

***County Level Disaster
Preparedness and Response for
Persons with Mobility Impairments:
Results from the University of Kansas
Nobody Left Behind Study***

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Disaster Planning and Disability

According to a January 2004 Harris Poll commissioned by the National Organization on Disability:

- 66% of people with disabilities do not know who to contact about emergency plans in their community
- 61% of person with disabilities have not made plans to quickly and safely evacuate their homes; and
- Among those people with disabilities employed full or part time, 32% say no plans have been made to safely evacuate their workplace



All percentages in this poll were higher for people with disabilities than their non-disabled counterparts.

The True Scope of the Issue

- 90% of presidential disasters result from natural phenomena in which **flooding** was a major component
- Annually, the U.S. averages 100,000 **thunderstorms**
- Galveston Texas **hurricane** in 1900 killed more than 6,000. Recent Florida storm damage estimates exceed \$40 billion.
- Average of 22 “killer **tornados**” each year.
- About 13,000 **earthquakes** of various magnitudes in the U.S. each year

Persons with Disabilities in the U.S.

- 50 million people with a self reported disability represent 19% of the 257 million people ≥ 5 in the civilian non-institutionalized U.S. population

Within this population, Census 2000 found:

- 9.3 million Americans with a sensory disability involving sight or hearing.
- 21.2 million with a condition limiting basic physical activities, such as walking, climbing stairs, reaching, lifting, or carrying.
- 18.2 million of those 16 and older with a condition that made it difficult to go outside the home.

National Business & Disability Council

Emergency Evacuation Checklist

http://www.business-disability.com/Whats_New/eepc.asp

- **“Are all exit routes accessible as a means of egress in the event of an emergency?”**
- **“Do you have a selection and follow up process in place to designate buddies/monitors/fire wardens?”**
- **“Do you have procedures to follow if a buddy/monitor/warden is out of the office?”**

How this Issue Affects People with Mobility Impairments

FEMA and the American Red Cross have written guidelines for assisting people with mobility impairments during emergencies, but many were not practical



For example: “show friends how to operate your wheelchair” (FEMA Exemplary Practices Report, 1998)

“During an earthquake, get under a desk or table, or cover your head and neck with a sturdy object.”

American Red Cross “Disaster Preparedness for People with Disabilities”



How this Issue Affects People with Mobility Impairments

Some recommendations are impractical or non-feasible:

“carry a fire extinguisher on your wheelchair” (FEMA, Fire Risk Series, 1999)





Mission



To research, identify, and advance person-environment centered strategies that encourage full participation in society among persons with disabilities representing diverse cultures, varying socioeconomic strata, and emerging populations.

Nobody Left Behind

Three year grant, TS#-08040, awarded the KU RTC/IL by the Association for Teachers of Preventive Medicine and the Centers for Disease Control and Prevention

<http://www.nobodyleftbehind2.org>

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AIM: Understand county level disaster preparedness and response around needs of persons with mobility impairments

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The Nature of the Problem

Typically, disaster preparedness and emergency response systems are designed for non-disabled persons, for whom escape or rescue involves walking or running.

In addition, many plans do not appear to specifically address the transition needs back to pre-disaster conditions that are required for persons with mobility impairments.

Focus Area #1

COUNTY PROGRAMS, POLICY, AND PRACTICE

Objective:

To determine whether counties that have experienced a disaster in the past five years have systems of workplace, home, and community disaster preparedness and emergency response in place for residents with mobility impairments.

Focus Area #1

COUNTY PROGRAMS, POLICY, AND PRACTICE

Research Questions:

- Have disasters facilitated changes in disaster preparedness and emergency response policies and practices for persons with mobility impairments? If so, how?
- Has the disaster preparedness and emergency response planning process included community stakeholders representing people with disabilities? If so, what has been their involvement? With what outcomes?

Focus Area #2
ASSESSING RISK

Objective:

To evaluate surveillance systems in place at the county level that can identify morbidity and mortality frequency and prevalence for persons with mobility impairments exposed to a disaster

Focus Area #2
ASSESSING RISK

Research Questions:

- **Are counties able to assess prevalence of persons with mobility impairments who reside or work in their jurisdictions and are at risk of disaster exposure (calculating the denominator)?**

Focus Area #2

ASSESSING RISK

Research Questions (continued):

- **Are counties able to determine how many persons with mobility impairments are affected by disasters (calculating the numerator)?**
- **Among counties that have surveillance systems in place, what are prevalence rates of disaster exposure for persons with mobility impairments, and what factors appear to influence these rates?**

Focus Area #3

ASSURANCE AND POLICY DEVELOPMENT

Objective:

To recommend modifications to county disaster coordinating agencies to address the health, safety, and survival needs of people with mobility impairments

Focus Area #3

ASSURANCE AND POLICY DEVELOPMENT

Research Questions:

- **What surveillance systems appear most effective in assessing risk for people with mobility impairments exposed to disasters?**
- **How can counties use surveillance systems to better manage their risk for persons with mobility impairments?**

Focus Area #3

ASSURANCE AND POLICY DEVELOPMENT

Research Questions (continued):

- **What county policies, practices, or programs are exemplars of best practices that can be emulated by counties around the U.S.? How can these policies, practices, and programs be incorporated in county disaster plans?**

Nobody Left Behind- Methods

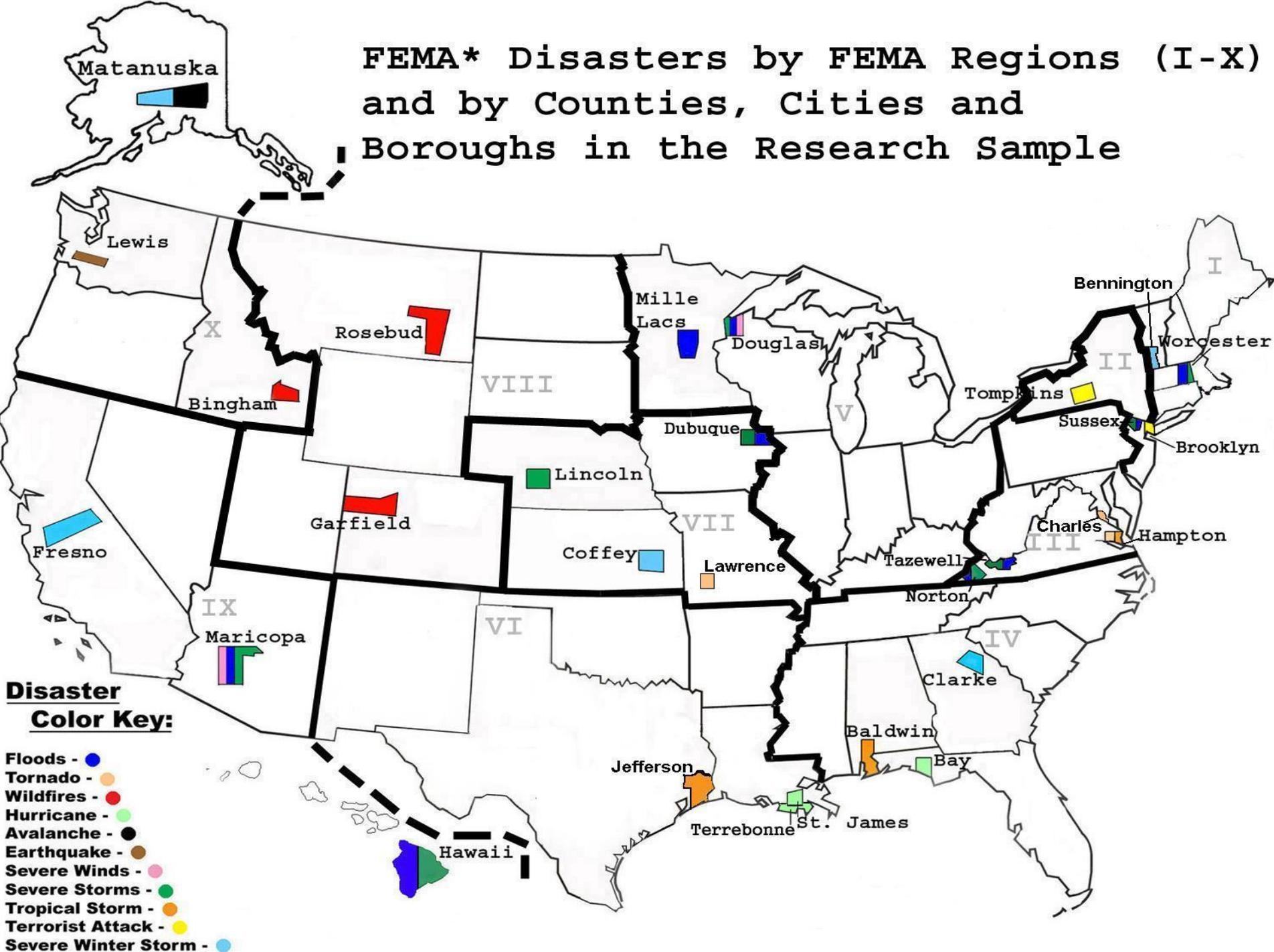
- Identify Federal Emergency Management Agency (FEMA) declared disasters over the last five years
- Select a random sample of 30 counties or equivalent units (i.e., boroughs, reservations, etc.) across each of the ten federal regions
- Interview these county emergency managers
- Evaluate their disaster plans in place at time of occurrence and more recently for actions targeting persons with mobility disabilities
- With assistance of national advisory panel, identify best practices
- Administer on-line consumer survey

Representative County Selection

Selection of state level disaster occurrences so that each of the ten federal regions is represented:

- REGION I:** Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont.
- REGION II:** New York, New Jersey, Puerto Rico, Virgin Islands.
- REGION III:** Delaware, Maryland, Pennsylvania, Virginia, West Virginia, District of Columbia.
- REGION IV:** Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee.
- REGION V:** Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin.
- REGION VI:** Arkansas, Louisiana, New Mexico, Oklahoma, Texas.
- REGION VII:** Iowa, Kansas, Missouri, Nebraska.
- REGION VIII:** Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming.
- REGION IX:** Arizona, California, Hawaii, Nevada.
- REGION X:** Alaska, Oregon, Washington, Idaho.

FEMA* Disasters by FEMA Regions (I-X) and by Counties, Cities and Boroughs in the Research Sample





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Disaster Preparedness for Persons with Mobility Impairments

Consumer Survey

Do you have a personal disaster experience to share?

We want to hear from persons with mobility limitations who have experienced a disaster.

Please complete our on-line survey at:

<http://www.nobodyleftbehind2.org>

&

<http://rtcil.org/survey.htm>

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What did we ask?

Examples of survey questions:

- *“Does your current emergency management plan have a protocol to assist people with mobility impairments during an emergency?”*
- *“To your knowledge, were people with mobility impairments included in the process of developing these protocols?”*
- *“If no written formal protocols exist to assist people with mobility impairments, to your knowledge what do emergency services personnel do to assist people with mobility impairments during an emergency?”*

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What did we find out?

Findings - Emergency Managers:

People with disabilities either were not represented or had minimal representation in the emergency planning process

The (G197) FEMA Emergency Planning and Special Needs course pertaining to people with disabilities appears useful in increasing county awareness, though only 27% of county emergency managers reported completing it

Only 20% of the emergency managers reported having specific guidelines in place to assist people with mobility impairments during emergencies

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What did we find out?

Findings - Emergency Managers:

Surveillance efforts to identify persons with mobility impairments are weak

- **57% of county managers did not know how many persons with mobility limitations lived within their jurisdiction**
- **Of those who claimed to know, most gave broad estimates based on unreliable sources**
- **27% of counties used Census or self-reported registries to identify this figure more accurately**

Among counties having this figure, the data are primarily used for planning purposes—shelter, education, evacuation, etc.

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What did we find out?

Findings- Emergency Managers:

- *20% of emergency managers reported having specific guidelines in place to assist people with mobility impairments during emergencies*
- *Among jurisdictions that did not (24 or 80%):*
 - *38% (9) identified transportation accommodations that they have in place*
 - *17% (4) identified accessible shelters and other educational programs that sought to reach out to persons with disabilities*

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Where are we now?

Findings of Emergency Managers:

- *Among jurisdictions not having specific details or guidelines in place, all (24) told us that they were important to have*
 - “Every person’s life is important....”
 - “I have never seen a publication that would address many of these impairments....”
 - “We have it, just not in our particular plan...covered in council on aging and human resource protocols.”
 - “It’s a fact of life. They are out there, they need assistance, and you’ve got to address it.”

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What did we find out?

Findings - Emergency Managers:

- **97% (29) of disaster management plans had been revised since the time of the county disaster we asked about**
 - **But among these, only 8 (27%) revised their plans owing to disability related concerns**
 - **Other reasons driving revisions of plans:**
 - Annual review (70%)
 - Federal mandates (57%)
 - State mandates (24%)
 - Other factors (33%)

Nobody Left Behind - Findings

- *Among jurisdictions not having specific guidelines in place (24), 5 (21%) told us they were planning to develop them. 19 (79%) told us they were not. Reasons why not:*
 - “If need is brought to our attention, we will accommodate...”
 - “We are trying to focus on special needs as a whole...”
 - “It is covered in other plans...”
 - “We don’t need to be any more specific than we already are..”
 - “Confidentiality issues...”; “limited local authority...”
 - “We are overwhelmed with the demands of Homeland Security...”
 - “My office is only staffed by one volunteer....”

Nobody Left Behind ~ Findings

- **Sites reporting no specific guidelines stated the following resources were needed to develop them:**
 - 67% financial resources
 - 33% knowledgeable and trained personnel
 - 17% greater education for the public
 - 25% a FEMA/State/or County mandate
- **Among reporting sites, who told us they were planning to develop the guidelines**
 - One told us the idea originated with our interview, another started with discussions of the needs of non-English speaking residents, one mentioned particular advocate associated with university



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Disaster Preparedness for Persons with Mobility Impairments

Consumer Survey

- Do you have a personal disaster experience to share?
- We want to hear from persons with mobility limitations who have experienced a disaster
- Please complete our on-line survey at:

www.nobodyleftbehind2.org
Click on Consumer Survey

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Consumer Survey Findings

- *There are inaccessible escape routes*
- *Few people know how to use the adaptive escape chairs for wheelchair users*
- *There was no accessible transportation after the disaster event to get around in the community*
- *Very slow response in helping citizens with disabilities return to their homes (e.g., rebuilding ramps, moving debris, etc.)*

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Consumer Survey Findings

- *Shelters, including bathrooms, were not accessible for wheelchair users*
- *During extended power outages, persons were unable to use assistive equipment and medical devices*
- *Power outages disabled elevators, forcing persons with mobility limitations to be dependent upon neighbors or emergency workers*

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Consumer Survey Findings

“It is really difficult to get the utility company to understand power is a need, if disabled.”

“I ambulate with forearm crutches and my leg stamina is limited. As a social service provider in NYC, I am in tall buildings often and one in particular had an evacuation drill. There were no plans or equipment to assist me. They told me to ignore the drill. I felt very vulnerable because I attend regular work meetings in this building.”

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Consumer Survey Findings

“I have juvenile rheumatoid arthritis and use a wheel chair. We had a bomb threat at work, which was very scary. Everyone evacuated, but I was still left on the 3rd floor by the stairwell for the firefighters to come get me. But, no one came. Finally, I just struggled and I used pure fear to get myself down the stairs and outside. It was scary just to realize that there are not really any procedures in place to help someone like me in an emergency.”

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Where do we think this will lead?

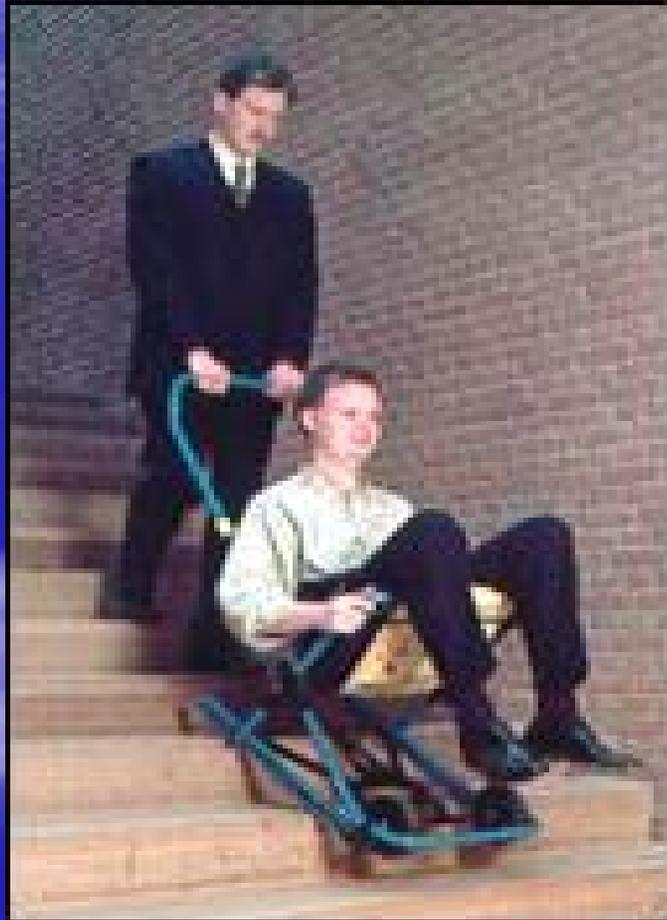
Improved Surveillance

- *Better understanding at the community level for the need to know how many people are at risk in disasters who may have mobility impairments*



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Where do we think this will lead?



Technology Adaptation

- *Understanding and use of new devices that will improve escape, rescue and survival for persons with mobility impairments*

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Where do we think this will lead?

Environmental changes

- Housing: safe rooms, slide escapes, common shelters, implementing ADA accessibility guidelines, special needs awareness programs (SNAP)
- Workplace: space, lighting, energy backup, employee input
- Community: participation in planning process by persons with disabilities

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WEDNESDAY, JANUARY 9, 2002

JUSTICES, BY 9 TO 0, NARROW THE SCOPE OF DISABILITIES ACT

VICTORY FOR EMPLOYERS

Ruling Says Impairment Must Limit Tasks of Day-to-Day Life, and Not Just Work

By LINDA GREENHOUSE

WASHINGTON, Jan. 8 — The Supreme Court ruled today that to qualify as disabled, and therefore to be protected by the Americans With Disabilities Act, a person must have substantial limitations on abilities that are "central to daily life," and not only to life in the workplace.

The unanimous ruling was the latest and one of the most important in a series of Supreme Court decisions that have interpreted and, for the most part, narrowed the broad terms of the 1990 law, which obligates employers to make reasonable accommodations for disabled workers.

As a result, plaintiffs are finding it much more difficult than the law's advocates expected to win their cases, or even to get into court in the first place under increasingly stringent definitions of disability.

Employers viewed the opinion today, by Justice Sandra Day O'Connor, as a major victory. It overturned a lower federal court's finding that an assembly line worker at a Toyota plant who suffered from carpal tunnel syndrome, an ailment involving muscle and tendon injuries from highly repetitive activities, was disabled in the "major life activity of performing manual tasks."

The justices' ruling was not conclusive, leaving open the possibility that the woman, Ella Williams, who worked for six years at the Toyota plant in Georgetown, Ky., might still win her case when it goes back to the United States Court of Appeals for the Sixth Circuit, in Cincinnati.

The appeals court had granted summary judgment to Mrs. Williams, finding her disabled as a matter of law based on her inability to meet the demands of her assembly

Justices, 9-0, Narrow Scope of Disabilities Act

Continued From Page A1

line job and of other jobs that require gripping tools and working with arms elevated and outstretched.

That was too narrow a focus on which to base a finding of disability, Justice O'Connor said, because it ignored the question of whether the limitations affected Mrs. Williams's daily life outside the factory.

"The central inquiry must be whether the claimant is unable to perform the variety of tasks central to most people's daily lives," not just those of a particular job, Justice O'Connor said, adding that "household chores, bathing and brushing one's teeth are among the types of manual tasks of central importance to 'people's daily lives'" and should have been part of that inquiry.

The repetitive work that caused Mrs. Williams's problem "is not an important part of most people's daily lives," Justice O'Connor said.

Mrs. Williams had testified that while she needed help in dressing and had given up such activities as sweeping and dancing, she could still take care of her personal hygiene, cooking and some housework and gardening. But the appeals court disregarded all the non-workplace evidence. Without an evaluation of the full effect of Mrs. Williams's impairment, summary judgment in her favor was inappropriate, Justice O'Connor said.

"These changes in her life did not amount to such severe restrictions in the activities that are of central importance to most people's daily lives that they establish a manual-task disability as a matter of law," the opinion said.

While Mrs. Williams is not likely to prevail back in the lower court, the decision could be helpful to plaintiffs whose limitations have more effect outside the workplace than within it, said Prof. Chai Feldblum of the Georgetown University Law Center.

"If brushing your teeth qualifies as an essential activity, then so do other things like taking out the garbage" or lifting things around the house, Professor Feldblum, a leading authority on the statute, said in an interview.

Nonetheless, she said, the court's approach today is likely to pose new problems for some plaintiffs, many of whom have already been shut out of court by the Supreme Court's earlier rulings and by lower courts' responses to those rulings.

In three decisions in 1999, the Supreme Court considered whether people qualified as disabled if their conditions could be corrected or controlled by medication or devices like eyeglasses. Corrective measures must be taken into account in assessing disability, the court ruled. Professor Feldblum said lower courts had interpreted the 1999 decisions to hold that people with diabetes, epilepsy, prosthetic limbs and even schizophrenia were not disabled.

As in 1999, the court today, in *Toyota Motor Manufacturing Inc. v. Williams*, No. 00-1089, stressed a need for an individual, case-by-case determination of disability rather than a conclusion based on a medical diagnosis.

The Americans With Disabilities Act defines disability as "a physical or mental impairment that substantially limits one or more of the major life activities." Disability can also be established by having "a record of such an impairment" or "being regarded as having such an impairment," definitions that were not at issue in this case.

Justice O'Connor said the law's essential definitional terms — "substantially limits" and "major life activities" — need to be interpreted strictly to create a demanding standard for qualifying as disabled."

Congress made that clear, she said, by its reference in the law's preamble to 43 million Americans who "have one or more physical or

mental disabilities." With 100 million people wearing corrective lenses, she said, Congress obviously did not mean to include everyone with some type of limitation.

The decision put off until another day answering the question of whether "working" can be considered a "major life activity" under the statute. Earlier Supreme Court decisions have suggested that it cannot be, but Justice O'Connor said, "We need not decide this difficult question today."

Although the court limited its discussion to the activity of "performing manual tasks," disability law specialists agreed that the decision extended beyond that category to create a kind of template for assessing limitations on other "major life activities" as well.

"The message is clear that claims of disability status will be looked at very closely," said Peter Sasser, a lawyer with the firm of Little Mendelson who filed a brief for the National Association of Manufacturers.

Stephen Bokat, executive vice president of the National Chamber Litigation Center, the legal arm of the United States Chamber of Commerce, called the decision a major victory for employers.

"The court understood," Mr. Bokat said, "that the A.D.A. was not meant to create a loophole for people with routine limitations or minor injuries, but was intended for people with significant limitations."

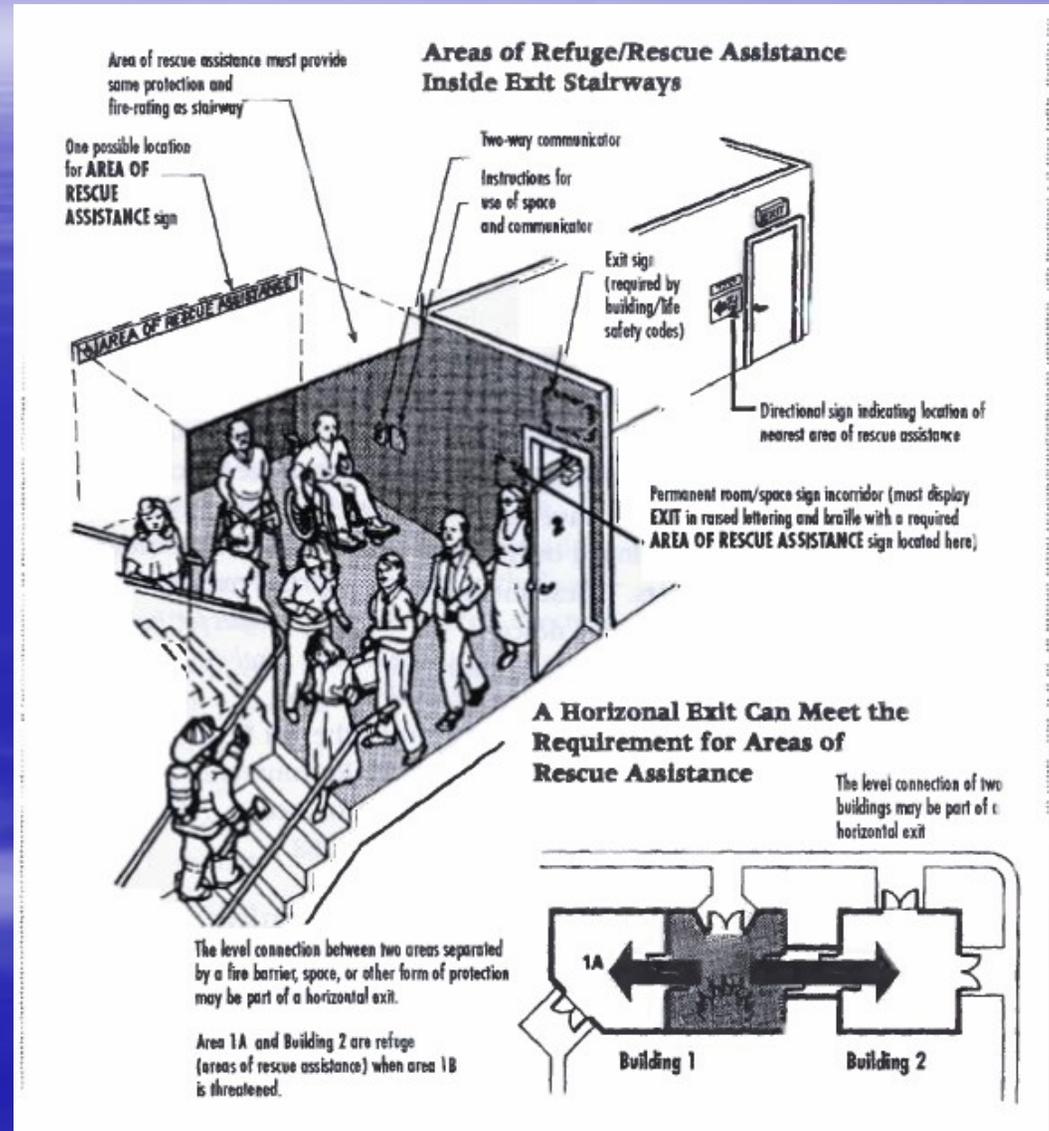
After Mrs. Williams, who is now 42, developed her repetitive motion injury, Toyota at first accommodated her by assigning her to inspect the paint on finished cars as they moved along a conveyor belt at the rate of one a minute. That job involved minimal use of her arms.

But then Toyota required her to use a sponge to wipe oil on the cars. Her physical problems returned.

When Toyota refused to change her assignment, she stopped coming to work. The company dismissed her, and she sued.

Environment Factors: Access

Americans with Disabilities Act Accessibility Guidelines (ADAAG) require accessible means of egress, areas of rescue assistance, alarms, and signage in public buildings covered under Title II and Title III of the ADA.



Environment Factors: Assistive Technology

- **Garaventa Evacu-Track is a tread chair that uses caterpillar-like action to move people with mobility limitations down the stairs.**



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Where do we think this will lead?

Enhanced Training and Education for:

- *First responders, disaster managers, other county officials*
- *Employers, employees*
- *Persons with disabilities*



Summary and Future Directions

- **The literature in this new and emerging area for people with disabilities has few experimental studies with methodological rigor**
- **Reliability, validity, replicability**
- **There is little empirical evidence about how effective person or environment changes or other interventions are under applied scientific conditions**

Summary and Future Directions

- **We co-hosted a national working meeting with the American Association on Disability and Health and the University of New Mexico June 14-15, 2004**
- **Agreement was reached to develop an action agenda for developing new programs, practices, and policies concerning disaster preparedness and emergency response for people with disabilities**

Additional Sources of Information

**Nobody Left Behind**
Disaster Preparedness for Persons with Mobility Impairments



<http://www.nobodyleftbehind2.org>

&

<http://rtcil.org/resources.htm>