

International Association of Emergency Managers Survey on Access and Inclusion: Bridging the Gap Between People with Disabilities and Emergency Management Plans

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Introduction

The International Association of Emergency Managers (IAEM) Access & Whole Community Inclusion Caucus is focused on securing the functional needs and access of populations before, during, and after the event of disasters and emergencies through inclusion and advocacy. It is crucial to include and identify the specific requirements of individuals living with disabilities and access and functional needs in emergency management plans and procedures. The purpose of the survey was to identify gaps in emergency management plans regarding access and inclusion of people living with disabilities. Disability advocates, people with disabilities, emergency managers, and government emergency preparedness employees were recruited and encouraged to complete the anonymous survey.

The survey defines “disability” as a physical or mental impairment that substantially limits one or more major life activities. Furthermore, the survey defines “access and functional needs” as a restriction or limited ability to perform activities normally considered routine, which may require assistance before, during, and /or after a disaster or an emergency. Individuals with access and functional needs may identify as but are not limited to: people with disabilities, people who live in institutionalized settings, elderly, children, people from diverse cultures, people with limited English proficiency/non-English speakers, and people who are transportation-disadvantaged.

Methods

The survey was conducted from April to July 2022. The survey was accessible through an anonymous survey link that was promoted via LinkedIn and posted on IAEM community partner

websites. The survey was also disseminated through email specifically targeting disability advocates, people with disabilities, emergency managers, and government emergency preparedness employees. The survey obtained ethical approval from the New York University Human Subjects Protection Office. The survey was completely voluntary and required participants to be eighteen years of age or older and living in the United States. Participants who agreed to complete the survey were informed that their involvement is voluntary and anonymous. A definition of key terms used in the survey such as “disability” and “access and functional needs” was provided to ensure clarity.

The questionnaire was created by New York University (NYU) Disaster Science Policy and Practice students and a faculty supervisor in collaboration with IAEM’s Access & Whole Community Inclusion Caucus. Questions relating to emergency management and emergency preparedness inclusivity efforts were formatted on a Likert scale; where respondents are asked to state their opinions ranging from strongly agree to strongly disagree. Questions were designed to allow comparison between the characteristics, perspectives, and opinions of the state’s emergency management professionals and people with disabilities and access and functional needs.

Results

Out of 233 responses, a total of 143 surveys were completed in entirety and were included in the analysis. Survey respondents were divided into three groups during the data analysis phase based on their answers to a question distinguishing people living with disabilities from people working in the field. The individuals who identified as living with a disability were labeled as Group A (17 people), professionals working in the field of emergency management were labeled as Group B (92 people), and individuals that selected both categories were labeled as Group C (34 people).

Characteristics of respondents

Initially, individuals were asked to select an option that best described their position in an emergency; they had the option to choose as many roles they deemed necessary from the

following: people living with a disability, living with access or functional need, working as an emergency or ADA professional, or none of the above.

Table 1: Distribution of respondents into groups based on their positions in an emergency

Group	Number of respondents
A (Individuals with a disability)	17
B (Professionals working in the field of emergency management)	92
C (Have a disability & an emergency management professional)	34
Total	143

This showed that the majority of respondents (64%) were emergency management professionals or have a similar title, and approximately a quarter were individuals that are living with disabilities and work in the field. The minority group equated to less than 10% of the total sample, live with a form of disability and/or identify themselves as advocates for people with access and functional needs.

When asked about their age, gender, and race; about 40% were between the ages of 36 and 65, with very few being older than 65 (less than 8%). A substantial majority identified themselves as male (59%) and 35% represented the female gender and the rest of the responses were from non-binary/other or from individuals that did not want to answer this question. Overwhelmingly, 85% of respondents identified with the white race, 4.2% chose not to disclose their race, 4.9% were black, 2.8% were mixed race, 3.5% were Asian, and none respondent was Native American. When asked if they identified as being Hispanic, 68% responded no, 26% yes, and the rest selected “prefer not to say”.

Normality

In terms of normality check-up, first we used Shapiro-Wilk normality test for different groups and the result shows that group 1 has a p-value of 0.33, which is considered normally distributed; group 2 has a p-value of 0.023, which is less than 0.05 and considered as not normally distributed; group 3 has a p-value of 0.89 which also considered normally distributed. Therefore, we performed the log-transformation in group2 to make it normally distributed with a p-value of $9.30e^{-12}$. We also performed the Wilcoxon rank sum test with continuity correction test after the log-transform group2, with a p-value of $<2.2e^{-16}$ shown in Table 7. This means that we reject the null means two groups have different median.

Internal consistency

Values for Cronbach's alpha were estimated for question #4 to question #13. The estimated Cronbach's alpha is 0.84, standard alpha value is 0.3. Thus, the internal consistency for this survey is considered high across different groups. (Table2.). Question #8 is the least reliable question which is asking people with disabilities and Access and Functional needs typically rely on members of their support team (e.g., family, friends, neighbors, care givers, etc.) for help if needed during an emergency. If we remove this item, Cronbach's alpha will increase to 0.86. However, the alpha value did not increase significantly compared with 0.84. Therefore, we decide to keep item #8.

Table 2: Internal consistency

Questions #	Internal consistency
4	0.7184370
5	0.7144748
6	0.6674216
7	0.7033638

8	0.1901472
9	0.4839168
10	0.6733623
11	0.7458624
12	0.7539981
13	0.7181118

Perspectives on accessibility and unmet needs

These questions were asked on a Likert scale; where respondents have the option to select from 5 possibilities; strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree.

When asked if local emergency management effectively meets the needs of people with disabilities, 40% disagreed with that statement, 6% strongly disagreed, 24% were neutral, 28% agreed, and less than 3% strongly agreed. Across all three groups, this question did not yield any strong feelings where most people agreed, disagreed, or were in the middle.

When asked if emergency warning notifications are accessible to differently-abled people, the trend continued with 41% disagreeing, 8% strongly disagree, 14% neutral, 30% agreeing, and just over 8% strongly agreeing.

Interestingly, when asked if accessible vehicles are available for the evacuation of people with disabilities, most people agreed (36%), but there was still a significant number that disagreed (29%), 12% strongly disagreed, and 4% strongly agreed.

The next question asked if shelters and mass care centers accommodate the needs of people with disabilities and other access and functional needs. Nearly half of the respondents agreed or strongly agreed with that statement, and the other half either disagreed or felt neutral, less than 5% strongly disagreed.

The respondents were asked to share their opinion about whether people with disabilities and access and functional needs typically rely on members of their support team for help if needed during an emergency or not, and almost all responses were “agree” or “strongly agree” (89%)

There is ample federal guidance and other authoritative documents available to help ensure that preparedness and response plans are inclusive. Mostly agreed (36%) with this statement, but one-third either disagreed or strongly disagreed. About 19% were neutral and 6% strongly agreed.

Emergency management disaster drills and exercises actively involve people with disabilities and other Access and Functional needs. This statement resulted in a very strong negative response, where over two-thirds disagreed or strongly disagreed, with only 12% agreeing and 5% strongly agreeing with that statement.

The statement that emergency management works with the local ADA Coordinator on emergency planning for people with disabilities led to a split vote; 38% agreed or strongly agreed and 40% disagreed or strongly disagreed.

Emergency management works with the local disabilities advocacy groups on emergency planning for people with disabilities. This statement was also split in the middle (39% agree, 22% neutral, and 40% disagreed).

Emergency managers are clear about their role and responsibilities concerning people with disabilities and other Access and Functional needs. Most people seem to agree with this statement (48%) but 35% either disagree or strongly disagree.

Conclusion

Overall, the survey sample did not have diverse representation, mainly due to both the survey's distribution strategy and the overall lack of diversity in the emergency management field. The survey sample was disproportionate between people who identified as having a disability vs emergency management professionals. Emergency management professionals made up most of the survey sample which brought about more bias. Future recommendations include targeting more people with disabilities and disability advocate groups to have a more even sample.

For most questions, a consensus could not be reached because the majority did not evoke strong opinions in favor of one side or the other, many were split fairly evenly. The attempts to provide these services, notably in the areas of mass care and emergency shelters, are accommodating to people with functional and access needs, according to several questions that received a favorable answer.

Few questions elicited a strong negative response, but those that did center on preparedness, such as whether emergency warning notifications take into account people with specific accessibility needs and whether drills and exercises are designed and executed with this population in mind.

Ultimately, people with disabilities are frequently excluded from planning activities in emergency preparedness and management plans. Emergency management professionals must prioritize assessing the hazards, risks, mitigation, preparedness, response, and recovery needs of people with disabilities in an emergency context.

Appendix

Table 3: responses based on age

Group	Age 19-35	Age 36-50	Age 51-65	Age 66+	Prefer not to say	Total
A	2	5	9	1	0	17
B	21	32	30	5	4	92
C	7	13	9	4	1	34
Total	30	50	48	10	5	143

Table 4: responses based on gender

Group	Male	Female	Non-binary	Other	Prefer not to say	Total
A	7	7	2	1	0	17
B	58	29	0	1	4	92
C	19	14	0	0	1	34
Total	84	50	2	2	5	143

Table 5: responses based on race

Group	White	African-American	Asian	Native American	Mixed-race	Prefer not to say	Total
A	14	1	2	0	0	0	17
B	80	4	3	0	2	3	92
C	27	2	0	0	2	3	34
Total	121	7	5	0	4	6	143

Table 6: responses based on Hispanic

Group	Hispanic	Non-Hispanic	Prefer not to say	Total
A	0	17	0	17
B	10	78	4	92
C	27	2	5	34
Total	37	97	9	143