

TESTIMONY
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before the

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Committee on Oversight and Government Reform

9/11 Health Effects: The Screening and Monitoring of First Responders

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Good morning, Congressman Towns and Subcommittee Members. My name is Lorna Thorpe, Deputy Commissioner of the Division of Epidemiology at the New York City Department of Health and Mental Hygiene.

Thank you for inviting me to be here today to discuss the findings of two new scientific studies published this month on impact of the World Trade Center disaster on the health of rescue and recovery workers. These studies, conducted using the largest sample of exposed workers and volunteers assembled to date, add important new findings to the growing body of information on the physical and mental health effects of the disaster. They are based on interviews during 2003 and 2004 with more than 25,000 rescue and recovery workers enrolled in the World Trade Center Health Registry.

The World Trade Center Registry (WTCHR):

The World Trade Center Health Registry was conceived soon after September 11th, and is one the nation's main platforms to better understand possible short- and long-term WTC-related illnesses. It was developed as a collaborative effort between the NYC Health Department and the Agency for Toxic Substances and Disease Registry (ATSDR). Initially funded through FEMA, and later through special 9/11 Congressional appropriations, the Registry has sufficient funding to last through Federal FY 2008; we estimate that it requires at least \$4.5 million per year to maintain the Registry for the remainder of its 20-year life.

In all, more than 71,000 individuals voluntarily enrolled in the Registry during the one-year enrollment period that ended in November 2004. Registrants include persons from every state and almost every Congressional District in the U.S. – in fact more than 20% of the enrollees lived outside New York State on September 11, 2001. Every enrollee met criteria that put him or her at a high likelihood of having been exposed to the physical and emotional environments of the WTC disaster. In addition to workers, the Registry includes more than 14,000 lower Manhattan residents, 10,000 tower survivors and survivors of other damaged or destroyed buildings, 19,000 occupants of other nearby buildings, 3,000 children, and 13,000 people who were on the streets or in transit around the World Trade Center at the time of the building collapse. (There is some overlap among these groups.) During the recruitment period, extensive efforts were made to estimate the size of the affected population and to compile lists of potentially-exposed individuals for active recruitment purposes. Nearly one-third of the Registry was recruited from such lists, allowing us to understand the differences between those who self-enroll into registries and clinical screening programs (who tend to have worse health effects) and those whom we recruited.

All participants completed an enrollment interview. The Registry will monitor the health of enrollees over a 20-year period, through periodic health surveys and assessments of mortality and cancer incidence, and serve as a resource for the development of special studies by either government or academic institutions.

The size of the Registry makes it the largest effort in the history of the United States to systematically monitor the health of persons exposed to a public health threat. Because of its size and diversity, the Registry can illuminate patterns and provide valuable guidance to potentially affected groups, medical care providers, emergency planners and other policy makers.

The two peer-reviewed studies published this month are based on analyses of the initial Registry surveys of enrollees. They report on the development of asthma and post traumatic stress disorder (PTSD) among rescue and recovery workers after 9/11. Both are potentially lifelong conditions that can be controlled and alleviated with appropriate treatment. The Health Department and clinicians from New York City's three WTC Centers of Excellence have developed and distributed treatment guidelines for WTC-related respiratory and mental health conditions to more than 26,000 physicians in the city.

“Asthma Diagnosed after September 22, 2001 Among Rescue and Recovery Workers: Findings from the World Trade Center Registry”

The asthma study, published in the journal, *Environmental Health Perspectives*, (<http://ajp.psychiatryonline.org/cgi/reprint/164/9/1385>) found that 3.6% of previously asthma-free rescue and recovery workers reported having been diagnosed with new-onset asthma by a physician within a 2-3 year time periods after working at the WTC site. The rate measured in this study is 12 times higher than expected for the general adult population in such a time period; new-onset asthma among adults is not a common occurrence, it more typically starts in childhood. Our findings also show that rates of asthma were highest among two groups of workers: those who arrived soon after the buildings collapsed, particularly those arriving on September 11th and September 12th; and those who worked more than 90 days at the site. For workers who arrived on September 11th and worked more than 90 days, rates of asthma were as high as 7%, 24 times higher than would have been expected.

Certain respirators or masks can reduce exposure to hazardous dust when used correctly. While the survey did not distinguish among different types of respirators or masks, or gauge correct usage, something that the Registry's follow-up survey of these workers will be looking at, we found that reported mask use afforded moderate protection against developing asthma. Workers who wore them on September 11th and September 12th reported lower rates of newly-diagnosed asthma --4.0% and 2.9%, respectively -- than those who did not -- 6.3% and 4.5%. The study found that the longer the period of not wearing respirators or masks, the greater the risk, although all worker groups, including those who reported wearing masks, had elevated levels of newly reported asthma.

The self-reported asthma findings in this study are consistent with, and add important additional information to, prior studies by the NYC Fire Department, (“Pulmonary Function After World Trade Center Exposure in the New York City Fire Department”) which documented time of arrival to be an important predictor of lung function decline, as well as a study previously published by the Mt. Sinai Medical Monitoring program

(“The World Trade Center Disaster and the Health of Workers: Five-Year Assessment of a Unique Medical Screening Program”) describing respiratory symptoms and lung function decline among workers being screened.

“Differences in PTSD Prevalence and Associated Risk Factors Among World Trade Center Disaster Rescue and Recovery Workers”

Another study published this month in the *American Journal of Psychiatry*, (<http://www.ehponline.org/docs/2007/10248/abstract.html>) examined survey responses of nearly 29,000 rescue and recovery workers enrolled in the Registry who worked directly at the WTC site. Using a formal screening assessment to detect probable PTSD, we found that one in eight workers – or 12.4% -- had PTSD at the time of their interviews in late 2003 and 2004. The prevalence of PTSD in the U. S. population is roughly 4% at any given time. Post traumatic stress disorder can be devastating, affecting the sufferer’s families and work lives. People with PTSD are also more likely to suffer from depression and substance abuse.

Levels of PTSD among these workers varied significantly by occupation, with rates ranging from 6.2% among police officers to 21.2% among volunteers not affiliated with an organization. Workers from non-emergency occupations, such as construction, engineering and sanitation, also suffered particularly high rates of PTSD. This finding may reflect that these workers do not typically have disaster preparedness training or prior experience with emergencies, both of which can help buffer psychological trauma.

As with the asthma study, people who started work on or soon after 9/11, or who worked for longer periods, were also more vulnerable to developing PTSD. For all occupations except police, the risk of PTSD was greatest among those who were at the site for more than three months.

The study also found that working outside one’s area of expertise-- for example civilian volunteers engaging in firefighting or engineering and sanitation workers performing search and rescue, or firefighters involved in construction-- raised the risk for PTSD among these workers. Sustaining an injury or having to evacuate a building also raised the risk of PTSD in nearly all the groups.

These studies demonstrate the need for continued monitoring and care of exposed workers, and they offer important lessons to help emergency planners reduce the impact of future disasters. These lessons include ensuring the availability of respiratory and other protective equipment and training in its use; the value of disaster preparedness and training for all types of emergency responders; the use of shift rotations to reduce workers’ duration at emergency sites; and limiting the exposure of those who have less prior exposure to trauma, such as volunteers.

In addition to our work on these studies, the NYC Health Department, is conducting a number of other studies using the World Trade Center Health Registry as a foundation. First among these is a clinical investigation of respiratory health, in collaboration with

Bellevue Hospital. This study focuses on residents and building occupants in lower Manhattan who report persistent respiratory symptoms and aims to identify any potential health impacts from exposures to dust and debris in homes and workplaces. Our partner, Bellevue, provides New York City-funded treatment services to more than 1,400 residents, office workers and students with 9/11-related health conditions. We have a number of other Registry studies under peer review at medical journals and in clearance at the Centers for Disease Prevention and Control, including studies examining the health impacts among adult residents and children.

We also are actively involved in implementing a number of recommendations from the comprehensive report "Addressing the Health Impacts of 9/11", commissioned by Mayor Bloomberg. These include:

- establishing a program to provide mental health services for people who continue to suffer the psychological effects of 9/11 that will replace a privately funded program which expires this year;
- working with our partners in a WTC Medical Working Group, a group of experts appointed by the Mayor to review the adequacy of health and mental health services available to WTC-exposed persons, and to advise city government on approaches to communicating health risk information;
- hiring a World Trade Center Health Coordinator who already has developed a one-stop shopping website for 9/11 health information and services, where the public can find links to the studies I have just described.

Presently, the Health Department is conducting its second survey of all 71,000 persons enrolled in the World Trade Center Health Registry to learn more about their current health status. So far, 60% of registrants have responded to mail and e-mail survey solicitations, a remarkably high response rate (mail surveys rarely obtain response rates higher than 20%). As of last week, we have initiated telephone calls with the remaining 40% and we aim to continue data collection through 2007. Even more remarkable, out of more than 71,000 registrants, only 52 persons originally enrolled in the Registry have withdrawn, even though we provide them the opportunity to do so in most communications. This speaks to the level of commitment that enrollees have to the Registry's mission.

This second survey will help determine whether respiratory and mental health conditions have persisted six years after the disaster and whether any new symptoms or conditions have emerged. It includes not only questions about mental and physical health conditions, but also about bereavement, social support, and access to health care and medical treatment. An important goal for the follow-up survey is to identify and help address gaps in medical and mental health treatment. Periodic re-surveys are planned by the registry.

The collapse of the World Trade Center towers on 9/11 was an unprecedented urban environmental disaster brought on by a terrorist attack upon our nation. We share, with others in this room, a commitment to better understand the health consequences of this

event and to assure effective services are available to those in need. The WTC Health Registry is a unique resource designed to monitor and systematically document the health impacts of this disaster over a 20-year period. While the Registry's funding is secured for the next year, it is essential that our commitment to the more than 71,000 people enrolled from across the nation be sustained and its viability assured for its intended 20-year life. We are grateful to the New York City Congressional delegation and to Mayor Bloomberg for providing funding to support the critical medical monitoring and treatment programs at the Centers of Excellence and the Registry. We are confident that working together and with our elected officials nationwide, we can improve medical and health care services to address the needs of first responders, recovery workers, residents and all those who may have suffered health effects related to the events of September 11, 2001.

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