The following is an excerpt of the piece from Jack Herrmann, MSEd, NCC, LMHC, Senior Advisor for Public Health Preparedness at the National Association of County and City Health Officials.

It is hard to believe that 10 years have gone by since September 11, 2001. In my memory, it feels like yesterday because I can recall the events vividly. That day and the work I did in the days, weeks and months afterward shaped my life in many ways.

When you think about public health and responses to natural or manmade tragedies, you think about the physical destruction these events leave on communities. However, the mental health impact from disasters is also incredibly important to consider. I began my disaster relief response work in 1993 with the American Red Cross and was deployed to my first large scale disaster in 1994, the Northridge, CA earthquake. I had seven years of disaster response under my belt before 9/11 and knew firsthand the importance of an integrated behavioral health response. What I wasn’t ready for was how the events of September 11th would transform my own understanding of terrorism as well as those of most everyone in our country.

At the time of the attacks, I was the New York State Disaster Mental Health Volunteer Lead for the Red Cross and in that leadership role responsible for working with Red Cross chapters across the state recruiting and training disaster mental health responders. I immediately called the NY State Red Cross Disaster Lead and received instructions to deploy to New York City. I rented a van, went to the local Red Cross chapter to gather supplies,

Cont. next page...
packed a few personal items and began my drive downstate.

Eventually I had the city in sight. I was struck by the absence of two of New York City’s most well-known landmarks replaced by a landscape of billowing gray-black smoke.

At one point I passed close enough to see the rubble from the buildings and the continuing fire and smoke. At that moment I thought to myself: “what could I possibly do, as one volunteer, in response to this massive event?”

The thought wasn’t with me for long as I was determined to do what I was trained to do. I needed to get to the Red Cross chapter and begin to coordinate our disaster mental health response. Throughout the rest of that day and into the first night I provided psychological support to Red Cross personnel that responded immediately to the scene after the first plane struck the tower, many of whom found themselves running for their lives when the buildings began to collapse. I also worked with the staff to coordinate the recruitment and selection of volunteers that would ultimately provide psychological support to victims and their families in the days and weeks to come.

At 4:00 a.m. on September 12, I and my Red Cross colleagues were called to a meeting with representatives from the New York City Mayor’s office to review the plan for opening a Family Assistance Center later that morning. This Center would be the first stop for many that were in search of the whereabouts of their family and friends who had still not returned home after the buildings collapsed.

It was announced that the center would open at 8:00 a.m., and by 6:00 a.m. there were thousands of people in line. We filled the first few hundred seats and began our work.

By the second day, those who had loved ones in the World Trade Center Towers likely already had their loved ones safely at home with them or knew of their whereabouts. Those who continued to show up at the center were not so fortunate and as the days progressed the prevailing sentiment was “no news wasn’t good news.”

The two weeks of my deployment and the subsequent year that I spent traveling back and forth from my home in Rochester to New York City, left an indelible mark on me. While my initial role was to coordinate the mental health response to this tragic event and provide emotional support to Red Cross volunteers and the families of those who died in the towers, my subsequent role was to work with City and Red Cross officials to plan for how to address the short and long-term psychological aftermath of this catastrophic incident.

The psychological impact I knew was big not only for those directly involved, but for people like myself that were called to respond. I had been involved with disaster work before, but I never fully appreciated the emotional impact that disasters, such as acts of terrorism can have, even on the most experienced disaster response professionals. This was a real awakening of my own vulnerabilities.

Professionally, it became clear how important it is to prepare and train individuals to work in a disaster environment. Frankly, one of the most challenging situations of managing the response to 9/11 was managing the staff, their frustrations and grief, and their expectations for what role they would play in this response. In addition, there were thousands of mental health professionals that wanted to help. While many were well-intentioned, few were truly prepared for the roles they would take on as a volunteer.

These were unprecedented times that, in many ways, many of us still find ourselves recovering from. On this, the 10 year anniversary, it has left us reflecting on where we were at the time, what contribution we made to helping those directly impacted by this tragic event, and wondering what would happen if something similar happened again. For those of us who are disaster response leaders, it reinforces the importance of building a robust and prepared nation — recruiting, training and sustaining a workforce, both volunteer and paid, that has the capability to be at the right place, doing the right things, at the right time.
RADIATION: AN INTRODUCTION

Radioactive materials that decay spontaneously produce ionizing radiation, energy that strips away electrons from atoms (creating two charged ions) or breaks chemical bonds. Any living tissue in the human body can be damaged by ionizing radiation. The amount and duration of radiation exposure affects the severity or type of health effect.

There are two broad categories of health effects: stochastic and non-stochastic. Stochastic effects are associated with long-term, low-level (chronic) exposure to radiation. Stochastic refers to the likelihood that something will happen such as cancer from the long term exposure. Non-stochastic effects appear in cases of exposure to high levels of radiation, and become more severe as the exposure increases. Short-term, high-level exposure is referred to as 'acute' exposure. Listed below are various threshold levels and health impacts for non-stochastic exposure:

<table>
<thead>
<tr>
<th>Exposure (rem)</th>
<th>Health Effect</th>
<th>Time to Onset (without treatment)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-10</td>
<td>changes in blood chemistry</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>nausea</td>
<td>hours</td>
</tr>
<tr>
<td>55</td>
<td>fatigue</td>
<td></td>
</tr>
<tr>
<td>70</td>
<td>vomiting</td>
<td></td>
</tr>
<tr>
<td>75</td>
<td>hair loss</td>
<td>2-3 weeks</td>
</tr>
<tr>
<td>90</td>
<td>diarrhea</td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>hemorrhage</td>
<td></td>
</tr>
<tr>
<td>400</td>
<td>possible death</td>
<td>within 2 months</td>
</tr>
<tr>
<td>1,000</td>
<td>destruction of intestinal lining</td>
<td></td>
</tr>
<tr>
<td></td>
<td>internal bleeding</td>
<td></td>
</tr>
<tr>
<td></td>
<td>and death</td>
<td>1-2 weeks</td>
</tr>
<tr>
<td>2,000</td>
<td>damage to central nervous system</td>
<td></td>
</tr>
<tr>
<td></td>
<td>loss of consciousness;</td>
<td>minutes</td>
</tr>
<tr>
<td></td>
<td>and death</td>
<td>hours to days</td>
</tr>
</tbody>
</table>

All kinds of ionizing radiation can cause cancer and other health effects. The main difference in the ability of alpha and beta particles and gamma and x-rays to cause health effects is the amount of energy they can deposit in a given space. Their energy determines how far they can penetrate into tissue. Alpha particles don't get very far in the environment. Once emitted, they travel relatively slowly (at approximately one-twentieth the speed of light) due to their electric charge and large mass. They lose energy rapidly in air, usually expending it within a few centimeters. Alpha particles also cannot penetrate most matter they encounter. Even a piece of paper, or the dead outer layers of human skin is sufficient to stop alpha particles. Because alpha particles are not radioactive, once they have lost their energy, they pick up free electrons and become helium.

Beta particles released directly to living tissue can cause damage at the molecular level, which can disrupt cell function. Because they are much smaller and have less charge than alpha particles, beta particles generally travel further into tissues. As a result, the cellular damage is more dispersed...
Radiation continued...

Beta radiation can cause both acute and chronic health effects. Acute exposures are uncommon. Contact with a strong beta source from an abandoned industrial instrument is the type of circumstance in which acute exposure could occur. Chronic effects are much more common. Chronic effects result from fairly low-level exposures over a long period of time. They develop relatively slowly (5 to 30 years for example). The main chronic health effect from radiation is cancer. The risk of cancer increases with increasing dose.

Most exposure to gamma and x-rays is direct external exposure. Gamma rays and x-rays, like visible, infrared, and ultraviolet light, are part of the electromagnetic spectrum. While gamma rays and x-rays pose the same kind of hazard, they differ in their origin. Gamma rays originate in the nucleus. X-rays originate in the electron fields surrounding the nucleus or are machine-produced. Most people's primary source of gamma exposure is naturally occurring radionuclides, particularly potassium-40, which is found in soil and water, as well as meats and high-potassium foods such as bananas. Radium is also a source of gamma exposure. However, the increasing use of nuclear medicine (e.g., bone, thyroid, and lung scans) contributes an increasing proportion of the total for many people. Gamma and x-rays can easily travel great distances through air and penetrate several centimeters in tissue. Most have enough energy to pass through the body, exposing all organs. X-ray exposure of the public is almost always in the controlled environment of dental and medical procedures.

Protection against the damaging effects of radiation is dependent on time exposed, distance to radiation source and shielding. Shielding simply means having something that will absorb radiation between you and the source of the radiation (but using another person to absorb the radiation doesn't count as shielding). The amount of shielding required to protect against different kinds of radiation depends on how much energy they have.

The farther away people are from a radiation source, the less their exposure. Distance is a prime concern when dealing with gamma rays, because they can travel long distances. Alpha and beta particles don't have enough energy to travel very far.

It's easy to understand how to minimize the time for external (direct) exposure. Gamma and x-rays are the primary concern for external exposure. However, if radioactive material gets inside your body, you can't move away from it. You have to wait until it decays or until your body can eliminate it. When this happens, the biological half-life of the radionuclide controls the time of exposure. Biological half-life is the amount of time it takes the body to eliminate one half of the radionuclide initially present. Alpha and beta particles are the main concern for internal exposure.

For more information go to the Environmental Protection Agency (EPA) site at http://www.epa.gov/radiation/
F-3 Tornadoes Devastate Communities, MRC Units Step in and Respond—I've never seen anything like it before...there were houses on top of cars...people were absolutely stunned...traumatized and walked around with a vacant, shocked look in their eyes." These are the words of Kathleen Conley Norbut, M.Ed., LMHC, describing the aftermath of F-3 tornadoes that touched down in western and central Massachusetts in the late afternoon of June 1, 2011. Conley Norbut is the MRC coordinator of western Massachusetts, a region that geographically encompasses more than 30 percent of the state.

Conley Norbut was out-of-state when she received a phone call from a hysterical friend telling her that the town of Monson was devastated. At the time, she was also serving as the emergency management director for the community and immediately recommended the appointment of an acting emergency management director for the town. Conley Norbut says she, "had to think of my role through a different lens as I was out-of-state. I started e-mails and calls, and put the continuity of operations plan (COOP) into place and contacted Michael Nelson, MRC coordinator for the neighboring Hampshire County, to coordinate the MRC volunteer deployment, and sent e-mails to unit coordinators to request volunteers—there was no stand-by notice."

She comments that when a catastrophe hits your region and your infrastructure is destroyed, you have to think of how you can reach people because communication is wiped out. Conley Norbut credits her being out-of-state for being able to communicate—if she had been in town, she would have had no way of communicating because the tornadoes destroyed the municipal office building that housed the emergency operations center, radio antennas, and the nearby cell tower. With communications and the emergency operation center compromised, Conley Norbut says, "The wounded were caring for the injured...whatever resources you have or don't have at the moment is what you have to work with."

MRC volunteers were deployed from up to 90 miles away and included people from the 17 western Massachusetts units, and central, northeast, and southeast Massachusetts MRC units. The MRC volunteers staffed three nearby shelters. For some volunteers, this was their first time in a shelter; therefore, just-in-time trainings were provided. The MRC staffed shelters in Springfield and West Springfield around the clock with three shifts for 30 days. Using the COOP, Conley Norbut surrendered her position as the MRC regional coordinator and filled the role of the MRC town coordinator, who was also out-of-state during the initial days of the response.

By days five and six, Conley Norbut notes that people were on edge and exhausted—they wanted "comfort, answers, and their life back." A resource center was opened and staffed with MRC volunteers who also donated office supplies and equipment. After 10 days, she turned the resource center over to the returning town of Monson MRC unit coordinator, Liz Manley. Conley Norbut then returned to regional operations to assist MRC coordinators, public health directors, and emergency preparedness planners in the ongoing challenges of managing volunteers and supplies to help survivors piece their lives back together.

Although people were overworked, stressed, and emotionally and physically exhausted, people were overall, very respectful. During the MRC debriefing, a volunteer observed that she witnessed, "rival gang members helping to setup cots...people overcame their differences."

From the August issue of MRC In Touch
And meet they do...and me they share
The only universal is...they care.
The Christmas Grinch or the Cat in the Hat,
This coordinator’s a bit like that!
The topsy-turvy hoorays and jeers
Of clients, care givers, bosses and peers.
The wants and the needs of disparate groups,
To be rallied and tallied and teamed into troops...
Troops that help, that try, that stumble-
But whose genuine efforts help keep me humble.
’Cause despite all the chaos, the re-vamping and silliness
A coordinator’s life abounds in willingness...
For everything I do, I get more in return,
For everything they give, I have to learn.

--Ann West,
UNICEF Victoria British Columbia Canada
Get Ready: Set Your Clocks, Check Your Stocks on Nov. 6

With communities across the East Coast still cleaning up from Hurricane Irene and earthquakes just prior in Virginia, Colorado and California, there’s no better time to remind ourselves of the importance of preparedness. Daylight saving time ends Sunday, November 6th. When it’s time to change your clocks, remember to check your preparedness kit, too.

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The American Public Health Association (APHA) has several ideas for setting up and having a Get Ready Day for schools, community centers, or groups wanting to sponsor an event. Go to [http://www.getreadyforflu.org/GetReadyDayPlanning.htm](http://www.getreadyforflu.org/GetReadyDayPlanning.htm) There is a wonderful booklet with lots of ideas to teach children about being prepared for an emergency. Wonder if we can make it happen? [www.getreadyforflu.org/GetReadyGamesGuideWeb.pdf](http://www.getreadyforflu.org/GetReadyGamesGuideWeb.pdf)

Standing desks help students burn calories

Elementary school students who stand at their desks can burn more calories than those who sit, according to a study in the August issue of APHA’s American Journal of Public Health. The study, involving 58 first-grade students in Texas, found that standing burned 17 percent more calories. It also found that participants who exceeded the 85th percentile in weight for their age and gender expended 32 percent more calories than those in the control group.

The study, though small, is important, researchers said, because rates of childhood obesity are rising and “obese children who grow into obese adults also have more severe health risks than do individuals with adult-onset obesity.”

The study also provided standing height stools that allowed students to sit at their discretion, targeted randomly selected classrooms and investigated students’ standing activity.

By week 12 of the study, 70 percent of the students were not using stools at all and the other 30 percent were standing, on average, about three-quarters of the time, researchers said.

**August 2011 The Nation’s Health**

National Childhood Obesity Awareness

There are more than 23 million children and teenagers in the U.S. are obese or overweight. MRC units can be the catalyst and work with community partners to spread the word about this important issue.

The 2011 toolkit can be found at [http://www.healthierkidsbrighterfutures.org/toolkit.pdf](http://www.healthierkidsbrighterfutures.org/toolkit.pdf) and more information can be found

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**August 2011 The Nation’s Health**
RESOURCES AVAILABLE TO VOLUNTEERS

CDC TRAIN Now Available

The Centers for Disease Control and Prevention (CDC) announced the most recent addition to the CDC Learning Connection (http://www.cdc.gov/learning), CDC TRAIN, a component of the nation’s most comprehensive public health learning management system (LMS). CDC TRAIN is an affiliate of the Public Health Foundation’s (PHF) Training Finder Real-time Affiliate Integrated Network (TRAIN). Through partnership with PHF, the CDC Learning Connection provides access to a searchable catalog of more than 22,000 computer-based learning products contributed by CDC and partners. http://www.cdc.gov/learning

A Brief History of the MRC

NACCHO has created the fact sheet, "A Brief History of the Medical Reserve Corps," which describes how after the life-altering events of 9/11, the volunteer physicians of the Stuyvesant Triage Center, recognized the need for an organized group of medical volunteers who would be trained and prepared to provide supplemental medical and public health support in response to emergency operations in New York City. The group submitted a proposal to the city, requesting that a cadre of trained medical volunteers be established; the proposal was alter expanded to suggest a nationwide group of volunteers be developed—a concept that eventually reached President George W. Bush and Congress.
http://eweb.naccho.org/prd/?NA409PDF
This is also posted on our website: www.wachusettmrc.org

MRC: In Touch

MRC: In Touch is a short newsletter published monthly with bits of national MRC news. Some of the information that is published in this newsletter is taken from In Touch. Each edition features unit activities, tips, announcements, and a calendar of events. All volunteers are eligible to sign up to receive the monthly e-newsletter. At the bottom of the newsletter is a box which allows you to sign up.
http://www.naccho.org/topics/emergency/MRC/newsletter.cfm

Radiation

Health effects are the central focus of EPA's Radiation Protection Programs. The site provides general health information and information that is considered as regulations and guidance are prepared on protective limits. Supplemental information to this issues information on radiation. http://www.epa.gov/radiation/understand/health_effects.html
ANNOUNCEMENTS/VOLUNTEER OPPORTUNITIES

**Do you have supplies for winter emergencies? Are you ready?**

We have several opportunities for community service:
1. We have purchased some backpacks that we would like to distribute to seniors. Inside each backpack we will provide a crank flashlight. We are looking for volunteers to contact and work with the seniors of community senior housing to educate and assist seniors to have an emergency kit. There have been scattered reports about senior housing that needed to be evacuated because of a storm or the aftermath of a storm. Seniors have come to shelters without some important papers such as medication lists or contact lists. And what about basic needs like hygiene products like toothbrush, soap, and Depends? We will provide the backpacks and the information, what we need are volunteers to contact the Senior Center or the Senior Housing in your hometown to set up a time and place to meet with the residents. Please call 978-928-3834 if you can help.

2. Flu Clinic help: The following flu clinics have been scheduled:

   - Hubbardston - October 29th 9:30 am report time, Hubbardston Senior Housing.
   - Hubbardston - November 5th at the Senior Center. Town wide flu clinic. Need 8-10 volunteers. Morning clinic.

   If you can help—nurses and non-nurses, please call 978-928-3834.

3. Whack the Flu- Puppet show teaching young children how to stay well during flu season. We would like to take this to daycare centers this fall. Very easy and fun. Short 20 min. presentation. Call 978-928-4086 to help with this important teaching program.

Trainings….We are finally at a point where we can offer trainings. We just had a very successful training September 20th at the Chocksett Inn in Sterling. We are working on a second training for early December on Special Needs Populations and their specific needs during an emergency event such as the loss of electricity from a storm or a need to evacuate to a shelter. We are looking for people with expertise with special needs populations to be part of a panel presentation.

Other ideas we have is to discuss pet needs during an emergency events or cultural diversity vs. cultural competency. Other thoughts are the impact of Quarantine and Isolation on the Community or a Disaster Response training. We are also looking at a couple of hands on trainings that look like they are not only educational but fun. Interested in helping? Call 978-928-4086.

**Reminders:**
1. Check the website for updates and new articles. Www.wachusettmrc.org
2. Also if you have a picture for your badge, please send it in...better you submit a picture you like than to chance our photography skills.
3. Please email wachusettmrc@juno.com with a note identifying yourself so we can update our email list. Many of our notices go out first over the email system.
Stress and Disaster, Relax and Survive

On September 20th, Dr. Hayden Duggan spoke at a training called Stress and Disaster, Relax and Survive.

Dr. Duggan spoke about the expected reactions that those who are the victims and those that are the responders may feel. He also spoke of the different stages of emotional recovery. It was a program packed with a lot of great information and enjoyed by all who attended the dinner meeting.

The program was held at Chocksett Inn in Sterling. Other programs are being planned for the coming year. Jonathan O’Dell will be our next speaker on working with and communicating with the deaf. A dynamic speaker who is also deaf. Date to be set but it will be soon, so look for a postcard in the mail or an email.