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The New York Times

January 11, 2002

Studies Will Take Sept. 11's Measure in Health Effects

By KIRK JOHNSON

Public health researchers in New York, struggling to determine the real dimensions of the health threat at the World Trade Center site, are beginning an ambitious series of long-term studies to identify and then track a wide range of people who lived through the nightmare of dust, smoke and stress when the towers fell.



Steffen Kaplan/The New York Times

Medical literature offers little guidance on effects of the cloud that spread over New York when the twin towers fell.

Two Manhattan hospitals, for instance, are collecting blood samples from pregnant women who say they were in the vicinity of the trade center on the morning of Sept. 11 or in the days afterward. Mount Sinai School of Medicine will send out 3,000 letters to obstetricians in the region as early as next week, also seeking pregnant women who were near ground zero for a related study that will look at the possible effects of maternal anxiety as well as toxic substances in the air.

Beginning next Monday, physicians and investigators from Queens College will start searching for nonunion day laborers, many of them now dispersed into the work force, who helped clean up dust-saturated buildings around the trade center in the weeks just after the attacks. The New York Academy of Medicine is beginning an even more ambitious task: building a registry of every person — from the firefighters to members of the New York City Transit tunnel crews — who worked, even for a day, at ground zero.

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The researchers say that while these studies are, in certain respects, the sort of work that invariably follows major disasters and accidents, they also say that the variety of the inquiries reflects a disturbing but ever-growing realization among health experts: four months after the attacks, very little can be said with scientific certainty about the health risks that recovery workers or bystanders faced in the disaster and the cleanup.

That uncertainty, which some health and environmental experts now say was perhaps not adequately reflected by public officials in the days and weeks after the attacks, underscores how unique the World Trade Center disaster was as a public health emergency.

The blast of dust and smoke — and the toxic substances, fibers and ash that blew through New York in the days afterward — is without precedent in medical literature, which means that there are no studies to fall back on for guidance on whether to be alarmed or reassured.

The air-monitoring system that was set up after the attacks — indeed, the whole science of air monitoring — is based chiefly on long-term exposures associated with ordinary air pollution or workplace hazards. This means that the effects of short, intense bursts of pollution — the sort experienced by many thousands of people on Sept. 11 — are far less known.

"There are gaps in our knowledge base," said Dr. Frederica P. Perera, a professor of public health at Columbia, who is leading one of the prenatal projects.

Professor Perera said that based on the evidence already reported, she does not expect to find widespread health consequences in her prenatal study. The air-quality measurements for things like asbestos, PCB's and dioxins, taken in the neighborhoods around the World Trade Center, have consistently shown little cause for worry about long-term health.

But as a scientist, she cannot offer any definitive reassurances when an anxious resident or downtown office worker calls. "Because of the uncertainty, and the paucity of the data, it's important to lay to rest the anxieties," she said. "And we'd like to be able to provide reassurance based on data."

Some \$10.5 million was made available by the federal government alone this week to finance medical and health studies and worker environmental training related to Sept. 11.

Studies like these are intensely complicated, a difficulty compounded in New York by the demographics of an area where residents, tourists and office workers — many of them commuters — are mixed together. No one has any idea how many pregnant women, for example, were downtown on Sept. 11. The Columbia study is seeking 300 of them — some more

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exposed to the ash and dust, some less — while Mount Sinai is hoping for another 300, with some overlap likely between the two.

Cleanup workers, many of them immigrants who do not belong to labor unions, have gone on to other jobs and may be impossible to find. One cleanup company that had 1,800 workers two weeks after the attacks now has 50, according to Dr. Steven Markowitz, director of the Center for the Biology of Natural Systems, an environmental and occupational health research institute at Queens College, which is leading the search for those workers.

Dr. Markowitz said his mobile examination vehicle, to be parked near City Hall, will have a physician, a breathing-test technician and an interviewer, all of them fluent in Spanish, the language spoken by most of the cleanup crews. He said that part of his motivation in starting the study is the issue of economic disadvantage.

"These guys are about the least likely group to get any medical attention," he said. "They either don't have access to health care, or will go to a neighborhood doctor who doesn't have a clue about toxins."

Even defining what "exposed" means has required rigorous new methodology. The Mount Sinai study, for example, has identified three zones around ground zero, each of which — based on existing air monitoring — will figure in the analysis.

Meanwhile, researchers at the University of Medicine and Dentistry of New Jersey and at the Lamont-Doherty Earth Observatory at Columbia are working on pinpointing where the smoke plume went in the days immediately after the attack. In this way, a zone of exposure in, say, Brooklyn Heights, which was downwind just after the attacks, might be better compared to one in TriBeCa in Manhattan.

Other approaches are more fine-tuned. The Mount Sinai study is focusing on women who were in Lower Manhattan on Sept. 11 itself, and within that group is only really seeking women who were south of Chambers Street, a few blocks from the trade center. The Columbia study, by contrast, is seeking women who were downtown on the day of the attacks or in the days afterward, but it draws a line three miles around ground zero, beyond which a woman is considered "unexposed."

Some of the researchers say that the accumulated work, when it is complete, will also provide a demographic, sociological bonus: the first full human portrait of New York on the morning it was transformed — who was where, what they saw and felt, what they breathed.

For at least the prenatal studies, there is the loud ticking of the biological clock. The women being sought must have been

pregnant on Sept. 11, which leaves only five months more or so for them to be found.

"This is not going to be easy," said Gertrud S. Berkowitz, a professor in the Department of Community and Preventive Medicine at the Mount Sinai School of Medicine.

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