

Insights and Innovations in Community Mental Health

The Erich Lindemann Memorial Lectures

**organized and edited by
The Erich Lindemann Memorial Lecture Committee**

hosted by William James College



**WILLIAM JAMES
COLLEGE**

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Foreward

The Erich Lindemann Memorial Lecture is a forum in which to address issues of community mental health, public health, and social policy. It is also a place to give a hearing to those working in these fields, and to encourage students and workers to pursue this perspective, even in times that do not emphasize the social and humane perspective. It's important that social and community psychiatry continue to be presented and encouraged to an audience increasingly unfamiliar with its origins and with Dr. Lindemann as a person. The lecturers and discussants have presented a wide range of clinical, policy, and historical topics that continue to have much to teach.

Here we make available lectures that were presented since 1988. They are still live issues that have not been solved or become less important. This teaches us the historical lesson that societal needs and problems are an existential part of the ongoing life of people, communities, and society. We adapt ways of coping with them that are more effective and more appropriate to changed circumstances—values, technology, and populations. The insights and suggested approaches are still appropriate and inspiring.

Another value of the Lectures is the process of addressing problems that they exemplify: A group agrees on the importance of an issue, seeks out those with experience, enthusiasm, and creativity, and brings them together to share their approaches and open themselves to cross-fertilization. This results in new ideas, approaches, and collaborations. It might be argued that this approach, characteristic of social psychiatry and community mental health, is more important for societal benefit than are specific new techniques.

We hope that readers will become interested, excited, and broadly educated. For a listing of all the Erich Lindemann Memorial Lectures, please visit www.williamjames.edu/lindemann.

The Erich Lindemann Memorial Lecture Committee presents

THE TWENTY-SEVENTH ANNUAL
ERICH LINDEMANN MEMORIAL LECTURE

Preparation for the Psychological Consequences of Terrorism and Disaster

Coping with life crises was the basis for the development of community mental health. Community-wide crises have always existed. Terrorism adds another to the four horsemen of the apocalypse. How do we recognize and cope with the mental health aspects of disaster? What do psychiatry and public health have to contribute, and do Erich Lindemann's concepts of preventive intervention mental health consultation still apply? This Erich Lindemann Lecture focuses on a population and community perspective on mental health prevention and restoration.

Lecturer

Frederick Stoddard, MD, Associate Clinical Professor of Psychiatry, Harvard Medical School; Chief of Psychiatry, Shriners Burns Hospital; Senior Attending Psychiatrist, MGH Shock, Trauma, and Burn Unit; Chair, Committee on Disasters and Terrorism, Group for Advancement of Psychiatry

Discussants

Carl N. Edwards, JD, PhD, Member, Massachusetts Emergency Management Team; Steering Committee of the Massachusetts Disaster Response Network; Command Staff Graduate, Federal Emergency Management Institute

Louise Carcione, Emergency Management Coordinator for MetroBoston, Massachusetts Department of Mental Health; 2002 Recipient, Clara Barton Award, Red Cross

Moderator

David G. Satin, MD, LFAPA, Assistant Clinical Professor of Psychiatry, Harvard Medical School; Chairman, Erich Lindemann Memorial Lecture Committee

Friday, April 23, 2004, 2:30 – 5:00 pm

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Frederick Stoddard, MD

Associate Clinical Professor of Psychiatry, Harvard Medical School; Chief of Psychiatry, Shriners Burns Hospital; Senior Attending Psychiatrist, MGH Shock, Trauma, and Burn Unit; Chair, Committee on Disasters and Terrorism, Group for Advancement of Psychiatry

I'd like to express my appreciation to Dr. Satin, the Erich Lindemann Memorial Lecture Committee, and the Massachusetts School of Professional Psychology, including Dean Abby, President Covino, and to the North Suffolk Mental Health Association for this invitation. I would also like to greet Brenda Lindemann and her children who are here. I hope that you find this interesting. I do understand that some people who come to a lecture like this are likely to have themselves been impacted either by 9/11 or other events that may be terrorist events or disasters, and I hope you find some of this of use. But in advance I do have to apologize that it is not possible to address everything, perhaps we can touch on some things in the discussion. This is a iteration that many of my colleagues at Massachusetts General Hospital have been bracing; events such as Logan disasters and others in recent years. As have all hospitals and health centers, it has really had to retune itself in anticipation of possible events, and others are included here as well who I've worked with in disaster response.

It is possible that those who see a video or hear an audio tape of this may also get from the slides than some of you further back. There are some classic studies that pertain to the work that we are talking about today. They include work by Lenore in particular who studied the children of Chowchilla, a group of children who were abducted and buried in a truck I believe or bus in California. It really explains, defines some of the developmental characteristic of traumatic stress in children. A question I have for you: How many people here are psychologists? Most. Any nurses? Any psychiatrists? A few of us. And other health professionals? Thank you. Other physicians besides psychiatrists? In adult studies, some of the classic studies were the Coconut Grove fire, studies with Stanley Cobb, Erich Lindemann, and Alexandra Adler, which I'll mention a second time, Barbara Sonnel, who I will refer to throughout this, who heads the Uniform Services Medical School Department of Psychiatry, looked at the impact on body handlers at the Newfoundland air crash. Very important study. And then since 9/11 there have been a number of studies looking at reactions of adults and children around the country, but I should emphasize that the number of good studies of the effects of terrorism are few at this point, and that's rather widely acknowledged by those in the research community, so this is not mainly a research lecture.

Roger Pittman, who I work with at Mass. General, is interested in PTSD prevention, and Dr. Ari Shalov, who I've just met for the first time last week, is living in the midst of

terrorism in Jerusalem, and has much to say about how one might approach issues of terrorism and disaster. What are some of the contributions of Erich Lindemann to disaster psychiatry? This is by no means complete, and Dr. Satin is more familiar with the many details of it than I. But I am sort of living in the Shriner's Burn Hospital, which was funded and part of the response to the Cocoanut Grove fire so some of the benefits of the work that he and others did we are reminded of daily. In 1942 the Cocoanut Grove fire happened...does anyone in the back of the room have a sense of how many people died in that fire? A guess? How many? Somebody with good eyesight, ok. 492. Everyone guesses fewer in general, because it's hard to think of something like a nightclub fire killing 492 people, but it caused many severe burns. Some cases were described by Lindemann and Cobb at MGH and others by Alexandra Adler, who is less heralded, but she wrote some pretty good case histories of patients at Boston City Hospital. And it turns out she was Alfred Adler's daughter, which I did not know. They're writing signals at beginnings of several areas: burn psychiatry, disaster psychiatry, grief therapy, the scientific basis for comprehensive burn care, and they certainly influenced the beginnings of community mental health.

There are some classic papers: Cocoanut Grove, the Alexandra Adler paper, the most famous by Erich Lindemann is certainly "The Symptomatology and Management of Acute Grief" and one that I've taken an interest in for this lecture, "The Preventive Intervention in Situational Crises." The features of normal grief that Lindemann highlighted were waves of somatic distress, preoccupation with the image of the deceased, preoccupation with feelings of guilt, hostile reaction, and loss of normal patterns of conduct. After 9/11 I think many, many people went through feelings that were similar to that for a long time period. In the last paper I cited, Lindemann wrote, "What we have said about grief work might also apply to the psychological work called for by the anticipation of a threatening situation, the rehearsal of future action necessitated by anxiety-arousing events, appears to show features quite similar to those of grief work, mainly the anticipatory review of interactional events with the right timing, and whittling down the problem into manageable proportions, attended by an amount of anxiety that can be handled without a sense of paralysis or despair, for both anticipatory threat and retrospective losses then the mastery of attending emotions, the review of possible suitable responses and the rehearsal of feasible role patterns are the ingredients of the necessary psychological work."

This provides an opportunity for the kind of preparatory work that we are discussing today, and he rounds it out emphasizing that. As I say, many opportunities for preventive intervention become apparent. It was a later of thought he had in the early '60s. he says too that, "The psychologist as a mental health worker in the community has at least four functions requiring teachable skills," and I mention these because they're mirrored in

some of what I will be saying that was written last year, the year before. To follow the model of crisis intervention is used in grief situation to serve as mental health consultants to other professional individuals whose job it is to deal with the population in crisis. The clergy are said to have done about 90% of the grief work with people after 9/11. It was an enormous contribution, and to be a resource person for city planners and public servants, rather a possibility for making decisions involving the emotional wellbeing of segments of the population.

So our new priorities involve terrorism and disaster. Other sources I wish to highlight here for you, and they're rather widely published: Ann Norwood, who works with Barbara Sarnoff; Michael Bloomenfield, who's been interested in the media issues in terrorism; Steve Locke who's here in Boston, and interested in myths and multiple idiopathic or unknown physical symptoms; Glen Sachs is here at Boston Medical, and with whom I work closely; Gerry Post, an expert on the origins of terrorism; Ari Sholov who I mentioned earlier; John Shaw, child psychiatrist at the University of Miami; and Barbara Dunham. What are some of the categories of disaster? What we see here is terrorism as a subcategory of human-caused disasters, and then there are natural disasters, and one that certainly came to my mind, and I would guess yours today, were what appears to have been a psychological-related disaster in North Korea where it sounds like several thousand people were killed, but rather hard for anyone to find out because they don't let information out, but it sounds like the terrible result of a massive train crash.

What are some of the kinds of terrorist events or hazards? Conventional explosives, biological, radiological, like Three Mile Island, chemical, and nuclear. There are various ways of thinking about the emergency management process and phases. In general there's issues of planning exercises and preparedness, and then mitigation, response, and recovery. So three phases following what occurs something that is, we've seen this in other kinds of crises as well. A key source which I will be referring to repeatedly here is the Chairman of Louis Goldfrank, it's a publication of the Institute of Medicine in 2003 called "Preparation for the Psychological Consequences of Terrorism for Public Health Strategies." I'm using it as a jumping-off point for my comments.

Terrorism involves the illegal use or threatened use of violence, is intended to coerce societies or governments by inducing fear in their populations, and typically develop ideological and political motives. I mentioned to you that someone did a study of how many definitions of terrorism there were, and there are actually hundreds, but this is a concise one. Terrorism, whether in the form of a mass physical attack or chemical, biological, radiological, or nuclear event can be psychologically devastating. The psychological consequences include an array of behavioral, emotional, and cognitive reactions, and the broad nature of these demands a full public health response. Suffice it

to say, we were caught so much by surprise by 9/11 and here in Boston, as you all know, we felt very affected by it. I mean the planes flew over my head on 9/11 while I was on the adult burn unit at Mass. General, and I think everyone knows where they were at that time. I walked onto the unit and one of the nurses said, "You might want to come over here and look at what's on the little station TV monitor," then I saw what all the rest of you saw too at one point or another, probably more times than anyone wanted to.

In that publication I cited a method of approaching prevention, and it is called the Hadden matrix, and I'll give you some illustrations about it as we proceed here. Then we'll close with some detailing of elements of that which can be applied to mental health. But one way that immediately was apparent to me as soon as I heard they used to explore this, was that I knew about it basically from the late '80s because they had applied it to burns, and it was how do you prevent burns in general. It was just the injury, as an injury prevention method, and tracking back the root causes, essentially, and then attempting to intervene with preventive measures very early so as to reduce the frequency of burn injuries in the general population. At that time, the frequency of burns in the population was very high in the United States compared to Europe and many other parts of the world. We were not a very safe place. They instituted these and they reduced the rate of burn injuries in the United States by 50% with legislative intervention, smoke alarms, education, a range of different interventions. They reduced the rate by 50% between about 1975 and 1992, and I think it's probably dropped more since then. You cannot find an intervention as effective as that. Even with automobiles I don't think the improvement has been as effective as that.

In shifting of something like auto accidents or burns to the psychological consequences of terrorism, there's a crosswalk, if you will, from epidemiological to psychological terms. For instance, the agent in this case is a violent act or threat, the host is the affected individual and population or population the vehicle or vector of the terrorist or injurious agent, and the environment is the physical and social environment. So these give areas for intervention, whether it's a violent act if one can do something about that, the individuals who are affected, the terrorists themselves, or to somehow try to immunize the environment or immunize the population so that the impact of a terrorist event is reduced. I don't like this picture particularly; I'm not sure any of us do. I think it was actually one of the less traumatic ones but I'm pleased it's not dark because it was so dark in earlier versions I wasn't sure you could see it. But it still has an impact on us, there's no question.

So what are some interventions for the psychological consequences of terrorism using the phases and factors of the World Trade Center attack? Well, first aid screening is one. Mobilizing trauma workers and families of victims and having plans in place that detail the roles of different parts of the infrastructure. Other factors involve mobilizing

trauma workers to respond to survivors. I guess I mentioned that, communicating that the response to the attack will help decrease the attack of any future attacks, and that's a psychological response because there's a need to get the word out that things are helping. And then adjusting communication to emphasize the positive, and then an interesting one is the last one on this slide, limiting the stress responses and minimizing the loss of life and impact of the attack is one major goal, and then minimizing the disruption of daily routines. I'm sure that you've all heard that 93 is going to be closed during the Democratic Convention and North Station also. It's in all the papers. That's an example of trying to do that.

What are some of the systems responsible for public health? Here are some overlapping circles: We have the medical care system, the public health system, an emergency response system, and they're vested with responsibility for protection, prevention, and promotion of health. Then some of the services that are mentioned on the right here: emergency medical, police and fire, water and electric, communication. It doesn't begin to touch the numbers of agencies that are involved here, I mean those of us on the panel have been at multiple meetings which involve all of the affected agencies and there are oftentimes as many as 60 different agencies trying to communicate with one another, and that clearly leaves out a few. But it's a very interesting process to try to find out how organizations responsible communicate in this context. What are some of the psychological consequences? There are many, and one that I remember not reading about anywhere but experienced myself was the sense of feeling drained within a month, two months, three months after 9/11, how one would have waves of sadness, sort of unpredictable moments, and many, many people that I've spoken with have mentioned it and they wondered about it. It's not often picked up on this, it's not really PTSD, it's not major depression, it is a sense of vulnerability.

We have distress responses, behavioral changes, those are common, and psychiatric illness, which is really not so very common. There's a whole debate about increased substance abuse, and I would say in general many of us who lecture about this have said there is. Actually the data, I've just learned they've done one or two studies. It's not quite as clear-cut as we thought. If there actually a real increase, there might be a decrease right afterwards and then a later increase. There are many different roles for a mental health professional, and trainings are increasingly available in this area and there's not as much funding as we would like but there certainly is a lot more than there ever was. Those who have a Master's in public health can be involved in planning. Increased communication I'll say more about but it's a very important area. Emergency services, acute responses, many people, Red Cross volunteers, for instance, participate in that area as do some of my colleagues at Mass. General and other hospitals and facilities in the area. Many are consultants.

I'm actually seeing a lot of and working with many people who consult to various federal, state, and private agencies. And I shouldn't leave out businesses- businesses are really quite important. I got a call shortly after 9/11 from the Internal Revenue Service office that had been the World Trade Center and they had been heavily impacted and needed consultation. A law firm called, so I didn't have time to do either one, but I did refer them to some good people in New York. So there is a large business need, to think about the workplace and how businesses can best respond. Psychiatry departments involved in acute and long-term care victims, inpatient consultation to medical surgical pediatric patients, I would highlight, and there is a I guess I'd say a developing literature in that area.

I should have mentioned this earlier but we're pleased to have Kate Lund From MSPP who is currently rotating through the Shriner's Burn Hospital. We have a rotating group of trainees from here who have done very fine work for a number of years in supervision. And then practitioners in the community -perhaps the most important group of mental health professionals because...as with one colleague in Concord after 9/11, he said he didn't know what to do. He wasn't an expert, so he went out and he began talking with some of the people in town who worked for the town of Concord and they had a lot of questions and wondered what to do and he spoke with some of the clergy and they were carrying quite a load and he discovered that he thought he was helpful. I'm sure he was, and I hope he was being overly modest or maybe he just wasn't aware of how important what he had been doing was. But that is the kind of thing that is so important. I would add primary care physicians, nurse practitioners, and others play a similar role with patients in the community, and then research is growing in this area.

In some ways I like it to grow more, on the other hand it's a little like treating burn patients—if we're put out of business, we'd be just as happy. So we kind of want more research on effects of terrorism that happens, but on the other hand we don't want any more events. The research is in many different areas. The one that we have least knowledge about is on treatments, although we can discuss that during our discussion later. We know some things about it. So we think about a time line. Before, at the time of an event, and after. Before the event we think about the mind of the terrorist. I haven't said anything about this so far. Jerry Polk with whom I'm working, he spent a career in the CIA and there is a lot of interest in understanding what makes terrorists tick in order to try to prevent events from happening in the first place. I think that there's a terribly important direction to go, either to identify where they are and try to do something about it. But also, as you'll see in a later slide, to attempt to identify what the legitimate grievances are that they have and attempt to do something about that, and I think that is very important. It might be a critical kind of intervention in the prevention of terrorist events in the first place.

Advising policy makers, domestic and foreign, and then some of the public health areas, organizing to prevent or reduce both the psychological and physical casualties, and there are a number of federal agencies involved. I would highlight the Communicable Disease Center and Disease Prevention Center in Atlanta which is quite involved in funding efforts in this area, and several others. At the time of the event, we're interested in risk communication, what message is sent out, triage in some events, the numbers due to mass fear, panic, are the numbers of people coming to the emergency rooms or other medical care facilities of those who are uninjured can far outnumber those who have injuries. So all of our services may be much more valuable than that of a surgeon or emergency doctors, and in Israel what they've done is set up a screening or triage in a school or elsewhere setting to be able to screen people to see if they actually have a physical injury. Early intervention- one could do about a three-hour lecture on that right now. I'm not going to but it's an interesting topic and we'll probably touch upon it in the discussion. I'll say a little more later.

Ensuring staff support. It's a very key area and mitigating staff stress, how to build the support network, and that is where many of you come in as well is to be able to reduce staff stress. It is not at all rare, it's not only residents and interns who overwork and need to have their time. I don't know if you know that doctors, residents, have just been limited to 80 hours a week, but as soon they're out of residency they're up to 120, so it's actually harder on the younger post-training doctor at this point. This is a very common behavior among many of us in a disaster, terrorism, or threat situation- overwork and less sleep than needed and other habits that are not healthy. So one of the simplest interventions that we can do is to encourage people to go get some sleep. Afterwards we're interested in longer-term interventions. There are some who need psychotherapy. There is a place for psychopharmacology, but that isn't what I'm here to talk about today, but we could take up the topic if people have questions. Then there's outcomes research as well, and that has been going on there. The most surprising thing to me in a way based on some of my own work have been the outcomes just for post traumatic stress disorder. It'll be clear from the slides later as to co-morbid conditions, but the outcomes are not as good as we might think.

There's chronic post traumatic stress that people do have. We've done some work already on Cocoon Grove, and I would highlight war also. Air crashes I think might be one of the most important ones. Community disaster; a suicide in a high school is a community disaster, and we have learned a good deal about how to be supportive within a community from such tragic events too. Earthquakes and floods; there are some differences between the disasters that I just referred to and biological, chemical, and nuclear or radiological threats, some differences from explosives and fire threats. Fire provides sensory cues that may provide time for a plan that may help one to act

responsibly, responsively, and altruistically. Chemical, biological, and nuclear/radiological threats lack sensory clues for the most part, and are unanticipated and unfamiliar. Historically, they have caused fear, panic and contagious somatization, mass panic at time and MIPS, again, is multiple idiopathic or unexplained physical symptoms. Because of my work in burns, I look rather carefully at the impact on the population, especially children in Hiroshima, and there's a lot now. It was enormously sad, and we certainly want to prevent any such things happening again.

In terms of the kind of place it was in New York after 9/11, this was a DMAT- a disaster medical assistance team setting. They set up tents and so forth, medical stations, attempting to respond to people on the spot. I've alluded to risk communication. There is an excellent document that all of you can read on the net, or get a copy of, and it is called "Communicating in a Crisis: Risk Communication Guidelines for Public Officials, U.S. Department of Health and Human Services, 2002." A quick summary on the pre-event communication of information regarding prevention of attacks to alleviate fear and anxiety and promote confidence. During the event communicate the risk and the proposed responses clearly, credibly, and in a timely way during and after with reassurance and with optimism. So keeping in mind taking initiative is something I would encourage, but now you have places to go such as websites that I will be mentioning at the end where you can actually find readily-developed materials should you be in a situation where you would like to have some guidance. Post-event communicating and preparedness help to decrease the impact of an attack or event, and continue to publicize available services and particularly target messages to those at increased risk, such as those I'll be describing in a bit.

So we want to think about, in our profession, observing, talking, and communicating with survivors and their families, as well as people not directly involved, not just patients. In a hospital setting we think more about patients. All exposed people should be screened, and if in thinking about primary care nurse practitioners, there are questions about what to say, how to integrate questions that screen for increased fear, anxiety, physical distress, depression, self-destructive ideas- there's a debate on whether those increase or not- or substance abuse, which I mentioned before also. I don't know if all of you can see this Larson cartoon, but certainly there are people who have a fear that something is just about to fall on their heads. Certainly after 9/11 for a while many of us- and even now, approaching the summer with the Democratic Convention- there's this sense of foreboding and anticipatory anxiety. But what were some of the responses that John Oldham wrote about in New York after 9/11? He mentioned phobic and anxiety responses and fear, and also highlighted courage, bravery, strength, the grief process, and resiliency. A very striking phenomenon in almost every study that you look at, at least 50% of people exposed to massive oftentimes overwhelming stress, are resilient and

do remarkably well. And then at some decreased stigmatization follows the response also. What are some normal phasic responses? A little different from the acute ones? Disbelief, numbness, fear, decreased concentration, waves, which I alluded to earlier, of acute grief, irritability and anger- we don't talk too much about it but it certainly does happen. Also disrupted school or work; people are dissociating, having acute stress symptoms, they're going to have a hard time concentrating, a sense of foreboding that I alluded to. And then a recovery of feelings of safety in a normal trajectory. People begin to feel safe again, if they don't something may be wrong, and resumption of usual activity.

Who are the more vulnerable? Youth and children. There's a lot of discussion about it. I am a child psychiatrist. I will not go into it right now, but we might have time later. There is some debate on how vulnerable children are but I think everyone agrees they are. Proximity to the threat; a lot of data support closeness to an event does make a person more vulnerable; relatives or friends who have died; preexisting physical or mental illness. An important one for those, say, treating a psychiatric population or in your clinical practice, to realize there they might be at increased risk. Prior trauma or injury, those with recent losses, those lacking support, and those who have overexposure to media and reminders. I do believe there was a study that found that if you saw the 9/11 replay over, I can't remember the number of times, 100 I think, you were at some increased risk relative to those who turned off the TV or set a limit on it.

Other groups who are particularly at risk: all those near to the event such as police, fire, EMT, and participants in rescue and recovery efforts. All morgue and body handlers. I was impressed that, I suspect everyone saw the Boston Globe, they had the caskets of many people who had died in Iraq and they mentioned that this now has been suppressed and we will not be seeing that again. That is how powerful that is. It says something that, and we're not even looking at the bodies, we're just seeing the caskets there, so one only has to imagine the impact on those who are working in the morgue. There are issues that medical examiners, pathologists, or people who work there. Maybe, for instance, at Logan airport where there may be an air disaster, maybe expected to notify family of the death of loved ones that they have no training for, so that's where consultation with people in the mental health profession becomes quite important. Medical and hospital workers- a common issue is something occurred in Boston would be some people would be at work and others who wouldn't, and those at work would have long shifts, those who couldn't get there wouldn't, so there would be increased stress. And then mental health professionals- us- and families of everyone.

I've been over some of the psychiatric health hazards, let's see if there's anything new here. Isolation and I've mentioned sleep deprivation. I haven't mentioned with adolescents impulsivity is an additional one to keep in mind. And then we think of it in

terms of phases: acute symptoms more in the insomnia, fear, phobic area, and some physical symptoms. Longer term, not just insomnia, but a persistent sleep disorder, grief such as that Erich Lindemann was interested in and which a key point is that after Cocoon Grove. He emphasized that most people did not have pathological grief. Most had normal grief, but there was a subset who did not grieve and their outcomes appeared to be less good. Substance abuse, whether it increases or doesn't, it certainly does complicate matters after an event, and it does include those who are working at the disaster site. In other words, it doesn't exclude professionals or volunteers. They might also be increasing their substance abuse or it may be interfere with their functions. And then disability is also mentioned as a long-term outcome here, and there certainly is long-term disability for some. The next looks at the severity of psychological reaction, and this makes a point that I've been mentioning already but in a graphic form, where many people have relatively mild reaction—worry, feeling upset, insomnia. In fact let me just ask—how many here had some insomnia after 9/11, didn't sleep as well? About half, but you know it would have been more if I had asked shortly after 9/11. Not so many raised their hands, but it was really very, very common as you can see. Then a moderate reaction—some anxiety and persistent insomnia, and then more severe reactions.

Acute stress reaction is from the international diagnostic code. I think it has a use where there's some relief, the symptoms lessen rather rapidly and they shift around, they're not too specific, and it's relevant to something like the sarin attacks in the Tokyo subway where 12 people were killed, 62 had severe injuries, 984 were hospitalized, but of those who didn't appear to have any problems but had to be examined and then were discharged from emergency. It was over 4000, so think of it as in that instance about a 4:1 ratio, or 3:1 ratio I guess, of people who appeared to mostly have what probably were psychological issues. A point that Ari Sholev made to me last week from who they began calling relatives of people who presented to the emergency room to find out well, what about them, the people who didn't come, and there are significant rates of distress in groups of people who are related to those who come to the emergency room but they never show up, they never go to seek help, and that's important to recall also. I won't emphasize acute and post-traumatic stress. I've mentioned them somewhat, but they will be picked up on later, but there's triaging and these triage and referral issues become quite important of how do you efficiently handle a very large group of people coming in.

The term psychological first aid I think has some popularity recently as a kind of early intervention. And linking community resources— we find that to be very, very important, and helping people connect with them is an active step that one can take. Most people will not be treated by us after a major event. As you know, the post traumatic stress symptom cluster is intrusive re-experiencing, avoidance, and hyper arousal. After Oklahoma City, this is Pfefferbaum and her team's work, 60% of children

in grades 6-12 heard or felt the blast, 40% knew somebody injured, 33% knew someone killed. Massive impact on their community, massive. And I think in terms of stigmatization of populations, it's important for us to remember many people were thinking Al Qaeda or some foreign cause at that time, and it was not- it was home-grown terror.

Post traumatic stress in that context is correlated with being female, knowing somebody injured or killed, and bomb-related TV exposure. There were high rates of distress and arousal. Intrusive symptoms –I will not go through. I've been very interested in nightmares in the children that we've followed but they are not universal by any means. Avoidance symptoms continue to get looked at carefully with children- they're not always there, and psychogenic amnesia- a very interesting symptom. I used to ignore it when people said 'I can't remember,' but now I pay a lot of attention because it often is significant when someone's memory is not quite up to par. Hyper arousal- startle response is not present in most people in association with PTSD. This is a bio-behavioral model of traumatic stress that Glen Sacks shared with me- it gives you the idea that there's an interface between developmental strengths and the traumatic event, a fight or flight, regulation, mobilization, these different factors competing and resulting in either enhancing or interfering with the development a traumatic stress response, which also has biological determinants which I believe are at the bottom, invisible part of this slide.

After the World Trade Center attacks, what was seen in terms of acute grief? About 3000 people were killed, about 30 to 40 people mourn each person killed, leaving about 105,000 people in acute grief and about 10,000 children lost a parent or loved one, close relative. This slide is particularly important about co-morbidity of post traumatic stress with other problems. As you can see, those with post traumatic stress who are those with the orange, not the green bar, have increased alcohol abuse in this study. Increased drug abuse highly increased major depression, which we have found in our studies as well, increased social phobia, increased general anxiety, increased panic disorder, and rated in three diagnoses we found this as well in this population about 50% of this. This is Kessler's analysis from 1995; I think that many of you are aware of it, which was a meta analysis of the studies of PTSD where other conditions were also looked at. Very, very important explanatory slide for why so many people with post traumatic stress don't do so well.

We all say it's not just post traumatic stress—it may be an indicator, but depression could be more important. So what are some emergent interventions? Creating a good impression. We all learn that early in training and it remains important; building alliances. Activities focused on the site, places where the injured are taken and areas where survivors and families are gathered. I probably first learned from the Red Cross- finding a safe place for everyone to go. First aid- I would also include Psychological First

Aid, but I don't think that's always meant. Diminishing exposure to further trauma-often isn't thought about, because people are quite vulnerable to further traumatization in hospitals, one example would be whether it's an open unit or individual rooms. Many people have been in open units over the years and have gotten further traumatization.

Assisting school personnel in delivering age-appropriate information- after 9/11 was a very interesting time for that. I'd say no more than half of the schools really did a good job, and I don't think it was that high. There were a number of schools where they withheld information altogether, and children were finding out on their cell phones and a whole bunch of other ways were it just wasn't dealt with in the school setting. So rapid dissemination of accurate and, in that case, developmentally-targeted information. Providing privacy for families of victims, and beginning assessments and monitoring, and then after the first 24-48 hours going on for a period of weeks earlier interventions are somewhat similar; encouraging resumption of usual activities, further educating teachers, parents, and I would also say workplaces how to support the children or workers in their settings.

The whole issue of the media I'll leave out right now, but encouraging the media to act as responsibly as possible is a terribly important part of it. Someone just said it'll never happen, but I know many examples where it has, and I would encourage you if you have friends or colleagues in the media to educate them. What I often have found is that some of the most stressed people are reporters, and the first thing I do when I speak with them is I say, "How are you doing?" Because they often are coming right from the site, they're frequently exposed directly. They often answer quite honestly and I say, "I know you're amongst the most stressed folks out there." And they feel, "Oh my gosh, somebody actually understands," and that has been a really important realization. I do think they listen to us better if we care about them. Then providing consultation on the use of mental health volunteers and researchers, and that's not easy sometimes, especially following a disaster or terrorist event, where the last thing people want is a researcher around.

We're wrapping it up here. There are four slides that illustrate the application of the Haden matrix, the pre-event, event, and post-event. Pre-event for biological or physical issues- stockpiling vaccinations, training emergency, medical, and public health professionals. With the biological/biohazard preparation, there's almost no money put into psychological training, and it doesn't make any sense. Again, integrating psychological mental health into all public health and emergency preparedness plans. I know the three of us have worked hard on doing that. Preparing materials for media and public education, designing and implementing psychological and first aid training, and training all relevant health professionals in disaster mental health. Then each of these categories: biological, psychological, and social or socio-cultural will carry out into each

category- terrorist or injurious agent, trying to make the chemical, biological, radiological, nuclear weapons agents difficult to obtain. It's been working for burns, you know, if you lock, and gun control too, lock up guns and there are fewer gun-related injuries, so one thing is just trying to do that.

I don't think the internet has helped us on decreasing information dissemination on how to produce weapons. I think that any of us could have done just about anything. And then finally in the physical and social environment, psychological interventions, including developing effective risk communication strategy, identifying and training spokespersons, informing the public about prevention and safety efforts, and providing information that educates the population about expectable responses and coping that would increase, remember early on I mentioned immunization, increasing community resilience- if you know something of what you're going to go through, it isn't quite so traumatic. I don't know, if anybody should have had a clue as to what we'd experience on 9/11 I think it probably was me. I didn't, and I don't know anyone who really was ready for 9/11. The Red Cross and other agencies do a good job on the biological and physical support which I think, we in mental health, need to remember is providing for basic needs. When I arrived here, I got up early this morning and played two tough sets of tennis, had a couple of cups of coffee, and then ran low on caffeine shortly before I got here. Someone, Dr. Satin I think, took good care of my basic need for caffeine. Don't forget people in these situations are hungry, they're thirsty, and one of some of the best things you can do for them is to think about basic things that will support them. They will be grateful.

So one thing all of us with fancy mental health and psychiatric training have experienced is we feel like we have skills that are far in excess of what are needed. It's not so. But we shouldn't expect to be using everything that we've got available in these situations. We need to find out what's needed and provide that. I think that some of these other event-related items we've already covered. Post-event, I'm going to jump to the psychological- limiting secondary exposure, adjusting risk communication, emphasizing positive messages, devising a public mental health strategy to assist communities and groups in recovery. This has not been easy in the past three year but we're in the process of doing it. Also I spoke with Jessica Stearn, who some of you may have heard of. She teaches terrorism at the Kennedy School, and sort of a joke, teaching terrorism, but asked her what did she think we all needed to, how should we use our skills following a terrorist event. She said try to limit the overreaction of fear- use your skills so people don't overreact to the fears that they have. I think she's also talking probably about the hostile responses and aggression, and I think that's very important. I think another thing that's post-event here that is alluded to is building community, and I

do think that there are positives coming out of some of the things that have happened since 9/11 in terms of pulling people together.

Perhaps what brought some of you here was that too, and what has brought volunteers out to see what they can do. And there has been building of community, and I do think that is a very positive outcome that we should not ignore. A point on the desired end result items here, and I'll run through them; mitigating or preventing adverse consequences, including distress, negative behavioral change, psychiatric illness, poor job performance or loss of jobs, and physical injuries. These are not necessarily so easy to do, but they should be goals in the workplace and elsewhere, but negative behavioral change—good to keep an eye out for. Increasing positive adaptive behaviors, and with children what was done was trying to encourage children's altruism. I believe after Oklahoma City, they found that to be important, and after 9/11 as well. There could be project with children sending donations, collecting donations for particular causes. This helps them to feel less helpless in the face of what is going on, to make a positive contribution. This was very common during World War II, by the way, but has certainly been less so in recent years. Another point about a desired end result: minimizing disruption in daily routines of life. People who have not gotten back into their routines are certainly at increased risk.

So in summary, we want to utilize the public health and public mental health approach, understand the knowledge from research and past events, seek to strengthen the infrastructure at all levels, local, state, and federal, and in this case, I'm certainly with those who would like to strengthen international collaboration to respond in this case to the psychological effects of terrorism. Applying preventive and mental health principles to reduce the psychological effects, and then planning for triage, early interventions, risk communication, research, a hospital disaster plan. I worked for three years and we really came up with different hospitals- Children's Hospital, General Hospital- to put in place disaster plans that were not in place six years ago. Now they're required by JCHO in a more comprehensive way than ever before. And a mental health system which is funded adequately, and we all know it's not, and to even say 'mental health system' is, most of us say it's broken, but that puts the strain more on the public system and actually puts more expectation on those in the community providing services knowing there is not as functional a system there as we would like.

Some federal legislation I just want to mention- the Disaster Relief Public Health Threats and Emergencies Act of 2001, which particularly funded bioterrorism services at about \$5 million. Then the act that I mentioned to some people earlier, the Model State Emergency Health Powers Act, a highly controversial act that addressed issues of isolation and quarantine. It isn't required that states do it, and I doubt that Massachusetts did it just the way they passed that act fairly soon after 9/11. And I have a

copy of the National Strategies for Combating Terrorism, and I haven't seen the National Strategy for Homeland Security, but they're good to know about because they are federal policies and they do influence what the agencies are doing. And here are the websites that I have mentioned. I'd be glad to email them to you if you wish. So send me an email at FStoddard@partners.org and American Psychological, American Psychiatric, Red Cross, SAMSA, NIMH, including some research on evidenced-based early psychological intervention. Thank you very much.

David G. Satin, MD

I want to thank Dr. Stoddard for what is really an impressively complex, comprehensive approach to a problem that is obviously a public health problem and not an acute medicine problem. It is also impressive that so much thought and analysis has been put into this. They say how much we don't know, but I'm impressed by how much it has been thought out and that we do know. I hope that Dr. Stoddard will make this rich information available for closer study sometime in the future. He mentioned repeatedly the issue of prevention, which again was close to Dr. Lindemann's heart. I ran across an interesting document, [A Symposium on the Medical Consequences of Thermonuclear War](#) that was held in 1962, and in its conclusion on the mental health aspects of it, there's an interesting paragraph.

It is obvious that we have raised many more questions than we have answered. It should be apparent that the psychological and social problems raised in planning a defense shelter program are of a magnitude and complexity that make it advisable to concentrate massive efforts in eliminating the need for such a program. Physicians, as one group of professionals concerned with the alleviation of suffering and the preservation of human life, are urged to examine the issues and take specific actions that will enable them most effectively to help in the achievement of these fundamental aims.

I think it still applies.

Carl N. Edwards, JD, PhD

Member, Massachusetts Emergency Management Team; Steering Committee of the Massachusetts Disaster Response Network; Command Staff Graduate, Federal Emergency Management Institute

Introduction by David G. Satin, MD

Our first respondent is Carl Edwards, J.D. and PhD, an attorney and psychologist, a licensed clinical and forensic psychologist and licensed health service provider, and a graduate of the command staff at the Federal Emergency Management Institute. He was senior associate for Policy, Planning, and Research at the Justice Resource Institute, a fellow of the American Academy of Forensic Sciences, whose most recent work has focused on terrorist profiles and cyber terrorism, a member of the Massachusetts Emergency Management Team, and on the steering committee of the Massachusetts Disaster Response Network.

Carl N. Edwards, JD, PhD

Thank you very much. I want to thank you all for coming out on a rainy day, and I'd like to thank Louise and Fred who have spent many hours underground talking about these issues, and I'd like to thank everyone for putting together this program. I'm going to take a slightly different perspective. Fred's done a great job of providing an overview of the academic research, and issues of prevention, issues of long-term treatment. For the moment, I'm going to turn to the issues of what you're likely to encounter on the ground at an actual incident, and the kinds of roles that you might be interested in playing, either now or after you've seen this presentation, and some of the factors that have shaped the events that we've seen over the last ten years in particular, and finally end up with where we tend to be moving at the moment.

I want to start by sharing a couple of polite secrets, and some people might find this a little bit shocking, but the reality is that most people are drawn to disasters. Drawn like a moth to a flame- there's a great attraction for people. The reasons for that are complicated, particularly people who aren't familiar with them. Everyone says they'd never wish anything like this on anyone else, which is very encouraging, it's an age-old phenomenon, it's psychodynamically highly complex. It greatly shapes the way people behave when disasters are taking place on a large basis and at actual sites. Grandparents very much remember the Titanic, our parents and grandparents remember the Hindenburg, and I think everyone here today remembers 9/11. These disasters are major events in our lives, and we anchor a lot of our other recollections around them. Why are we so attracted to disaster? They provide us a lot of things that we don't get at other

settings. One of those things is honest emotion. On a day-to-day basis we don't see a lot of emotion. We go to movies to see it, we hear somebody raising their voice, something happening, it gets our attention but emotion does something to us. Disasters provide a lot of emotion, some of it highly poignant, some of it not so poignant. It's raw and very often it is driven by sheer terror and fear for one's life. That kind of arousal is not coincidentally related to the fact that most of the classic literature involving disasters came out of the romantic period. Disasters are traditionally linked with romance. The movie "The Titanic" is really a romance movie. It's not coincidental that the 1970's saw three things happening at once: you had a sexual revolution, you had a war, and you had a period of enormous protest. Emotion is very easily eroticized. We could spend a lot of time talking about psychodynamic interpretations of that, but emotion has a value because it provides us with a propelling force, and we are driven to that kind of force.

In the classic painting by Goya, it conveys many of those types of elements, it's also the kind of work that we associate with Goya which dealt with exactly these same themes, but very often they involve the force of nature, which is enormously powerful, and again, like human emotion, it raises feelings in us. Some of those feelings are extremely striking. We are attracted to disasters in part because they are a challenge for us. If we're able to deal with a disaster and survive it despite all that kind of power, it can be very much of a growth experience, and that is the test that attracts people, many people, to disasters, and it's an attraction that often attracts people to war. Disasters and war also produce heroes- professional heroes, in the case in World War II the gentlemen in uniform were there because it was part of their job but there is also the spontaneous volunteer, and all kinds of heroes come out around disasters. And maybe if we go to a disaster we can be a hero too, or we can see somebody and be encouraged by heroic acts. We volunteer for that reason, and volunteers are genuine heroes. They can be doing very basic, fundamental life support activities, like providing food and clothing. They are heroic, they are important. Those services are provided by a variety of agencies. They can be very gratifying, as you see on the left-hand side of the screen, and people play those heroic roles without even intending them. On the lower right-hand corner you have a picture of a mayor of a little town that's been flooded out, and at that point he's the hero, quietly dealing with a desperate situation, and we respect him for that. There are professional heroes that we should respect, and certainly appears, particularly after 9/11 where firefighters got an acknowledgement of the kind of indebtedness we have to them.

But disasters, emergencies, and wars also bring out the villain. These villains are also icons. They can be real, as in the case of the people on the far end, and they in the middle is a Goya classic painting, the sort of thing that people would take and maybe hang at home, depending on what their propensities were. Not a real villain, but all of these villains are people who we can view in very black and white terms—these people

are really bad people doing bad things. Most of life doesn't have that. Most of life is very gray, and we like to be able to have areas in our lives where we can identify our villains and act out that anger. When you arouse that large numbers of people as you had following Pearl Harbor and following 9/11, that becomes a very strong driving motive and it can lead to other things like belief in conspiracy theories. If you look at the political debates, the social debates that followed 9/11 and are continuing to today, they're amazingly similar to the discussions around FDR. We think of FDR as being a very different person and dealing with things in a very different way.

These are emotions, and finally, there is an emotion that we never like to talk about that has to do with self-gains. Now how could people talk of disasters interested in self-gain? And if you've allowed as a volunteer and people come in the door, the last thing you'd expect is somebody to be there for any reason that has to do with their own self-gain. We've learned that maybe lawyers might do that, but outside lawyers, but one of the most depressing things to see in volunteers, the new volunteers, is to have a lovely young lady come in who's really mourning the loss of her husband, and when you start to look into this case, she wants to talk to the press, she wants to cry, she wants lots of attention, and she's in the process of a divorce. Well, it doesn't mean she can't have honest emotions but you look at enough of these cases and you see people who are in fact exploiting disasters for their personal gain, and you have to accept that fact. Accept that fact that people are going to be sharing the same kinds of benefits.

There might be complex psychological explanations for much of this that we could talk about in another setting, we won't address that right now, but it's something we have to bear in mind. And to add on top of all of these other emotions that are being created around major disasters there's always the element of reality, and the reality of disasters is that they're not glamorous, that disasters turn properties into rubble, and they turn people and their pets, every living thing, into effectively garbage. We do not like to face that, it is unpleasant and it can occur in very large numbers. You can end up in a disaster scene but there's a pretty fair amount of it, and you are seeing a combination of that kind of rubble, the kind of smell that's associated with the situation, where people are dying and have died and are buried, with people who are obviously responding to that.

We're moving away from the things that we like to see in paintings, romanticized paintings, to something that's very real, large numbers of people, the smells and the sounds that go with disaster, and the floods of humanity. Finally, 9/11 was a great example of these situations are dirty- they're dirty and they're dangerous. And finally the emotions that people are showing are often in response to truly horrific events, and that is a sight that you do not forget in a hurry. These are not the horrible things that you see at a sight, things that body handlers see. The picture actually in the lower right-hand side looks horrible, but that's not necessarily a person with a very serious injury- that's

someone with a relatively minor head wound, looks like, but you see people who are in the midst of events that are tremendously powerful.

These factors all combine to create and modulate disaster phases, and to take a further course in this area, you'll find a lot of discussion about what are classically four phases we assume they come in. But they don't necessarily, things are changing, taking place different times, different individuals, people are all mixed together or in different phases because of the factors that are driving their involvement with the scene at the time. You have a heroic phase when people arrive, then when people who know who've been in the army before and come out in combat and, boy they really are heroic, and they behave in a very heroic way. This is followed by a kind of honeymoon phase; we're all going to work together, we're going to survive, we're going to come out of this better than we were before. That transitions over to a disillusionment phase, and finally to a reconstruction phase. That can take a very long time. This happens not only with individuals in disasters, but it happens around the disasters themselves. Immediately after 9/11, the Red Cross could do no wrong. We were really in a heroic phase. We followed it with a honeymoon phase and when the disillusionment phase occurred, the Red Cross could do nothing right.

But what do you really think this is part of? The human art...it wasn't for long the human art to serve human welfare and the professions that are really grounded, all grounded in behavioral sciences. Law is a behavioral science, who are clinical specialty focus on propensity and variation of law focuses on duties and exceptions to those duties. Clinicians study things like secondary gain, lawyers study things like Phil Resnick here. Phil always says, "No such thing as secondary gain- all gain is gain. Most of us know secondary gain is something you look at and say, 'wait a minute, this person do this for this?' And they're a little surprised by it." That's the way people work, many people work. Well, the law is about rules and basic principles often turn on concepts, like willful, malice, premeditative, all of those are actually behavioral concepts. The law is filled with terms on behavioral concepts, and in a country like the United States that is a common law country, behavioral dynamics and the human response to those behavioral dynamics, is the underlying driving force of the law.

Two perspectives on behavior reinforce and complement each other, and they help to create the occasional lapses in both professions and practitioners in both professions, and professions occasionally have lapses in judgment or what in the long run may not necessarily be the most rewarding direction. What does the data tell us? We've heard a lot of information today from Dr. Stoddard. I agree with everything he presented. Recently there is a massive overview, particularly of the recent literature, done by the national PTS group connected with the VA with its research arm at Dartmouth, and we know that people are different. They're different from person to person, they're very

complex, they differ by ethnic group, by background. We know that there are risk factors, and they're very much the risk factors that we've seen here, discussed, and there is no sure way of predicting or preventing subsequent adverse responses.

There's difficult situations, you've got a lot of acute responses, almost universal you're going to end up with somewhere about a quarter, same thing as you've been hearing here- 10-30% of people are going to have long-term adverse results, and part of the interpretation of that is that all of this effort is part of a normal, adaptive process. We don't have to worry about it very much. The treatment that tends to work best for these difficulties tend to be the treatments that work on most things: cognitive behavioral therapy, my apologies to Erich Lindemann, who was a psychoanalyst, who came from an era, as I did, where that was by all means the major yardstick we had. And the SSRI's tend to work very well, however, as immediate post-disaster interventions they might actually be harmful. You have a paper we'll look at in a minute that makes that case.

Psychological first aid is probably the most effective, and it can be taught to most good, sensitive people in about two hours. So what is all that mean? It means that as a group, we haven't necessarily gotten the best reputation. This was published in The New Yorker before 9/11, and it's a couple of cowboys working out over the prairie, and one is looking, talking to the other one and says, "It's hard to tell from here, could be buzzards, could be grief counselors." Grief counselors came away with not necessarily a terribly good reputation. Most recently, and there are copies of this out front, I'm not supporting this, but this Jerome Rootman piece was published in The New Yorker in January, and I can't be terribly critical of what it says, because I said all of these things myself at one time or another but I've said them in a meeting with my colleagues. I'm not sure that I like it being told to the world. I mean for many people this is their only source of information.

It says the traumatized person should share what he wants with people he knows well- close friends, relatives, familiar clergy- they are what help people create a sense of meaning and safety in their lives. Hard to disagree with in a way, and it says in another section, techniques like debriefing, which have been one of the most common interventions, particularly immediately following disasters on the scene, hold for us because they reflect a prevailing cultural bias, mainly that a single outpouring of emotion, one good cry, can heal the scars. Gee, we sound like fools. What has led companies to provide such services, people who go out and provide these services to the companies after disaster, is a fear of litigation. He has not failed to put in a little slap for lawyers. So is there anything at all left for us? I mean, maybe we should just pack up and forget about it. And in three or four years after a disaster, that 10% of the people who, or 25% of the people who are going to have major long-term consequences, who are going to need specialized care, can call Dr. Stoddard.

Well, let's start by taking a really quick look at the history. This is a slightly different view of the history than we've talked about. This point starting with mental health, and we'll go back to World War II. There really wasn't much disaster mental health before World War II. Before the turn of the century, last century, life was a disaster. People were facing disasters all the time. If you survived, great, if you didn't, you were beyond the veil of tears, and that's the way it was. So World War I came along when people started behaving strangely in battle. That was diagnosed as shell shock, a kind of concussion from all those guns going off near you, was something biological that's affecting your behavior. We took those people that weren't much good in combat, we brought them back and put them in VA hospitals, most of them died there. They never functioned as a group effectively again. We didn't have anything remotely like the psychodynamic theory until the 1930's and the 1940's and we have to thank Sigmund Freud and psychoanalytic theory for that. That theoretical perspective is still, whether you buy it or not as your primary operating model for what you feel you do for service, it's still the most dynamic, most insightful view of personality we've ever had and probably ever will get. And by World War II we realize that we're not doing people a favor by taking them off the line, taking them away forever. What you've got to do is you've got to real quick send them back as quickly as you can. Get them back functioning.

That same period, 1942 Cocoanut Grove fire here in Boston, 1000 people at a nightclub. The nightclub had plenty of fire exits. Big windows all covered with crepe paper. People on the inside didn't know where the exit was, all headed for the same rotating door, half of them died, the other half were for the most part horribly burned. I know people alive today who were in that, and they attribute their lives to the care they got following that event. In Vietnam we did, I believe, the first of the systematic, good physiological research that helped us to really understand, and I'm not saying it hadn't been done before, Tannen here in Boston doing good work. I was introduced as a student many decades ago by Flanders Dunbar. He'd been doing physiological research for a long time. But in a military threat situation, a lot of that came out of Vietnam, but it wasn't until the 1970's that we came up with anything appropriate for the people at the scene and that work was done by Mitchells called debriefing.

There's another variety of it called critical incident stress debriefing or critical incident stress management, and that said that people do a lot better if you sit them down and let them talk it out at the end. Sit with people who share the same experience, and by the time the disaster mental health movement came along, that was the model that it drew on. It wasn't until the 1980's that we had an explosion in the research of theory in this area, but a lot of that work has come under a different kind of criticism—recovered memory work came out of this period, and we've learned from that research and follow up later that recovered memory, like symptoms, can often be implanted

memories and created symptoms. So you sit somebody down, you say, “You’ve been through a horrible event.” Or “Your father must have molested you—I can tell from the way you look when I look in your eyes, so let me tell you about all the symptoms and I don’t know if you’re going to get them, but you’re going to get them.” And when that happens, most of us know, the story that follows from that, and it’s a lesson that was lost from the shell shock experience and shell shock model, we went from one extreme in World War I to another extreme in the 1990’s.

In the 1990’s we started dealing with disaster scene management. Louise, Fred, and I spent a lot of time with people like Hayden Duggan, and what was the bunker out in Framingham, and occasionally, particularly one of us coming from a military background would say, “Hey, how are we going to manage this? What are we going to do with these people? How about the press?” Nobody paid any attention to it. In fact we had the state police and they’d come in and say, “Hey, you want me to protect people who are at the disaster? We have real things to deal with.” I think we are at present in an area of reassessment and consolidation. There are many factors that are affecting that, and those factors very much correspond to some of the events that took place in the law. We do not have any theory of disaster law until the World Trade Center. The ABA, the American Bar Association, put its first program on disaster law, and what was the first thing that program said to all the lawyers in the audience? Don’t forget what you learned about law, but forget everything you know about how you’re used to practicing law.

A decade later we train mental health professionals, we start by saying don’t forget anything you learned, but forget about how you practice it. A very different kind of setting. In 1996 we had the ValuJet crash, a plane, first major disaster a woman pilot in command, a tragic incident, a fire in the luggage compartment, there was an improper storage of oxygen, the container burnt through the control cable. The plane became completely uncontrollable, took a nose-dive down into the Everglades just west of Miami, and was never found again. Went straight into the Everglades, we never got anybody out. People had to deal with the fact that this was an avoidable accident, that they’d never see their loved ones again, that they can’t easily get to them, that they were inundated lawyers who were all trying to win money for them. I’ll tell you a secret—anybody can win an aviation disaster case. It’s an open and shut case. The Florida Bar Association was the first bar association in the country said, we’re not going to allow that and they’re not necessarily the most conservative group or most progressive-thinking group in the world. It was outrageous.

That same year, a few months later, TWA 800. TWA 800 a lot of similarities, was the first time that we tried doing a family assistance center. For all those people in New York, crash was out on Long Island, learned something really quickly, those people will not stay in New York- they’ll get out, they’ll walk if they have to, and their anger was the

same as the anger of the family members of ValuJet, and led in that year to the passage of the Assistance of Families to Passengers in Involved in Aviation Act. It's titled 291136, and that's really what sets the model today, the family assistance model, lead agencies, Red Cross, no lawyers contact within 15 days, responsibility, security, everything that goes with a systematic model. That model is applied in most other forms of disasters. But it's a model that, having been tried and after TWA 800 and not particularly working, the family assistance model was really tried again in the first highly publicized way in 9/11 here in Boston, and that was the application that really got attention.

Louise was there, Fred was there, many of our colleagues were there. It worked. It's not easy, but it works. And in the wake of 9/11 we have the Patriot Act. I'm not going to talk about the merits of the Patriot Act but it changes our legal environment, and we have the formation of Homeland Security, and if you don't know what Homeland Security is, and you're old enough to remember like I am civil defense, Homeland Security is civil defense two. It is a very good model. In the period of the Cold War, security was a confidential, classified thing. We're going back to a much more open model. We've realized that preparation starts locally. We've realized that it follows the public health model, that mental health is a component, and it immigrated aspects of public health. It is an all hazards model- we train for all kinds of hazards, and it's strongly volunteer-based, and it works very effectively.

So in summation, disaster mental health is a very young specialty and didn't even begin until 30 years ago. It's still trying things. We've got to be a little patient and we can't expect everything to work first time out of the box. Recognize that we're dealing with a new environment, new legal environment, new expectations. Things that used to work aren't necessarily going to work today, even though we can look back on history, recognize this environment shakes our myths about social support, and often concentrates impacted populations. It's very nice that we saw in this current New York paper that, well what you do when you're faced with this kind of crisis is work it through. It's normal, it's healthy, and just rely on the social supports that you have on a day-to-day basis. You and I know not everybody has those social supports and in the best of situations, you put them into a concentrated setting, which we do, trying to protect people in family assistance centers. Putting them in concentrations of intense emotions, the kinds of things we talked about before. That requires reconsideration.

Recognize that disaster response always starts at the local level, and trust enduring fundamental concepts of humanity. They've been around the longest; they tend to hold up the best. And as it comes available, follow evidence-based research. Now, do we have a major job? If I were to find one job for us as mental health professionals, I would say we need to help to prepare ourselves as a profession. People came out of the woodwork after 9/11. Everyone wanted to help, and the stories were all the same: I'm in the

business of helping people. I don't know what to do with this kind of situation. I can't help myself. What can you do to help me channel my skills and my talents in a way that's going to be used productively to deal with probably fairly enduring national crisis? People who did come and work with us said the single thing when you ask them, what did you benefit from this, say certainly a benefit from being helpful and useful and over and over and over again we heard not having to sit in front of the television watch the airplane go through the World Trade Center.

We have to start by taking care of ourselves. We don't want anybody, particularly on a disaster scene, who can't take care of themselves. So let's talk about most of this: follow normal routine, eat and sleep in an appropriate way, get as much exercise as you can, use the media only for breaking news, provide and draw upon your social supports, provide them as well as draw on them, note any unexpected reactions in yourself and others, watch out for children, the vulnerable group that we've talked about before, use only a reliable information resources, and follow preparedness recommendation. Finally, and this appears in just about everything I write and I can't underestimate the importance-cultivate civility, guard democracy, and value the diversity of opinion and culture that is America's greatest strength. If we don't do that, the other side will have won before it begins. Go out, do some volunteering, be realistic, be patient, be ready to serve when called. If you say you're going to do it- do it. We don't want heroes, don't try to be a hero. Remember that most disasters never make the news. If you're only going to go out with something you see on CNN, first of all you're not going to be able to keep up your skills, and secondly you're not going to make the kind of impact you can.

Remember the last place disaster workers should be is at a disaster, which means they spend a lot of time with people in training and drilling situations. Get and remain current in your training, the sorts of things psychologists can learn easily. Psychologists know what mental health work is, are things like what the alert statuses really mean, how incident command works, how quarantine and isolation works. Your patients are going to have questions about that. They want to know simple things like, "Oh, gee, the alert is up today, should I even come in for my appointment?" Try to get as much information you can that will help you to provide good advice on that. Do not report to a disaster scene unless called for. There are very good screening programs. Stay prepared. If necessary that means keeping a kit in your car. You copy your license, don't come and say I'm the world's greatest clinician.

What can I do as a mental health professional? Psychological First Aid, you can learn that in a short amount of time. It'll make you better at whatever you do on a day-to-day basis. Fred's talked about these. Work with disaster workers. If you think back to World War I and World War II, again Dr. Stoddard said this, who did most of the work? Work was done by chaplains. One way to look at our profession, and this makes some of

us uncomfortable, is that we are the secular successors to what used to be chaplains. And what does a chaplain do in a fire company or in a police company or in a military unit? What's your primary job there? To bring the word of whatever your religious belief is? Most people don't work out general very well in disaster situations. They're there is to keep people functioning. One of the things you've got to get used to, if you're going to work with workers, your job there is not to take onto yourself burden but to prepare them to be able to function. They're a critical part of the team, and that team sort of works. And you want them to be there and be effective; you want to keep them on the job. That's what, think back to what chaplains so, that's what chaplains do. They're also the backdrop to doing very good triage; they're not saying we can't do that in this case.

Do good triage, do good monitoring, and education. We've got to be very careful about implanting things- consultation, you discuss planning, which is creating a realistic expectation. We have good models coming out of Israel. When we started planning for terrorist attacks, people said, how do we plan for all these attacks? And I said, you can't. you just have to set some kind of reasonable expectation. Resilience development, which was talked about as inoculation, follow up care specialists, and do research that provides you with some kind of cyclical, out of the lab, into the field, back to the lab, evidence-based results. This is the only line you may want to take a note of: most of the literature on this area is fast-moving; Literature that was handed out to you is old. Many of those sites may not work at this point. They're not necessarily things I supported except for the one I wrote. I coordinate a lot of that literature, maintain a list. I'll send you what's current. It's much easier to do it, be able to pint and click on it than get in handwriting. Feel free to call on me anytime, to let me know when you get tired of this stuff. If you don't want those, just tell me, I keep a couple of lists. I appreciate your being here today, and I look forward to Louise.

Louise Carcione

Emergency Management Coordinator for MetroBoston, Massachusetts Department of Mental Health; 2002 Recipient, Clara Barton Award, Red Cross

Introduction by David G. Satin, MD

Thank you, Dr. Edwards, that was really a lovely and lucid clinical and policy review that bears further study, and I'm glad it will be available in various forms. Let me now introduce Louise Carcione, Emergency Management Coordinator from Metro Boston for the Massachusetts Department of Mental Health. She was originally an occupational therapist, which prepares her for being a very broad and a very responsive worker. She has been a participant in the Red Cross FEMA, is CISM trained, and for 12 years she has been the DMH representative at the Massachusetts Emergency Management Agency. For 12 years she has been a member of the Statewide Disaster Mental Health Substance Abuse Service Committee, and she is an overseer of the Federal Emergency Management Agency funding of Boston agencies selected to provide crisis counseling to the victims, survivors, and airline crews. She is also a member of the Substance Committee of the Governor's Task Force on Bioterrorism Training Series; co-sponsored by the Massachusetts Department of Public Health and the Harvard School of Public Health; she is the 2002 recipient of the Clara Barton Award of the Red Cross; and has received many other awards and appreciations for services of many kinds. You can tell that she's been around a lot and that she knows a lot and how it got that way.

Louise Carcione

I'm going to do a favor for you; I'm not going to show any slides. The presentation that I normally give when we're training folks who want to work in disaster contains 102 slides, so Dr. Satin suggested that I bring handouts, but not the whole thing. So 45 of you are going to be able to carry one away. It's in color, it is the whole course that talks about the mental health system in your government, and when I say your government I'm talking about local, state, and federal. I want to thank Dr. Satin, I want to thank the Massachusetts School of Professional Psychology, Dr. Stoddard, and Dr. Edwards. I particularly want to thank Lisa Gerland who recommended that I be one of the presenters today. She's not able to be here, but she is creating in the new scheme of things as a staff member of the Department of Public Health a bridge between public health and mental health, and that's very critical and very important. I also wanted to say that all of those things that Fred and Carl talked about in terms of the outline is all true, and I do most of it.

I am not a clinician, but I want to say as a person who has been involved in a number of incidents including fires, floods, shootings, hurricanes, and the blizzard of 78. However, I really began my career within the Department of Mental Health as Emergency Manager after the no name storm in about '91, that is pre-9/11. That's when, for example, in South Boston there were four separate fires in a 12-hour period that resulted in the loss of 27 apartment units. It knocked out a good section of South Boston in terms of their ability to function as a community, but the city pulled together. The helpers came to L Street, which is where the city set up a family assistance center, and we were able to see people, to have people come in and talk to us, and find out what they needed. I was the only mental health person there because what they really needed was answers to questions such as, "Where am I going to sleep tonight?", "Where do I take my kids?", "Can my kids go to school?", "How can I get there?" and "I don't have a telephone anymore. I can't call, but I need help." So there were a number of questions like that and we needed people to provide those things. You need someone that has a telephone, you need someone that has a directory, you need to help them access. I think that there were 75 people who needed to be housed by the Red Cross over that period. They also needed food vouchers but in terms of the mental health aspect, the activity was based primarily in finding a compassionate presence, walking along with them, sitting with them, getting down on my knees talking to a child who was crying because she couldn't go home.

Those were the kinds of experiences I had pre-9/11. I also worked the shooting that was workplace violence when seven coworkers were murdered. That was another kind of incident that was tragic because the small community was not prepared- neither the police nor the helpers in the community had any experience to deal with a tragedy of this magnitude for them, so there were a number of people from outside that community who were called upon to go in and do some of the mental health support work. Because, even though the shootings took place in a building on one side of the street, the other side of the street contained a church and a parochial school, and the children were looking out the window at the time. They saw everything that happened across the street so you already know, those of you who are psychologists, mental health workers, people who have been where I have been in many cases, you already know how many people and what kinds of situations are going to have to be dealt with when you hear that description.

The post-9/11 situation of terrorism that has been described so well by both Dr. Stoddard and Dr. Edwards as something that defies description in that sense of pre-9/11 period because in the case of the fires, in the case of the hurricane, in the case of the shooting, there were people out there who were impacted by that incident. There were people that could be helped by the clinicians that I could call on to send or bring to the

scene. At 9/11, that incident touched everyone, including me, because it happened to all of us. It didn't just happen to victims or to people on the flights. When I look back at the ocean during the no-name storm, some houses actually got carried away by the tidal surges, but maybe eight people were very specifically impacted. When you get to a situation of terrorism, you're talking about a situation that affects everybody. As an American, as a grandchild of immigrants, there were all kinds of things that were going through my mind. One of the things that I can describe for you is that the amount of time the Red Cross invested and the airlines, both United and American. They invested in maintaining the families of people, bringing families in, and talking with them. I spent probably nine continuous days, 15 hours a day at the airport or on the phone.

One of the things I did for myself was that I did not watch television. After I knew what happened, I did not watch television and I did not read the newspaper. I went home every night. I could not stay at a hotel because I have a dog. I went home every night, practically to feed my dog, walk my dog, take care of my home, do what I had to do there. Then I went back. I had to be debriefed every single night, or I couldn't come back. There are a number of things that are given when you're on the scene with those people. Some of you here and others who will answer the call and want to come running and help because they're licensed psychologists, social workers, psych nurses, whatever, you will want to respond too, but it may not be your place. It may not be where you can use your skills unless you're trained, experienced, and oriented in what I call controlled chaos.

Some of the visuals- the families of the 97 victims on the two planes that went out of Boston, numbers in the hundreds. There were some families that three, four, five people came for that one victim on the plane. There was another family who's immediate family numbered 29 and they were bilingual. One of the things we were able to do through our survivor agency in the Department of Mental Health, there is an association with Boston University Multicultural program, they were able to bring to us people who were not only bilingual but were bicultural. Very important when you're dealing in crisis or where there is death, tragedy, dismemberment, whatever, that the people who come to provide those services are culturally competent. You need to understand how Muslims, Buddhists, Hispanics, and Italians, for example, react under those kinds of conditions. So it isn't just enough to be able to communicate with them. It's really quite important you have that cultural competence. We were very fortunate in that. Dr. Kermit Crawford, who is not here today, I want to mention him because we have a continuing association with him now that is related to the 9/11 experience. He came every day and brought with him psychologists from B.U. school who were able to provide debriefing with families, even if it meant sitting on the floor. There was one woman with whom I actually sat on the top of the stairs and she was very distraught but she was very quiet, and she said not really talking to me, but talking at me, she said, 'Do you think my husband's body was

shredded by the explosion or shredded by going through the building?' There's no answer for that one, but she didn't want an answer.

I was just sitting there, eventually holding onto her three-year-old while she was musing, because she was in trauma. There was nothing I could have said, I don't think anyone could have said anything at that point, but those are the kinds of experiences that I had. And it got me to think about what it is that I really bring to this lecture today, and I was going to have to say that what I bring is I bear witness, I bear witness to the tragedy of loss, to the confusion, the chaos, to the fear, the terror, fear of the unknown, but I also bring witness to the resilience of those people who are affected by this- to the resilience of those helpers who came, the mental health workers, the psych nurses, the first responders. All of those people had a resiliency that enabled them to put aside their own fear and anxiety and help those families during that period of time. So I think that as I said, I see myself as bearing witness to those kinds of tragedies. I wanted to mention another thing- it's like that story about when you're planning to do this thing over here, that thing happens. Shortly after the experience of 9/11, we were well-involved in the few months' application for funding. We got several million dollars for the state of Massachusetts to provide crisis counseling for those families who are affected by the immediate relatives, for those who were friends, partners, neighbors, and also we were providing a number of training events in the school department. We were training using that word that I've heard twice today, the inoculation, encouraging teachers to learn how to deal with the children when they came in and raised the classroom. The most common thing, I would say if someone calls me or if we were connecting these processes, what's going on in the classroom, we would say, "What are you doing?" "Oh well, the children were watching TV." Well, let's turn off the TV. Unplug it. Roll it out of the classroom. Because of exactly what we've heard today- you get children, particularly, to see that image of the planes going into the building. We see it once, twice, ten times, fifty times, we know it only happens once. Children think it's continuously happening. That it's happening over and over and over, and they're wondering when something is going to happen over their heads.

So it's very important that we teach people how to inoculate against these fears and anxieties. But getting back to what I said about when you're doing this one thing and something else happens—two years ago in April, we were very involved and invested in the FEMA-funded program which you will find out about in this booklet. But one of the clinicians who actually had earned her doctorate in psychology at Boston University was running the marathon. She died, and I would simply see her picture out here in the lobby when you leave today. You've got to take a look at it. She was a very young woman. She had come from Ecuador. She spent her entire academic life in Boston. Her parents had come, not only because of the marathon but they had come for her graduation. They

were coming to see her earn this doctorate, but she died. And that was extremely traumatic for us, because this was a person that had come part of our little team of helpers, and it was just very, very difficult. So what happened was that while the B.U. team was dealing with the loss and trauma of this young woman's life, our other provider team headed up by Robert Macy was in my office at a meeting at which I announced this terrible thing. He left the office and he went upstairs to the group of people. I mean, this is what people do when they're in this network.

We care about what happens to each other, and I think Carl said this as well: self-care is important. You've got to make sure you're in good shape before you offer to help anyone else. Secondly, once you've gone through a disaster, you're never the same. You always have that memory. If you're in a disaster, you cannot remain untouched. You always know that you have that experience, and I think another thing I wanted to say was that if we train you, the lead trainers will be the very people that I've been talking about. If we train you and you want to be on our call up list, and whether or not you are paid to come, whether or not we have FEMA funding to give you a stipend, and that's all it is, it's not a hundred dollar hour here. FEMA was paying something like \$26.44 an hour. Nobody made money on this. Just about covers their travel expenses. But if you want to do this, be prepared to become part of this very elite group. I call it an elite group because we've bonded. We know each other. We know what each other looks like, we know what each other is capable of. When you come to a disaster, you do not want to be introducing yourself to someone else. You want to know who they are already.

If I call you out because you're on the DMH roster or because you're on our vendor roster, then you'll report to me and then I will use whatever resources by reporting back to the incident commander- that's another whole lecture, the incident command system. These are new terms that we're all having to get used to, having to understand because of 9/11. I know the time is getting scary for some of you who have to leave. I want to make a couple of closing comments and talk a little about things like the future. Where are we? I was fortunate, two weeks ago I was in Washington, D.C. at the National Red Cross Headquarters and I went to a couple of very powerful meetings where I was able to hear Ari Shalov's presentation. He's the psychiatrist from Hadassah Hospital in Israel. It's interesting because Dr. Macy, who's on the Arbor team, has been to Israel many times so he has actually consulted through UNICEF with Israel and Palestine and some of the other middle eastern countries. One of the things that I was struck by was something we've said and that's resilience. He described the numbers of people who have been in Israel, the numbers of people who have been injured, the numbers of people that came to the ER and swelled the surge capacity was way out of whack, and a number of people who never even came at all. But he talked about the resiliency in terms of how people are able to get up every day, get ready for work, get ready for school and go there, even

though there is this threat. And I think that there are lots of lessons to be learned from that experience, from his presentation, and the things we're learning along the way.

I think it's important to continue building our network, to continue building infrastructure. Carl is a member of the Department of Mental Health Substance Abuse Service Committee which meets quarterly, and it's in the book. Representatives of all the different agencies are in the planning sessions. I think among lessons learned and evidence based research, I would ask as a non-researcher, that those of you who are interested in research consider developing some studies on the substance abuse that we've talked about which is incomplete, domestic violence, and suicide. I think that I read that after the Oklahoma City bombing that 13 first responders have committed suicide. There have been some suicides out of the first responder group in the World Trade, and we don't know about the others because we're so busy taking care of it that we don't have time to research. For those of you who are research scientists, I implore you, please take a look.

One of the things that Dr. Crawford has done is that he has done some research on the jumpers. I think it was your slide, the people who jumped off the World Trade Center. Very interesting research, very interesting conclusions. I think people thought at the outset that this was suicide. It's not. They were getting away from something, they were going somewhere, but it would be very important for you to hear his research. It's excellent work. So I think it's important for all of us to hang in there together because we really are together. You and me and all of us. This is our new life. Thank you.

Discussion

Dr. Satin:

I want to thank Louise Carcione. She's a wonderful example of the preparation and caring response from the government agencies to the suffering of disaster. We often fear as agencies of government as being unresponsive. I think she is such a good inspiration and leader and recruiter that she shows that face of organization. I'd like to encourage those of you present to respond. Let me encourage you not to make this a question-and-answer session, where you have the questions and you're expecting all the answers to come up here, but for you to give your ideas and your experiences and your disagreements and your interchanges about this subject. Anybody can start and you can speak without raising hands.

Unknown Speaker:

I have a question. I'm actually an army officer and I'm looking at combat families in Boston and I have to say that families of soldiers in the army reserves, we have a little low response. The question- my current insurance is there a time limit on free care. It seems as though it doesn't work for reimbursement for keeping folks around long-term trauma on insurance and my question is have you, the panel, felt that this is a problem? And what are some ways in which mental health professionals will be doing long-term support, particularly in this short-term driven market of recession and then for those who have no insurance?

Louise Carcione:

I don't have a real answer to your question in terms of long-term care, but I do know that one of the things, one of the last things we did before the FEMA funding ended was that we conducted a very large community debriefing for families serving in Iraq who were not eligible for services until the military family member did that. You know what I mean. They couldn't get services at the VA because their military personnel was not a veteran, and they couldn't get services through the services of the type that they thought they needed because they were very angry about some of what was going on, some of what they were learning. So I found that interesting that we were able to do that, and we have stayed connected. I have been sending by email information to the leader of this group, and as a matter of fact, the three clinicians that came with me when we went to them at a church have offered to see them probably without charge.

Carl Edwards or Fred Stoddard:

Well, I actually had to go in and talk to those families. There's a lot I can say about the long and short term of trauma, but I'll just speak more in general on trauma for this

audience. I don't think our current mental health system on this need for short-term driven therapy or worse yet. I show up to an emergency room. I get evaluated by a crisis team who may or may not put me in based on my insurance and I go to a hospital or I have no insurance. I'm sitting in the emergency room for two days, I'm trying to get into a psych hospital, and I get into a psych hospital. What are they going to do? They're going to give me a lot of medication, try to get me so I'm not suicidal or homicidal, and they're going to push me out. But yet I may have been a refugee from Kosovo and can't even speak English, or Rwanda. Our system does not, I don't know...

Carl Edwards/Fred Stoddard:

You've broadened your question a lot with that last... remember I mentioned earlier a broken mental health system? You were just describing the specifics of it, and we're not going to fix that today unfortunately. But in your original question, were you're talking about families of military personnel?

Unknown Speaker:

Yes.

Carl Edwards/Fred Stoddard:

That's what I thought. They should be covered by Champus, right? Value Options manages Champus? Oh, what a disaster. No, I have said of a one answer to it, and I've fought Value Options personally for I don't know, certainly between about '96, '97 and 2000 I was sitting in meetings with Value Options and quite distressed about it. Many people refer to this as the disaster in mental health. But you can appeal things within Value Options for services, and I would encourage you to advise people if they don't get a service to go through the appeals network, having ideally a psychiatrist if they see somebody for evaluation, or their primary care physician, take appeals responsibility for it and insist on talking to a physician review, and that's a way of getting the service provided. But the appropriate outpatient service is what I'm thinking about from your original question, but it's hard. I mean, if I do it, I have to go up that ladder because it's not easy and I wish I had something simpler to say. The only other thing is it seems to me that in the military there should be advocacy for better health care for servicemen and their families through congressional routes and such, because that would be another way that I would suggest going at it, because this managed care, you detailed it better than I. Thank you. Other questions?

Unknown Speaker:

I wonder if you could comment about what you feel are the dangers of people who are better able to deal with trauma and those who really have a hard time coping in the

light of it, especially in terms of people who when things like this happen are ready and willing to volunteer and go to New York and be right in the spotlight, if you will, and the others maybe in Alaska watching on television?

Louise Carcione:

So your question is who thinks they are better able to deal with the trauma? Who might have better coping skills? I wish there was a way to say there was a formula and you can look at it and you can say bing, bing, bing, and that's you and bing, bing, bing, and that's me. It doesn't work that way because every disaster's different, and every human emotion that you bring to the disaster is different. If you had a serious tragedy in your life, in your family, you bring that with you, so you might have a totally different attitude about helping than someone who's never experienced any tragedy or any death in their family of any kind. It's very difficult to say that there is a way of looking at someone, but I will tell you, and I think Carl spoke of this, one of the things that he and I did at Logan was that when I called out my volunteers and some of my DMH and the DMH vendor roster and he called his out from MPADRN was we not only knew who we were calling and what we thought they could handle, but we did a kind of prescreening when they arrived to make sure they could handle it.

I personally turned three people away. Two because they were too shaky, I mean really shaky, they were trembling, one was crying, I couldn't let her speak to a family member when she was crying. Three of them came in with such a bad attitude. They said, 'I have a Ph.D.' and I said, 'Thank you very much for coming.' I ended up with that particular woman having state police escort her off the canvas because she was so adamant. She was representing an agency- I don't know this is the one you're talking about, Fred- she was representing an agency that had some kind of contractual arrangement that she wanted to be paid, she wanted to be sure we knew who she was. We were looking to be sure that she was in the right place, and I determined that she was not. But I have to tell you that there was a person who came who had done disaster work before that we considered a safe risk, a person we trusted, and trust has a lot to do with it. And she came and she said, "I heard about this and I got called and here I am, but I have to go to a funeral this afternoon." We said, "Thank you for coming we really appreciate it. Let's have someone talk to you before you go home." So you never know, you really don't know. There's no formula.

Unknown Speaker:

If I may interject a point of fact. I used to be a hospital chaplain in another life, and one of my colleagues was a Vietnamese pastor named Hong Dan. And Hong came over as a refugee from Vietnam when he was not even ten years of age and I asked him, being a

Vietnam veteran myself I was curious I said, “Hong, you came to America, and is there a possibility of any PTSD going on?” And he said, “You know, I’ve thought about all that, but I don’t think I’m in denial. I just think that when I was so little, I was born into a war, I lived in a war, and when I came to America I thought I went to heaven.” So I think the contact, the environment, also is a great factor in determining somebody’s resiliency.

Carl Edwards/Fred Stoddard:

I think I understood the infrastructure question you’re asking, and I think she knows more about it than I do, but I want to address the early intervention piece which I mentioned a couple of times today. I said I’d say something in the discussion, and critical incident stress debriefing has come up, and I’ve been thinking a little bit about what can you expect us to have more evidence-based data and understanding about so we can do a better job if something happens in the future. And for people within that 30 days too, not only acutely, and for people who are in a sense secondarily traumatized such as yourself in going down there. Debriefing, by the way, it was started in World War II by a historian, whose name eludes me at the moment, but I have it. And he began sitting down groups of soldiers to talk about what they had been through, and it wasn’t psychotherapy but it was debriefing and it helped some. But the science of it, the science of what helped, even though in the Red Cross it is widely practiced and CISD has done very little research that’s solid on it, and it’s being done now gradually.

We will know what the complements are of good early intervention, which probably is not catharsis, probably is not just encouraging people to say what they’re feeling in that kind of open way. But you said that’s not debriefing, but the reality is that many people who do debriefing are not thoroughly trained psychologically. They may have a very short course, and they may not know what to do. I didn’t say that, use debriefing. But it’s one complement that’s frequently used in a somewhat, what shall I say, uncontrolled way, in different settings, and the complements of debriefing of an effective early intervention will be defined both for children and adults within, I think, within the next several years on a research-based method. But to address the infrastructure question.

Louise Carcone:

I think that I just want to tack on to the CISD discussion because I had been trained in that. I don’t feel competent because I think one of the prerequisites for providing critical incidence stress debriefing is that you’re either part of the blue line or the red line, and I don’t mean the T. I mean that police officers tend to respond well in that technique when other police officers are presenting it. Fire department personnel respond well when it’s the fire chaplain or the fire department person who’s trained, and

that is more like the military model because it really speaks to getting you back on the line, not just helping you recover. It's a quick fix, get you back on the line because you've got to it again. Back to the infrastructure.

You're probably not aware of this because it's not a secret but it's just that we're going in four different directions all the time. Bioterrorism funding has come into the Commonwealth finally, and the Department of Public Health is the lead agency and there have been some trainings. One of them in particular is called Care and Connectivity and it was a closed-circuit broadcast I participated in. In that one Liz Walker was moderator and the second phase of that was the, you mentioned one of you had it, Isolation and Quarantine. As an offshoot of that, there will be a major mock drill coming up in the fall. The people who have a responsibility for this are people who are from your local area, so for example if you live in Boston and you work in an agency in Boston, either through your JCore Accreditation or through your affiliation with the Public Health Commission of Boston, you will be asked to play a part in this.

I'm very sensitive to what you said about people in New York not having the ability to give directions. That's because there were so many outsiders in New York who didn't know the way to the bridge, but I think that getting back to what I said earlier about preparedness, it is very important that you have, that every place you work, whether it's a business or an agency or a clinic or you have private practice, that you have a written disaster plan. You have the names of people to call, you have the telephone numbers and all of this important stuff that you're not going to have time to look for when there's an incident. You need to have it available now.

In the trunk of my car I have the Red Cross go bag. It's red, it has water in it, it has a flashlight, it has a whistle, it has all kinds of things I might need if I'm called. I also have the written plans for each of the Department of Mental Health facilities including the Lindemann Center, because that's where our central office is as well as the Community Mental Health Center. I have the written plans that I've helped administrators produce in my trunk, so if I'm in Worcester and something happens in North Station, which could very well happen in July, I know what the plan is. And I can provide some kind of consultation there. I think what I'm trying to say in answer to your question by this long, drawn-out, but in answer to your question I think I'm trying to say make sure the people at the local level are the ones doing the planning, because they know where everything is.

Carl Edwards/Fred Stoddard:

Louise, just a follow-up on that question, in your experience has the infrastructure planning, do you feel it's gotten better?

Louise Carcione:

I feel it's gotten better among those of us who believe the same things, like Carl. I mean the people that we've worked with at the airport, worked with at various disasters, if we have a camaraderie, we've bonded, you know, so we have a kind of understanding, and frankly for the rest of them, no.

Carl Edwards:

Just a very short follow-up on two things that we've talked about. First of all, debriefing is an old concept that really means being asked questions. What Mitchell brought to it was a therapeutic concept in an inverse horseshoe of opening up emotions and shutting them down again and applying those specifically to disaster settings. But people use the term in very different ways. The Red Cross does not use debriefing in the same way. It's much closer to a classic debriefing model where you use that opportunity to do some basic triage, assessment, and referral. A lot of models, a lot of research, if anybody's interested in that research that starts to address the kinds of things that Dr. Stoddard was talking about, I'd be glad to give you references to it, and I think it's starting to unfold, a lot of explanation for the findings that we've been getting in the past. As the former chair of the Cyber terrorism Program, the American Academy, I want to commend the logic of what Louise is doing in carrying paper reports. I said earlier, send me an email, I'll send you a lot of information, a lot of links. Don't count on being able to reach those links in a real terrorist incident.

Well, actually what I was working on was an inventory of the models, and your list is shorter than the actual number. Psychiatrists have a model, the social workers have a model, a lot of private agencies have models, a lot of people who want to franchise their services or make you qualify for reimbursement have models. Our original hope was to do an inventory that would be very systematic like a curriculum, a classic methodologically curriculum component analysis and find out what's common among all the models. The first problem we ran into is every time you ask somebody, "What's your training model?" It's, "Oh we did a training a while ago, but we don't do it that way anymore." And it changes because every piece of information that comes in, people make changes in their model.

We do know that there are certain elements that you see coming up over and over and over again from model to model. And in a sense it would be nice to be able to give you, but the Department of Public Health is now partnering with DMH has a very nice model for providing entrees into training, and the logical thing to do is to break a curriculum down into components, so you can take one piece here and it will apply to whatever accreditation you want. You can take another piece here. But we're still going to find that every agency does have specific requirements, and those requirements are a foundation of the fact that they serve slightly different populations, the fact that there is

an institutional culture, that you need to know about working with that organization. I did a training at Red Cross and a third of that training is our procedure, and there are philosophical difference in approach. So I don't think one approach is ever going to really cover it, but at this point it's simply not rational.

The last conclusion people came up with when we looked at this was, well everybody does debriefing, and as you can imagine that not even germane to the discussion anymore. What I think we are getting a movement towards, and the research that's being done that I talked about earlier is coming largely out of Dartmouth- those people are very good methodologically- and one of the things that we're moving toward are some very basic common sense approaches to how you deal with people that's becoming called psychological first aid, or compassionate care. That's hard to teach, and it's going to take us a while to develop a curriculum for that.

Fred Stoddard:

As a psychiatrist and child psychiatrist, I should say one thing because I avoided it the rest of the time, about medication, which is again similar to the debriefing question, the science, the evidence base is not there yet. So even you put SSRI, I mean most of us are scared to death. SSRIs for anybody. There was that FDA warning on adults that came out two weeks ago, and personally I think it's overblown and causing people to not get treatment or to be afraid of it, so I don't think there's any science base to what the FDA is doing, but that's a different issue. But we are going to have, I would give it also roughly the same time sequence as the debriefing: five to ten years we will have a much better idea on some medications that are, and then maybe ones we're already using, but we'll know better in different populations. And most interestingly, like you saw that co-morbidity slide I showed, I'll bet we'll end up with, here's something that's going to help somebody who's got a combination of PTSD and depression. Here's something that's going to help somebody that's got PTSD and panic, here's something that's going to help five year old child who's got separation anxiety in response, I think we'll be fine-tuning the cohorts and hopefully I'm sure all of us think that it won't be medication alone, that it will be combined treatments, and see if medication is indicated. And there are about five candidate medications at this point.

Carl Edwards:

Sure, just one quick comment. For three quarters of my career, and I began working in inpatient psychiatric settings, I spent three decades before the profession of psychiatry had a single medication that we understood the mechanism of action. I started out with phenothiazine I mean they were going to save the world. Took us decades to find out what that was really doing to people. In the last ten years there's been a rapid succession

of empirically and theoretically derived drugs. We've been making great strides in that area.

Fred Stoddard:

I have to disagree, actually. I've been at several psychiatric meetings lately where people who have basically been saying there's been nothing new really, even though we feel as if there is, mostly due to drug company advertising, but there really hasn't been much new in many of these treatments in the last several years.

Carl Edwards:

One statement response, there's certainly truth to that. I think people are understanding and targeting a little bit better than they were, but in reality we do not know, and I think there's a limit to the extent to which we're ever going to understand how our clinical business really works. So much of it is a function of individual characteristics and things that don't transfer easily, even with the best of teaching, from person to person.

Louise Carcione:

I just want to clarify something. When I talked about the kinds of things you might do if you're called to the scene it sounds very mundane, like making a peanut butter sandwich, sitting with someone and holding their hand, or making a phone call. And maybe that's not where you want to be, but if it is where you want to be, keep in mind you bring with you the training and academic excellence that you gain from institutions like this, and so we need you there to say, "This particular person is going to need a referral, and we need to find that group for that person, because maybe that person needs medication." It isn't always the case, and we certainly never give medication at a disaster scene, but we take people where they can be assessed, evaluated, and possibly given medication, or maybe they need a real classical approach to their traumatic experience. It's different for everybody.

Fred Stoddard:

I have one other interesting point. As we all know a traumatic memory is central to post traumatic stress, and that's really what causes the embedding of traumatic memory and what might prevent it, what agents or psychological interventions or both, and those cases where it shouldn't, where it's really impairing, and that's very interesting research.

Carl Edwards:

One last comment that may seem obvious to us because we're so accustomed to this fact and we don't get appreciation for that until you get actual experience at a disaster

setting. I talked a lot about earlier how people are attracted to emotion. That attraction is a very gross attraction. It's an emotional arousal that builds something in you as an individual, and in reality we could lose sight of this because of what we do for a day-to-day living. Once that starts to become focused in an interaction, most people who haven't been trained in it are terrified at it, and what they can look for in us as professionals someone who can come in who's not afraid of that, who knows how to make interpretations of it, and who can do something useful for them. You will be appreciated for being there. For that reason alone and for the expertise you bring. And it's been a pleasure this afternoon. Thank you.

David G. Satin:

I must say I expected this to be a very interesting and a very rich presentation, and I was wrong- it was even better than I expected. And you can see that we've opened up a large issue that people are eager to discuss and fertile ideas to expand on. We've gotten a wonderful array of presentations on theory, on clinical models, on practical application to disaster psychological responses, and I hope that this whole thing will be pulled together and we'll be able to present it to you in written form or in some other form for posterity. It should not be lost and should be a stimulus to continuing discussions. I want to thank you all for coming and I hope you will come next year to the 28th Annual Erich Lindemann Memorial Lecture.