



Emergency Management Times

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**From
the Governor**

Earthquake strikes State

Dear Friends:

The events of September 11, 2001 have changed our lives forever. The tragedy of that day is indelibly etched in the minds of New Yorkers and all Americans across our Country. And while the citizens of the United States have been shocked and saddened by those unspeakable acts, we also stand united, stronger and more committed to defending our freedom than ever before.

I am encouraged by what I have seen and felt as I traveled throughout the great State of New York. At every stop — from lower Manhattan to the North Country, from Binghamton to Buffalo, and from Schenectady to Syracuse - our friends, neighbors and fellow citizens have displayed a resilient spirit and joined together in a resolve to rebuild the world's greatest city.

I have also witnessed the partnership among our first responders grow tighter. As firefighters, police, emergency services and management professionals focused on the shared mission at hand, their already strong bond strengthened even further. That partnership is the successful result of many years of training, preparation, and planning and I encourage you to continue to work together, review and update your plans as necessary and participate in tabletop and full-scale drills.

Furthermore, I wish to commend you on your courage and dedication. I am proud of the level of support

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An earthquake measuring 5.1 on the Richter scale struck New York State at 6:50 a.m. Saturday, April 20, and was felt across the State and, according to media reports, as far away as Boston, Cleveland and Baltimore. An aftershock measured at 4.0 quickly followed at 7:04 a.m.

The quake's epicenter was in the Town of Black Brook, 15 miles southwest of the City of Plattsburgh. There were no reports of fatalities or injuries, but there was damage to several roads as well as numerous reports of minor structural damage (building and cellar wall cracks) to homes and buildings in the region. Electric power was cut to more than 3,000 customers, but was quickly restored.

Governor George E. Pataki declared a State of Emergency for Clinton and Essex counties, making the full resources of State agencies available to assist the two affected counties in their response and recovery.

State Department of Transportation engineers were dispatched to inspect roads and bridges. A portion of State Route 9N north of Clintonville was closed to one lane of traffic because of a collapse and at least one county road was closed because of damage. Department of

Environmental Conservation personnel inspected all the dams in the area and found no damage. State Police conducted patrols to check the area for damage and to support local law enforcement as needed.

As of press time, a team of SEMO's Public Assistance Liaisons was dispatched to conduct a formal preliminary damage assessment with local officials.

The State Emergency Operations Center was activated and staffed with representatives from those agencies as well as State Police, Office of Fire Prevention (OFPC) and Control, Division of Military and Naval Affairs, and the State Emergency Management Office (SEMO).

"The state and local response to this event have shown once again that both the state and local government are trained, ready and prepared to conduct a coordinated response to any event that threatens the health and public safety of New Yorkers," Governor Pataki said.

The last earthquake of this magnitude in the Adirondacks, measuring 5.1, occurred on October 7, 1983, about 50 miles southwest of the April 20 quake, according to the Lamont-Doherty Earth Observatory of Columbia University, which registered the quake. □

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THE R

REPORTER



Responder Injuries in New York State, 1993-2000

By Wanda Lizak Welles, PhD, and Rebecca E. Wilburn, MPH

Are you a responder or involved in responder training? The data and lessons below may help you or those you train to avoid injuries.

A family staying at a hotel was transported to a hospital with symptoms which they believed to be due to food poisoning. When the physician received the results of the blood test, he notified the local fire department to check the hotel for carbon monoxide (CO). The fire department responded and found levels of 300 parts per million in the room where the family had stayed. The hotel was evacuated and twelve people were transported to hospitals due to symptoms of carbon monoxide exposure. Three of the injured people were firefighters who entered the facility

wearing firefighter turnout gear but without respiratory protection.

The New York State Department of Health (DOH) investigates spills or releases of non-petroleum chemicals. From 1993 to 2000, DOH staff working on the Hazardous Substances Emergency Events Surveillance (HSEES) project reviewed approximately 142,000 actual or threatened spills reported in New York State. Of that number, staff identified 4,078 events (2.9 percent) which qualified for the database because they were an actual or threatened release of a non-petroleum hazardous substance. Twelve percent of the events (494) involved injuries to 2,209 persons, most of them employees and the general public. However, 246 responders were injured. Over time, as we have worked to deliver our message,

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Figure 1.

Injuries most frequently reported for responders wearing firefighter turnout gear

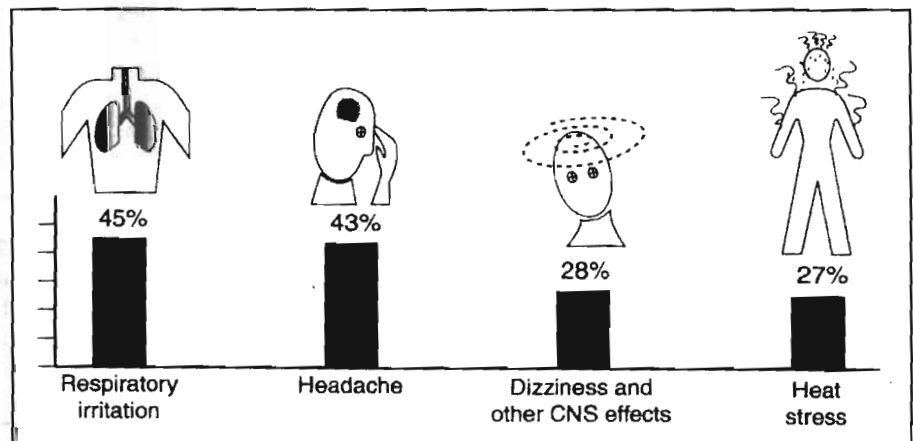
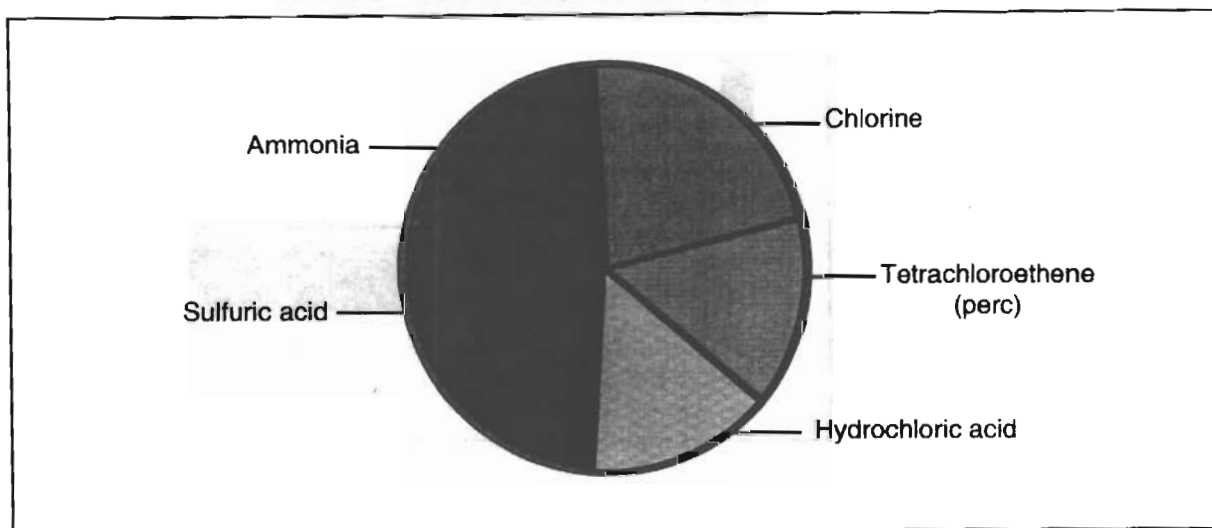


Figure 2.
Chemicals most frequently associated with events with responder injuries



we have learned of many other events with injured responders.

Some elementary school age children found containers that had been dumped in a field located in a residential area. While playing with a jar, one of the children threw it at another. The jar broke open, splashing an unknown substance on the children. The unknown substance also ignited nearby brush and started a brush fire. The area rescue squad was first on the scene. When they arrived, the children were complaining that their skin was burning. On-scene emergency medical technicians (EMTs) tried to clean the liquid off the children's skin using saline from the ambulance. The EMTs were overcome by fumes while trying to decontaminate and treat the patients. All the victims (two children, two EMTs and one other adult) were transported to the local hospital and treated; one was admitted. Later, laboratory reports identified the unknown substance as mixed chemical waste.

Data in our study show that more than half the injured responders (54 percent) wore firefighter turnout gear and 21 percent wore NO personal protective equipment (PPE). Our data indicate that many of these injuries may have been avoided with proper training and appropriate protective gear. The responders who reported with injuries were: professional and volunteer firefighters (151), emergency medical technicians (27), police officers (15), company hazmat team members (9), hospital personnel (5), and unspecified responders (39). The injuries most frequently reported by responders (see Figure 1) were respiratory irritation, headache, dizziness and other CNS effects, and heat stress. More than half the injured responders (153/246) were treated at medical facilities and released, but eighteen were admitted. About half the admitted responders were volunteer firefighters. No responder fatalities were reported to this project from 1993 through 2000.

A truck involved in a motor vehicle accident had no manifest available. When the fire department arrived on the scene, they discovered the cargo consisted of 120 golf cart batteries, many of which had broken open. Two responders wearing firefighter turnout gear opened the truck. They were transported to the hospital with respiratory irritation. Both responders were hazmat trained.

The five chemicals most frequently associated in events with injured responders in decreasing order (see Figure 2) were ammonia (24 percent), sulfuric acid (24 percent), chlorine (22 percent), hydrochloric acid (15 percent), and tetrachloroethene (perc, 15 percent). The factors contributing to events with responder injuries (see Figure 3) included fires, but also other causes such as operator error, equipment failure, and improper mixing. The data show that responders were injured in events with various causes and, in many cases, even when no fires were involved.

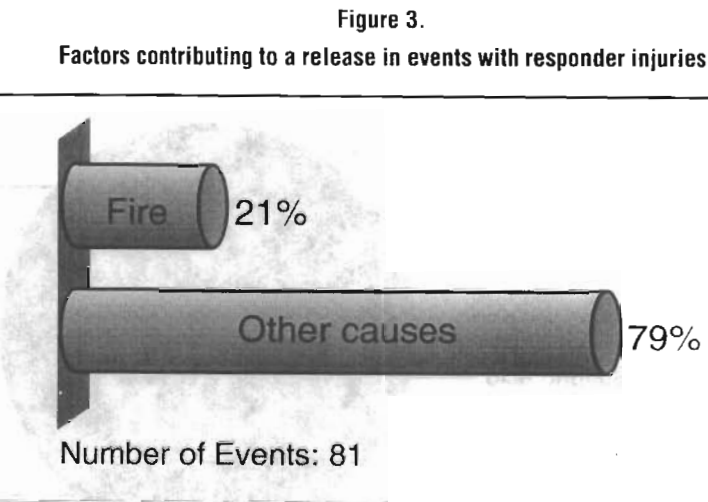
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Lessons learned

- 21 percent of injured responders wore NO PPE and 54 percent of injured responders wore firefighter turnout gear. **LESSON:** Wear appropriate PPE. Firefighter turnout gear is fire resistant but may not provide protection from chemicals.
- The most frequent responder injury was respiratory irritation. **LESSON:** Wear appropriate respiratory protection.
- Sulfuric acid, ammonia and chlorine caused most responder injuries. **LESSON:** Know your chemicals and their health effects.

Remember: Know your scene. Do not rush in until you do.

Early, on a hot summer morning, an electrical short started a fire at a regional recycling facility. The fire, which quickly spread to adjoining storage areas, was so hot that it melted I-beams. Several hours into the fire, the on-scene commander was notified that hazardous materials were on-site and involved in the fire. In addition to expected materials such as metals and plastics, firefighters learned that fertilizers, pesticides and sulfuric acid were in the buildings. At this point, those firefighters near the fire who had not been wearing respiratory protection donned their air packs. Thirty-five volunteer firefighters were treated on-scene or at a medical facility primarily for heat stress (35), headache (32), elevated blood pressure (30), and heart problems (26). Lesson learned from this event are that it is important for



responders to know the scene and its hazards, and that PPE, although necessary, also poses risks and taxes the wearer. All of the injuries in this event could have resulted from the physical demands of wearing firefighter turnout gear and the air packs in extreme heat. Firefighters must be trained to use PPE properly, to understand both the benefits and risks of its use, and know how to reduce those risks. Appropriate use of PPE must include consideration of both the environmental factors (potential exposures, temperature and humidity) and individual limitations (tiredness, dehydration and physical conditioning).

The goal of the HSEES project is to share lessons learned to reduce injuries and death from exposure to hazardous substances. Responders should review the lessons learned from these hazardous substances events and use this information to reduce future injuries.

If anyone would like a copy of the information contained here as a two-page informational fact sheet or as a poster, please contact HSEES staff at (518) 402-7810 or

1-800-458-1158, extension 2-7810. Both the fact sheet and the poster are also available electronically. □

About the HSEES study

The New York State Department of Health collects information on hazardous materials spills as part of the Hazardous Substances Emergency Events Surveillance (HSEES), a study supported by the Agency for Toxic Substances and Disease Registry (ATSDR). New York is one of 16 states now participating in the study.

The goal is to reduce death and injury associated with emergency hazardous materials spills and releases. To reach this goal, we collect spill information such as the location and cause of the release, resulting injuries and evacuations. The information is then analyzed and patterns in the spills and injuries are evaluated for possible interventions such as better emergency planning, additional worker training, or improved equipment maintenance.

Visit our web site at

www.health.state.ny.us/nys-doh/enviro/hsees/hsees.htm. □