

als (psychiatrists, psychologists, and social workers) to rotate for two to four weeks to the earthquake zone and provide crisis intervention to some of the victims.

During the first year after the earthquake, 45 volunteers rotated to Armenia for two to four weeks and offered clinical services. Subsequently, the United States Agency for International Development provided a training grant for one clinician to live in Armenia while consultants continued to rotate, and to establish a training program for Armenian mental-health professionals to carry on the psychotherapeutic work.

The program was discussed in detail and three areas were elaborated on that contributed to the success of the program.

1. Volunteers—All participants in the program were American Armenians and fluent in the language. The uniqueness of the Armenian people, their history, and the fact that Armenians are located throughout the world (approximately 1 million in the United States) fostered a sense of brother-

hood and reunion of family when the volunteers went to the "homeland" (most for the first time), to offer their professional expertise.

2. Political Events in Armenia—While the Psychiatric Outreach Program was establishing a training center, the Soviet Union ended and Armenia became a free and independent country. The American system of outpatient therapy with such fundamental principles as confidentiality and open expression of thought and feelings via individual, family, or group therapy were novel and welcomed. The old communist system with strong lines of demarcation between disciplines of medicine, psychology, and education (not unlike the U. S. a generation ago) were formidable barriers that required continued negotiation and mutual collaboration. The political difficulties inherent in effecting changes to an open market economy, the war with neighboring Azerbaijan, and the subsequent blockade causing lack of heating fuel, electricity, food, and water, all added to tremendous

burden, stress, and further trauma to the people.

3. Continuity—Other relief agencies have left Armenia after completing admirable projects such as constructing entire villages, schools, hospitals, and clinics. The Psychiatric Outreach Program continues to provide consultation at both clinics in the earthquake zone and currently is establishing a clinic in Karabagh, the war torn Armenian state that was part of Azerbaijan. Both centers in the earthquake zone are administered and staffed by trained local mental health professionals.

The health Ministry has requested establishment of a clinic in Yerevan, the capital, to provide clinical service and training at the medical institute. The lack of funding has been the principle limiting factor.

This presentation discussed the evolution of the training program, delivery of services, and examples of research projects.

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An International Perspective on Disaster Responses

Steven J. Rottman, MD, FACEP

Professor, University of California-Los Angeles Schools of Medicine and Public Health, President-elect, World Association for Disaster and Emergency Medicine, Los Angeles, California USA

In the past two decades, interest in disaster relief has increased dramatically, no doubt in response to the relentless rise in natural and human-made mass population humanitarian emergencies worldwide. The televised and printed media literally have brought these catastrophes into the living rooms of the global population, further illustrating the difficulties in providing immediate and long-term assistance to affected populations.

On 02 October 1976, a small group of anesthesiologists founded the Club of Mainz in Germany, with the major objectives of improving the delivery of resuscitative care in daily life, and acute medical care after disasters. They aimed to do so by combining scientific, social, and related information and experiences, together with international communication and collaboration. Today, known as the World Association for Disaster and Emergency Medicine (WADEM), the society has grown in membership, representing more than 40 countries, publishing the only peer-reviewed, international journal dealing with this subject, and hosting world congresses on odd calendar years.

The recurring litany of disasters and multiple casualty incidents, reported by colleagues at international congresses led to the creation of the WADEM Task Force on International Disaster Responses. First convened at the 6th World Congress in Hong Kong in 1989, it was not surprising to find that the 11 member group which represented 11 different organizations, presented 11 different positions on how acute disaster medical care should be provided. Dr. Remi Russbach, Chief Medical Officer for the International Committee of the Red Cross, understated our dilemma nicely:

Owing to the large number of organizations willing to participate in relief activities, and owing to logistic,

administrative, and political constraints, an ideal situation is hard to reach.

Yet, at the conclusion of a week of Task Force meetings, scientific presentations, and vigorous discussions between meetings, all of us were starting to see the merits and pitfalls of the 11 points of view expressed by our members: a consensus was beginning to evolve. I presented a concept paper for the membership to consider, asking the panelists to look at a disaster as a series of ever expanding concentric circles, much like the ripples seen when a pebble is thrown into a pond of water. The initial splash is the disaster event itself, whether earthquake, pipeline explosion, or cutting-off of food and water supplies by war. Any such incident is capable of overwhelming day-to-day community resources, and, in the case of war, is intended to dismantle those resources.

Time and again, we have seen that the initial circle of responses will come from those most immediately available to the focus of the event: the uninjured survivors. Without training and preparedness, local citizens will not act in an effective medical manner. The landmark study by a joint Soviet-American team demonstrated that after the 1988 Armenian earthquake, bystander first-aid virtually was non-existent. Simple rescue and first-responder training could have reduced significantly the morbidity and mortality of this tragedy.

The second circle of response consists of the existing, everyday medical and paramedical personnel, *whatever its level of sophistication*. There needs to be a plan for their deployment in this type of a setting, which, because of its magnitude, will *not* be "the same as our usual response...only bigger." It is, in fact, an altogether different species of event.

A third circle of response will involve a system of transportation of victims, responders, and equipment and supplies into and out of the disaster zone. And, while it may seem somewhat callous to consider during a mass population emergency, there must be support and coordination of the active development of research models that integrate types of disasters, injury patterns, and health care resources that will be needed to care for victims. Thus, we need a "research circle" so that we thoughtfully might attempt to answer

the question, "what happened?", and thereby, make qualitative changes in our responses for the next time.

Linking all of the local and regional circles of responses requires adequate communication capabilities. These must include multiple links to those areas where victims will be brought, in order to stage their level of injuries, and where displaced persons will go, in order to assess their numbers and needs for public health and psychological support, as well as for temporary housing and financial assistance.

Expanding to a larger circle, national health policy should include a coordinated, interdisciplinary approach to mass casualty preparedness and management, including roles for the military and civilian sectors. *And while no national government wants to jeopardize its pride by asking for outside assistance, it should be taken as a sign of responsibility and official integrity for governmental leaders to recognize the vulnerability of their population in a humanitarian emergency, and embrace the offer of assistance when it is based on a carefully conducted and documented assessment of need.*

And what of the global circle: the international response? The international community will respond to these horrors, whether invited or not, and with "relief" supplies, whether appropriate to the needs of the victims or not. To help international relief effort, an inventory should be established for cataloging and updating the many voluntary aid and mobile disaster units available worldwide. International non-governmental relief agencies, national disaster response teams, and international health organizations should work cooperatively to improve the availability, capability, and effectiveness of international disaster efforts. This compilation of proven resources should be made available to national and international health planners so that each may be considered and included as part of each nation's disaster plan.

These points were agreed upon unanimously by our Task Force, and adopted in the form of a resolution by the full Congress on 18 August 1989. They were published in *Prehospital and Disaster Medicine* in January 1990.

What have we physicians learned since then? There certainly have been

more than enough natural and human-made catastrophes to challenge us. We have continued to see some of the same problems crop up, but there has been a definite push, especially in more developed countries, to develop disaster plans, exercise them, employ them, and conduct retrospective analyses of them. Many of our immediate care responses are becoming rather well-tuned. Ambulance, police, and fire services, along with hospitals, major businesses, and schools are more and better prepared than ever before to react to sudden onset disasters. Many communities have begun to have a look at their likely hazards, and construct contingency plans to deal with them. Mutual aid agreements are becoming commonplace to facilitate a response structure in the event of a mass population disaster.

But while we seem to be "getting it" in many of these acute phase variables, we continue to have great strides to make in the area squarely addressed in the very theme of this conference: "After Everyone Leaves." What about the displaced refugees? What of the public health needs of these large groups of displaced people? The need for water for drinking and sanitation, nutrition, communicable disease surveillance?

What of the parents who have lost children or children who are now orphaned? What of the ability of rescuers and shelter management staff to identify individuals at risk for haunting, dysfunctional psychological disturbances? Who will treat them?

What of the physical restoration of a fractured community: its utilities, roads, communications, financial centers? What of the debris?

I would submit that only by recognizing the true interdisciplinary nature of humanitarian emergencies will we ever be able to provide a comprehensive response to them. The global need for well-trained relief personnel never has been as great as it is today. The very number and scope of these crises have outstripped the worldwide resources to cope with them. The World Health Organization Director of Emergency and Humanitarian Assistance has indicated that the field of humanitarian assistance awaits a fusion of relevant broad-based expertise into a training curriculum, aimed specifically to educate committed career-minded individuals

who will move into the world community of relief workers, educators, and researchers. Only with this interdisciplinary shared effort and mutual respect, will we make substantial inroads in disaster relief, both acutely, and after everyone leaves.