for continued supplies of medication and support of clinical trial patients and coordinators. Institutional Review Boards should have clear plans for continued oversight of research protocols following a disaster with flexibility and discretion being allowed for investigators to act rapidly in the best interest of patients.

**ADA Volunteer and Staff**

Disaster response guidelines need to be developed, identifying the first response team.

**Industry Partners**

Clear guidelines are needed on shipping requirements for supplies and medications, and coordination with partnership for quality medical donations and relief organizations.

**Other Relief Organizations**

Interaction is needed with organizations such as Red Cross, FEMA, IDF, and other government agencies to obtain information, statistics, and the kind of help that they need. Other organizations dealing with chronic disease such as the American Heart Association and the American Cancer Society

**Recommendations**

The recommendations of the disaster response task force are summarized in table 2. They emphasize that the ADA can be a center for information and should be the leading information provider for people with diabetes, caregivers, and the media. The ADA will revise, develop, and disseminate guidelines for diabetes care in emergencies, and serve as an information clearinghouse related to the status of ongoing relief efforts in diabetes care. A booklet for patient guidance has already been produced.

The standards of care and core educational curriculum will include guidelines on disaster and emergency preparedness for people with diabetes.

It is important to recognize the limitations of national organizations, such as the ADA. The ADA cannot and will not supply medication, supplies, and direct patient medical care.
People with diabetes should receive instructions on what to do in an emergency, how to switch insulin and medications, and how to treat high and low blood sugars in an emergency situation. Additional instructions may be needed on sharps disposal, carrying medical records, etc. This represents an opportunity for diabetes self-management education to emphasize disaster preparedness. Learning stress management skills, including dealing with major disasters, should be considered as part of the diabetes education curriculum. Table 1 summarizes some things people with diabetes can do to prepare for a disaster.

The task force is confident that lessons learned from the prior disaster will lead to implementation of guidelines that will lead to better relief of individuals with diabetes from either small emergencies or large-scale disasters.
Table 1. Preparations for a Disaster for People with Diabetes

1. Good diabetes education emphasizing self-management skills and stress management.
2. Be up-to-date with all immunization including tetanus.
3. Keep a water proof and insulated disaster kit ready with:
   a. A list of items to pack during an evacuation:
      - glucose testing strips, lancets and a glucose testing meter
      - medications including insulin etc.
      - syringes
      - glucose tabs or gels
      - antibiotic ointments/ creams for external use
      - glucagon emergency kits
      - pre-packaged snacks
   b. A list of contacts for national organizations such as the ADA through their help lines or the internet.
   c. Photocopies of relevant medical information with you, particularly recent lab tests/procedures if available
   d. Up-to-date information on all oral medications and insulin as regards formulation and dosing. If possible, have the prescription number available. Many chain pharmacies throughout the country may be able to refill based on the prescription number alone.

   This should be reviewed and replenished at least twice yearly.

4. Evacuate early if possible, taking the above with you.
Table 2. Summary of Recommendations of the Disaster Preparedness Task Force

1. The ADA should be the leading information provider for people with diabetes, caregivers, and the media.

2. The ADA will revise, develop, and disseminate guidelines for diabetes care in emergencies.

3. The ADA will serve as an information clearinghouse related to the status of ongoing relief efforts in diabetes care.

4. The standards of care and core educational curriculum will include guidelines on disaster and emergency preparedness for people with diabetes.

5. The ADA cannot and will not supply medication, supplies, and direct patient medical care.

6. Plans for protection of human subjects in clinical trials must be developed by all sponsors, investigators and institutional review boards.

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