

My name is Dr. Robyn Gershon. I am the Principal Investigator of the World Trade Center Evacuation Study and an Associate Professor at the Mailman School of Public Health at Columbia University.

I have just completed the first phase of our study, which is designed to identify the individual, organization and structural factors with a special emphasis on evacuation preparedness, that affected the evacuation process and decision-making for the survivors of the World Trade Center on September 11, 2003. We are on schedule and on budget. We are in full accordance with the IRB requirements of our institution, and have received a Certificate of Confidentiality. The interview process involves extensive mental health assessment, follow-up and referral.

I am here today to share with you preliminary findings based on in-depth interviews with evacuees of Towers 1 and 2. These are as follows:

- 1) In the absence of leadership or direction, many people delayed their decision to evacuate the building, or actually froze and did not react to surrounding messages.
- 2) People with disabilities or informatics were dependent on others to assist them, and in some cases slowed the flow of movement on the staircase.
- 3) Evacuees were unfamiliar with the building and were unaware of all fire exits. Once off their own floor they became spatially disoriented.
4. Once outside, many evacuees were unsure of evacuation procedures to follow to vacate the immediate area.
5. Despite the fact that people were unable to differentiate among the uniformed services, they seemed to be relieved to encounter them in the stairs and lobby and readily followed their directions.
6. Individuals who had some sort prior leadership experience emerged as natural leaders and reported using a command and control tone of voice to engage others and prompt them to follow their directions.

Based upon these preliminary findings the following early recommendations can be made:

1. Evacuation leaders should be identified and appropriately trained for all structures that are 10 floors or higher
2. Plans should be developed for the safe evacuation of the disabled and infirm and should include identifying assistants, elevator use, etc. .
3. All employees or residents of high rise structures should be fully oriented to the building, including points of egress at all levels (including the basement).
4. Pre-planning is needed for mass evacuation from specific areas of urban settings, including appropriate identification and training of personnel to direct traffic at the ground level.

Without exception, evacuees reported calm orderly evacuation. The presence of evaluation workers, including FDNY, EMS, NYPD, NY/NJ Port authority employees was reassuring and extremely helpful.

Almost without exception, interviewees have reported some sort of mental health consequences, including: fear of working in a tall building; stress, anxiety and flashbacks; and need to long term mental health care.

Given today's current geopolitical climate and the fact that urban centers continue to be a target, these preliminary findings indicate that important modifications to current evacuation policies and procedures are needed for high rise structures. In closing, we support the important efforts and leadership of NIST, and look forward to continued collaboration between the two studies and we work together towards improving the safety of occupants of high rise structures.