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Mount Sinai to Announce Preliminary Findings of Medical Health Screening Program for WTC-Site Responders

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Analysis Reveals Over 50% of Responders Experience Pulmonary, ENT and/ or Mental Health Symptoms One Year Following NY Terrorist Attacks

New York - Today, Mount Sinai physicians announced official preliminary findings of a federal medical screening program developed to evaluate health problems and hazardous exposures experienced by worker and volunteer emergency responders in New York in the wake of the September 11th terrorist attacks.

Coordinated by the Mount Sinai-Irving J. Selikoff Center for Occupational and Environmental Medicine at Mount Sinai Medical Center, with the support of the National Institute for Occupational Safety and Health (NIOSH) of the Centers for Disease Control and Prevention (CDC), the program - *The World Trade Center Worker & Volunteer Medical Screening Program* - offers free and confidential medical screening examinations nationwide for exposed workers and volunteers - individuals whose tireless post-September 11 efforts in the rescue, recovery and cleanup work at Ground Zero and the Staten Island landfill exposed them to a wide range of environmental hazards and placed them at risk for resultant health problems.

An analysis of the physical examination findings, symptoms and hazardous exposures experienced by an initial group of 250 WTC Program participants documents that approximately half of the sample experienced persistent WTC-related pulmonary, ENT and/or mental health symptoms 10 months to one year following the New York terrorist attacks. These results indicate the need for medical treatment and a long-term monitoring program.

The findings were released by Dr. Kenneth Berns, CEO and President of Mount Sinai Medical Center and WTC Program Directors Drs. Stephen Levin and Robin Herbert at a major press conference at the New York City medical center with Congressional and

federal agency and labor leaders in attendance.

"These preliminary results demonstrate the importance of the screening program, given the documented persistent effects on the physical and psychological health of the WTC workers and volunteers," said Dr. Levin, who also serves as Medical Director of the Mount Sinai-Irving J. Selikoff Center for Occupational and Environmental Medicine. "The findings also point to the

need for treatment resources and for short-and long-term follow-up. The earlier these WTC-related illnesses are detected and treated, the more likely that treatment will prevent long-term illness and disability," he said.
Major findings of the preliminary analysis include:

- 78% of participating emergency responders reported at least one WTC-related pulmonary symptom that first developed or worsened as a result of their WTC-related efforts; 46% of the sample still experienced at least one pulmonary symptom in the month before the screening examination.
- 88% reported at least one WTC-related ear, nose or throat (ENT) symptom; 52% of the sample still experienced at least one ENT symptom in the month before the screening examination.
- 52% reported mental health symptoms requiring further mental health evaluation; approximately 1 in 5 of the sample reported symptoms consistent with post-traumatic stress disorder (PTSD).

Most striking is the fact that a large proportion of this sample showed evidence (either symptoms or abnormal test results) of respiratory disease 10 months to one year after September 11, 2001. Seventy-three percent of the sample had either ENT symptoms or abnormal physical examination findings or both. Similarly, 57% of the sample had either pulmonary symptoms or an abnormal pulmonary function test or both.

"The high prevalence of pulmonary, ENT and mental health symptoms among WTC-site workers some 10 months to a year following the September 11 terrorist attacks is alarming," said Dr. Robin Herbert, who also serves as Medical Co-Director of the Mount Sinai-IJ Selikoff Center. "Our preliminary findings clearly demonstrate the need for the immediate screening of WTC-responders, as well as the provision of medical follow-up. Our findings are consistent with the findings from a number of related health studies, including government-funded analyses, all of which support the urgency of providing appropriate health services for these workers," she added.

"Clearly, Mount Sinai's findings demonstrate the value of this NIOSH-funded screening program for identifying, characterizing, and addressing the chronic health problems experienced by some WTC workers," said NIOSH Director John Howard, M.D. "The preliminary data also will help inform ongoing research and recommendations to protect emergency responders and others from hazards associated with catastrophic incidents."

Data presented were analyzed on a random sample of 250 WTC Program participants

selected from the first 500 WTC-responders to participate. To date over 3,500 WTC-responders have been screened as part of the existing one-year program, scheduled to conclude in July 2003.

Only about one-third of the sample participants had received any prior medical care for their symptoms and conditions before participating in the screening program, emphasizing the critical need for medical screening. To date, federal funding has been received to support a total of 9,000 medical screening examinations, one each for 9,000 of an estimated 40,000 plus responders that have been estimated to have participated in post September 11, 2001 efforts at Ground Zero.

Further follow-up of affected workers is also clearly indicated in order to monitor the chronic nature and severity of these health problems and to assure that proper treatment is received.

"In the wake of the September 11 attacks, tens of thousands of brave men and women selflessly put themselves in harm's way to help others. Providing appropriate screening and follow-up is the very least we can do for them," said Dr. Philip Landrigan, Chair of the Mount Sinai Department of Community and Preventive Medicine. "Every one of us at Mount Sinai are grateful to our leaders in New York and Washington whose efforts make this program possible."

The twelve million dollars in initial federal funding was secured for the one year screening program through the efforts of **Senator Hillary Clinton, who will be speaking at today's press conference**, with the support of Senator Charles Schumer, New York's Congressional leaders in the House, and labor leaders.

The medical screening program was established after months of planning in July 2002 to provide free medical assessments, diagnostic referrals and occupational health education for workers and volunteers exposed to hazards of the World Trade Center site and/or Staten Island landfill in New York City in the aftermath of September 11, 2001 in the course of their efforts in rescue and recovery, restoration of essential services, clean up and/or debris removal.

WTC Program services are provided by a consortium of occupational medicine centers in the New York metropolitan region and nationwide under the auspices of Mount Sinai's Center for Occupational and Environmental Medicine working in conjunction with the Association of Occupational and Environmental Clinics (AOEC).

Workers and volunteers interested in obtaining more information or registering for the program are asked to call the WTC Program phone bank at *1-888-702-0630.*

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FACT SHEETS - More About The WTC Program, Screening Examinations, Preliminary Findings:

The Goals of the WTC Medical Screening Program are:

- To identify individuals who sustained exposures at or near the WTC-site or the Staten Island landfill during rescue/recovery activities.
- To provide clinical assessments for exposed individuals to identify those with persistent WTC-related medical conditions.
- To coordinate referral for follow-up clinical care for affected individuals.
- To educate individuals about their exposures and the associated risks to health, and to advise them about benefit and entitlement programs available.
- To establish "baseline" clinical status for individuals exposed at or near "Ground Zero" for purposes of comparison with future clinical assessments for diseases with chronicity or longer latency.

Each Medical Screening Examination includes:

- Comprehensive self-administered and health-care provider administered medical questionnaires
- Physical examination by a physician
- Pulmonary function tests (spirometry) with bronchodilator administration
- Standard blood tests and urinalysis
- Chest x-rays
- Psychological screening questionnaires, with on-site referral to mental health professionals
- Interviewer-administered exposure assessment questionnaires
- Each examinee is sent a final letter describing the results of his/her examination and also receives a packet of occupational health information related to the screening program, WTC-related health effects, and benefit programs.

Participating Provider Partners:

The WTC Medical Screening Program offers exams at the following NY-NJ locations: *Manhattan:* Mount Sinai Center for Occupational and Environmental Medicine and Bellevue/NYU Occupational & Environmental Medicine Clinic; *Queens:* Queens College Center for the Biology of Natural Systems; *Long Island:* SUNY Stony Brook/L.I. Occupational & Environmental Health Center with various examination sites in Nassau and Suffolk Counties; *Westchester (Yonkers):* Mount Sinai Center for Occupational and Environmental Medicine/Hudson Valley Division at St. John's Riverside Hospital; *New Jersey (Piscataway):* UMDNJ Environmental & Occupational Health Sciences Institute. In addition, screening examinations ware available elsewhere in the U.S. through the Association of Occupational & Environmental Clinics.

More about the Preliminary Findings:

To assess the prevalence and severity of health problems and hazardous exposures experienced by workers and volunteers participating in the World Trade Center Worker and Volunteer Medical Screening Program, participants' medical charts were reviewed. The analysis conducted provides data on a random sample of 250 of the first 500 patients examined under the auspices of the WTC Program during the period July 16-August 29, 2002 - preliminary descriptive statistics focusing on a limited number of symptoms and examination findings on the random subset of examinees. To date, over 3,500 individuals have been seen at the WTC Program, and as on-going analysis is being conducted on data collected from all participants in the Program, the presented findings are considered preliminary. However, since the initial sample includes a large proportion of workers (e.g., telecommunications employees) who were working near but not directly on the pile, these data may underestimate the prevalence of symptoms and illness experienced by all program participants.

The analysis is also consistent with earlier clinical experience that indicated a high proportion of workers at the WTC site experiencing persistent WTC-related symptoms - particularly upper and lower respiratory and mental health symptoms - as well as independent studies. The high prevalence of upper respiratory symptoms is corroborated by a high prevalence of abnormalities observed upon physical examination.

Sample Demographics:

The 250 participant sample was predominantly male (96%), Caucasian (69%), with a median age of 40 (range 24-63). Gender distribution of the initial 250 participants is significantly different than the entire group of eligible participants. To date, more recent screening participants include a larger proportion of women. Largest occupational groups represented among the 250 participants were telecommunications field technicians and police officers, who together make up 60% of the total sample. However, many other occupations were represented, including

construction, transportation, sanitation, park and emergency medical workers. Again, since this initial sample includes a large proportion of workers (e.g., telecommunications employees) active near but not directly on "the pile," these data may underestimate the prevalence of illness experienced by all program participants.

Ground Zero Site Exposures:
In the months following the September 11, 2001 attacks on the World Trade Center, there became a growing concern about injuries and illnesses related to the disaster sustained by the many thousands of individuals who worked or volunteered at or near "Ground Zero." Workers at or near the WTC site had potentially sustained exposures to: 1) a range of environmental toxins, including cement and glass dust, asbestos, fiberglass, respirable and larger particulate matter - much of it highly alkaline - as well as lead and other heavy metals, PCBs, dibenzofurans, volatile organic compounds and other products of combustion; 2) psychological trauma; and 3) physical hazards including fire, collapsing buildings, falling debris, noise and extremes of temperature. There was mounting evidence of a high prevalence of respiratory illnesses among New York City firefighters and among ironworkers who were at Ground Zero. At the same time, it became clear that there were numerous other groups who were at or near the site during and after the WTC disaster who were also suffering from a variety of WTC-related health problems.

The majority of participants analyzed to date (76%) were working at the WTC site or the landfill either on September 11, 2001, or the following day. Twenty four percent were still working at the site/landfill at the time of the examination. The remaining 76%, whose site/landfill work ended before the examination, worked a median of 94 days (range 3-324 days), or about 3 full months, on site. Among those present in lower Manhattan on September 11, 2001 at any time of day, half were directly in the cloud of dust created by the collapse of the WTC buildings and another 31% were exposed to significant amounts of dust.

Symptoms - Upper and Lower Respiratory:
A large proportion of the sample reported respiratory symptoms which first developed while working at the WTC site or landfill. Additional participants reported that symptoms which pre- dated September 11, 2001, had worsened during work at the site/landfill. Workers were considered to have a WTC-related symptom if the symptom either first developed after exposure at the WTC or worsened following exposure at the WTC. At least one WTC-related pulmonary symptom was reported by 78% of the sample, and at least one WTC-related ear, nose or throat (ENT) symptom was reported by 88% of the sample. In addition, about half of the sample was still experiencing at least one pulmonary symptom (46%) or ENT symptom (52%) in the month before the screening examination. Respiratory symptoms which first developed while working at the WTC site or landfill included throat irritation (44%), dry cough (38%), blowing nose more often (35%), chest tightness (28%), head or sinus congestion (26%), and shortness of breath (25%).

Physical Examination and Pulmonary Function Test Findings:
Nasal mucosal inflammation was observed in 49% of the sample and swollen nasal turbinates were observed in 36%. Pulmonary function tests demonstrated a high prevalence of respiratory abnormalities. Twenty five percent of the 250 examinees had restriction, obstruction or mixed abnormalities. This high prevalence is not likely to be due to smoking since 58% of this sample had never smoked. There were comparable prevalences of reversibility after bronchodilator use among those with restriction only, obstruction only, and combined (mixed) abnormalities; about 1/3 of each of those groups.

Symptoms - Mental Health:
About half of the sample reported symptoms on a screening questionnaire consistent with diagnosable mental health problems and/or significant problems with psychosocial functioning such as problems with a spouse/partner, children, work, or social or home life. About half of the sample (52%) was referred for

further evaluation by a trained psychiatric provider based on their questionnaire responses and, in a few cases, due to a clinician's judgment. About 1 in 5 participants reported symptoms on the screening questionnaire consistent with post-traumatic stress disorder (PTSD) (22%). Nearly 2 in 5 (37%) reported symptoms of anxiety, insomnia and depression (using the General Health Questionnaire), which triggered further evaluation.

PTSD rates, as assessed by a PTSD Symptom Checklist, are comparable in prevalence to other recent studies of workers in the vicinity of the World Trade Center. Of 191 federal employees working near the WTC site, 25% reported symptoms consistent with PTSD 8 weeks after September 11th. Six months after September 11th, PTSD symptom prevalence among 374 employees at the Borough of Manhattan Community College was 15%. In control groups in these studies, PTSD prevalence was much lower: 4% among Dallas federal employees, and 8% among

York College employees (in New York City but not near the WTC site). The high prevalence of PTSD among our participants 10 months to a year after the WTC disaster is indicative of persistent serious mental health problems.

Evidence of Disease by Questionnaire and by Physical Examination and Pulmonary Function Test:
One would expect to find that persons with ENT or pulmonary symptoms (WTC-related symptoms in the "past month") would be more likely to show abnormal findings on physical examination, an expectation now confirmed by our data. Participants with ENT symptoms were significantly more likely to have abnormal nasal examination findings, and participants with pulmonary symptoms were significantly more likely to have a bronchodilator response and had more frequent abnormal pulmonary function test results.

Most striking is that a large proportion of this sample showed evidence (either symptoms or abnormal test results) suggesting respiratory disease 10 months to one year after September 11, 2001. Seventy-three percent of the sample had either ENT symptoms or abnormal physical examination findings or both. Similarly, 57% of the sample had either pulmonary symptoms or an abnormal pulmonary function test or both.

Diagnoses Prior to Participation in the Screening Program:
In contradistinction to the high rates of abnormalities detected in these examinations, only 38% of the sample had sought and received any medical care for WTC-related health problems before participating in the screening program and fewer had received a diagnosis of an illness. The most commonly diagnosed conditions were sinusitis and/or nasal inflammation.

Lost Work Time and Workers' Compensation:
While 38% of the sample had previously received or were receiving medical care for WTC-related health problems at time of exam, and 21% had missed workdays because of WTC-related health problems, and despite the high prevalence of symptoms and abnormal physical examination findings, only 8% of this group had filed for workers' compensation for a WTC-related injury or illness.

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