NACCHO
National Association of County & City Health Officials
The National Connection for Local Public Health

[RESEARCH BRIEF]
December 2014

National Assessment of the Knowledge, Awareness, and Inclusion of People with Disabilities in Local Health Departments' Public Health Practices

Executive Summary

Approximately 56 million people in the United States live with a disability, which is equivalent to approximately 20% of Americans living with a congenital or acquired disability.[1] The number of people living with a disability is likely to increase as the population ages.[2] Research suggests that people with disabilities have complex healthcare needs and are disproportionally affected by health disparities; consequently, people with disabilities experience poorer health status and a poorer quality of life when compared to people without disabilities.[1,3-5] One way to address and mitigate these health disparities is through including people with disabilities in public health programs offered by local health departments (LHDs).[6]

To explore and better understand how LHDs are including people with disabilities in their programs, products, and services, the National Association of County and City Health Officials (NACCHO) conducted a quantitative assessment of randomly selected LHDs from across the United States. A total of 159 LHDs completed a brief nine-item questionnaire. The key findings from this assessment suggest the following:

- LHDs do not intentionally exclude people with disabilities from their activities;
- LHDs tend to be unaware of the prevalence rates of people with disabilities in their LHDs' jurisdictions;
- LHDs report a general lack of knowledge about the health disparities experienced by the population of people with disabilities; and
- LHDs are more likely to include people with disabilities in emergency preparedness/planning activities than in any other type of public health program or activity.

NACCHO will use the quantitative data obtained from this assessment to develop a general framework for creating comprehensive education, training, and outreach materials/activities to raise awareness among LHDs of the health inequities and poor health outcomes experienced by people with disabilities. LHDs can use the information presented in this report to become familiar with the inequities in health experienced by the population of people with disabilities and to better understand the ways LHDs are including people with disabilities in public health programs and services.

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Introduction

NACCHO's Health and Disability Program, supported by the National Center on Birth Defects and Developmental Disabilities (NCBDDD) at the Centers for Disease Control and Prevention (CDC) and The Arc of the United States, provides training, technical assistance, resources, and funding to LHDs to promote the inclusion and engagement of people with disabilities in planning, implementation, and evaluation of public health programs and services to address the health disparities in this population.

Approximately 56 million people in the United States live with a disability, which is equivalent to one in every five Americans having a congenital or acquired disability.[1] In the United States, approximately $280 billion public and $118 billion private funds were spent on disability-associated healthcare for adults in 2006.[7] Although people with disabilities should be able to enjoy good health and well-being like everyone else, they experience poorer health status and a poorer quality of life in comparison to people without disabilities.[8] Data from the 2009 Behavioral Risk Factor Surveillance System suggest that adults with disabilities are twice as likely to be obese,[9] are 1.5 times more likely to be physically inactive,[10] and tend to smoke cigarettes at a higher level than adults without disabilities: 32.9% vs. 20.4%.[11] In addition, the higher prevalence of risk factors and unmet healthcare needs among people with disabilities increases this populations' risk of developing secondary health conditions such as hypertension, diabetes, and cardiovascular diseases.[12,13] Following are some key statistics about the health inequities experienced by people with disabilities taken from the literature on a variety of health topics:

- Adults with disabilities are four times more likely to report poor health status than adults without disabilities;[5]
- Adults with disabilities are at a 2.5 times greater risk of developing chronic diseases in comparison to adults without disabilities;[14]
- 71% of adults over age 40 with intellectual disabilities have at least two chronic diseases (e.g., hypertension, eye disease, heart disease);[15]
- Adults with intellectual disabilities are six times more likely to be hospitalized than their peers;[15]
- The risk of developing mental illness or suicidal tendencies is three times higher in adults with disabilities compared to adults without disabilities;[16]
- Adolescents with autism, learning and behavioral disabilities, and developmental disabilities are 1.5 times more likely to be obese than people without disabilities;[17]
- Students with disabilities are more likely to smoke cigarettes, use marijuana, or drink alcohol than students without disabilities;[18]
- People with disabilities with fair or poor health status are less likely to report having household disaster preparedness supplies and an emergency communication plan;[19] and
- People with disabilities are 1.22 times more likely to be unprepared for an emergency event.[20]

Aside from NACCHO-funded health promotion programs implemented by a small group of LHDs, there is a paucity of research on the topic of the inclusiveness of people with disabilities in LHD practices. To develop and implement health initiatives addressing the health inequities affecting people with disabilities, LHDs must be aware of the number of people with disabilities living in their communities and the risk for secondary conditions experienced by people with disabilities. The NCBDDD at the CDC funds 18 state-level programs to implement health promotion and emergency preparedness planning programs with the purpose of reducing health inequities and improving wellness and quality of life for people with disabilities.[21] No known studies have examined if and how LHDs in the 18 grantee states have been including people with disabilities in their public health programs and services.

Because people with disabilities can greatly benefit from inclusive health promotion and education activities implemented by LHDs, the primary purpose for conducting this large-scale quantitative assessment was to assess LHDs' knowledge/awareness of people with disabilities in their jurisdictions and to better understand how LHDs are including people with disabilities in their public health programs and activities. The objectives of this quantitative assessment follow:

- Assess LHDs' knowledge/awareness of the number of people with disabilities residing in their jurisdictions and the secondary conditions experienced by this population;
- Identify the inclusive programs that LHDs implement that meet the health promotion or emergency preparedness needs of people with disabilities and identify the types of supports LHDs need to better include people with disabilities in programs and activities; and
- Assess if LHDs within CDC-funded states implement more inclusive programs than those in states without CDC funding.

Methodology

The following sections discuss the methodology NACCHO used in the assessment:

Sampling

NACCHO used stratified random sampling to select 550 LHDs from across the nation. LHDs were the sampling units for this assessment. This quantitative assessment used a cross-sectional, observational design. To ensure a representative sampling scheme, NACCHO stratified the LHDs on the sampling frame by jurisdiction population size: small (<50,000), medium (50,000–499,999), and large (500,000+). Because LHDs with large population sizes represent a relatively small proportion of all LHDs, this assessment oversampled large LHDs to ensure a sufficient number of responses from large jurisdictions for the analysis. NACCHO sent e-mail invitations to the primary contact person listed for each of the randomly selected LHDs; the e-mail invitations stated the purpose of the assessment and contained an individual link to an online questionnaire in the survey program Qualtrics. Initial invitations were sent on April 28, 2014, and the LHDs had three weeks to respond to the questionnaire; the assessment period ended on May 21, 2014. Of the 550 initial e-mail invitations that were sent, 61 bounced back as undeliverable. NACCHO created a replacement sample based on subsequent random numbers for LHDs and invited those LHD representatives to participate in the assessment. A second replacement sample of seven LHDs was drawn to replace the seven undeliverable e-mails from the first replacement sample. NACCHO sent reminder e-mails once per week for the original and replacement samples to increase the response rate. After reminders e-mails, NACCHO placed 215 follow-up telephone calls to non-respondents. A total of 167 respondents completed the questionnaire; NACCHO excluded the results from eight LHDs in the final analysis because five LHDs had only partially completed the assessment and three LHDs had missing values for all questions. The final sample included 159 respondents, which yielded a final response rate of 29%.

Measurement

The questionnaire was developed based on items taken from the Americans with Disabilities Act (ADA) checklist, NACCHO's 2013 National Profile of Local Health Departments study, previous research literature, and findings from NACCHO's qualitative key informant interviews. NACCHO's Health and Disability team developed the questionnaire in consultation with in-house research and evaluation experts and programmed the questionnaire into Qualtrics. NACCHO's Health and Disability Workgroup (which includes three LHD representatives and eight experts from the field) pre-tested the questionnaire; workgroup members then provided feedback, and NACCHO revised the questionnaire based on this feedback. The final questionnaire included one open-ended question and eight closed-ended questions across three sections.

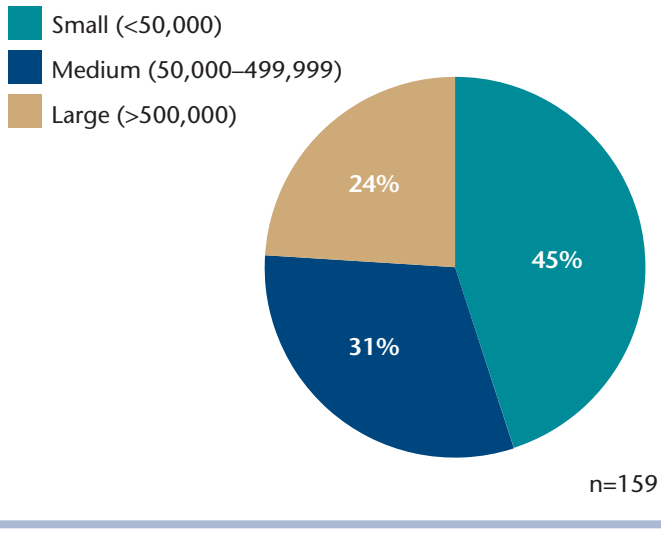
Data Analysis

NACCHO analyzed the data using STATA 12.0 statistical software. To analyze the assessment's objectives, NACCHO calculated descriptive statistics for all items on the questionnaire and reported them as percentages in the results section of this report. To analyze the third objective, the difference between LHD program inclusiveness in CDC Health and Disability Program grantee states and non-grantee states, independent two-sample t-tests were used.

Results

Figure 1 displays the demographics of the respondent LHDs from the sample. About 45% of the respondent LHDs were small jurisdictions with a population of less than 50,000; 31% were medium jurisdictions with a population of 50,000–499,999; and 24% were large jurisdictions with a population over 500,000, which is consistent with the distribution of LHD sizes across the country.

FIGURE 1. DEMOGRAPHIC DATA OF LHDS: SIZE OF POPULATION



Figures 2A–2D present the results about the knowledge/awareness of LHD representatives of the number of people with disabilities in their jurisdictions, accommodations needed to support such people, and secondary conditions experienced by the population of people with disabilities. Less than half of LHDs (47.8%) reported that they were "aware" or "very aware" of the number of people with disabilities in their jurisdictions, and 57.6% of LHDs stated that they were "knowledgeable" or "very knowledgeable" about accommodations needed to support people with disabilities. More than 50% of respondent LHDs reported that they were "aware" or "very aware" of the secondary conditions experienced by people with disabilities. Only 10.7% of the respondent LHDs considered people with disabilities as a health inequity population.

Figure 3 provides data on public health programs/activities implemented by the LHDs that participated in this assessment and inclusiveness of people with disabilities by program type. Emergency shelter operations was the most frequently reported program area that included people with disabilities—out of the 52.8% (n=84) of LHDs that provided such services, nearly three-quarters of them (72.5%) purposefully included people with disabilities through some methods. Among the LHDs that implemented emergency preparedness or planning programs, nearly 70% included people with disabilities. Over 50% of the flu vaccination programs provided by LHDs included people with disabilities. For all other programs/activities, the proportion of LHDs that included people with disabilities ranged from 16% to 45%.

FIGURE 2A. AWARENESS OF THE NUMBER OF PEOPLE WITH DISABILITIES LIVING IN THEIR JURISDICTIONS

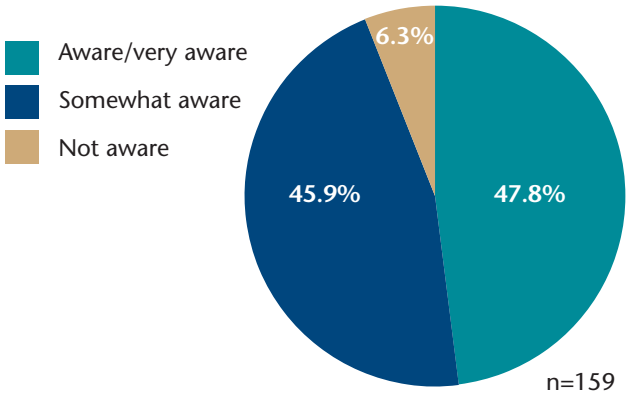


FIGURE 2C. KNOWLEDGE OF ACCOMMODATIONS NEEDED TO SUPPORT PEOPLE WITH DISABILITIES

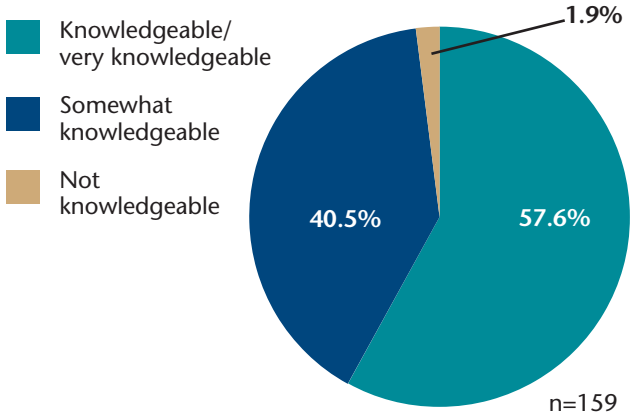


FIGURE 2B. AWARENESS OF THE SECONDARY CONDITIONS EXPERIENCED BY PEOPLE WITH DISABILITIES

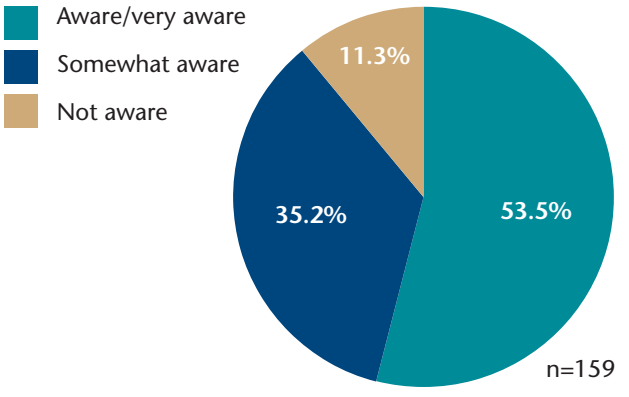


FIGURE 2D. WHETHER LHDS CONSIDER PEOPLE WITH DISABILITIES AS A POPULATION THAT EXPERIENCES HEALTH DISPARITIES

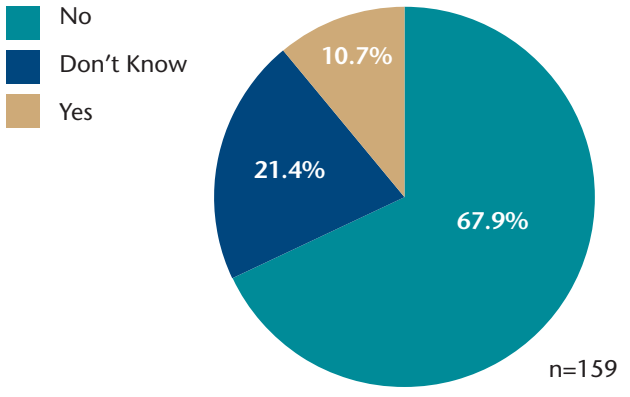


FIGURE 3. PERCENTAGE OF LHD PROGRAMS THAT INCLUDE PEOPLE WITH DISABILITIES

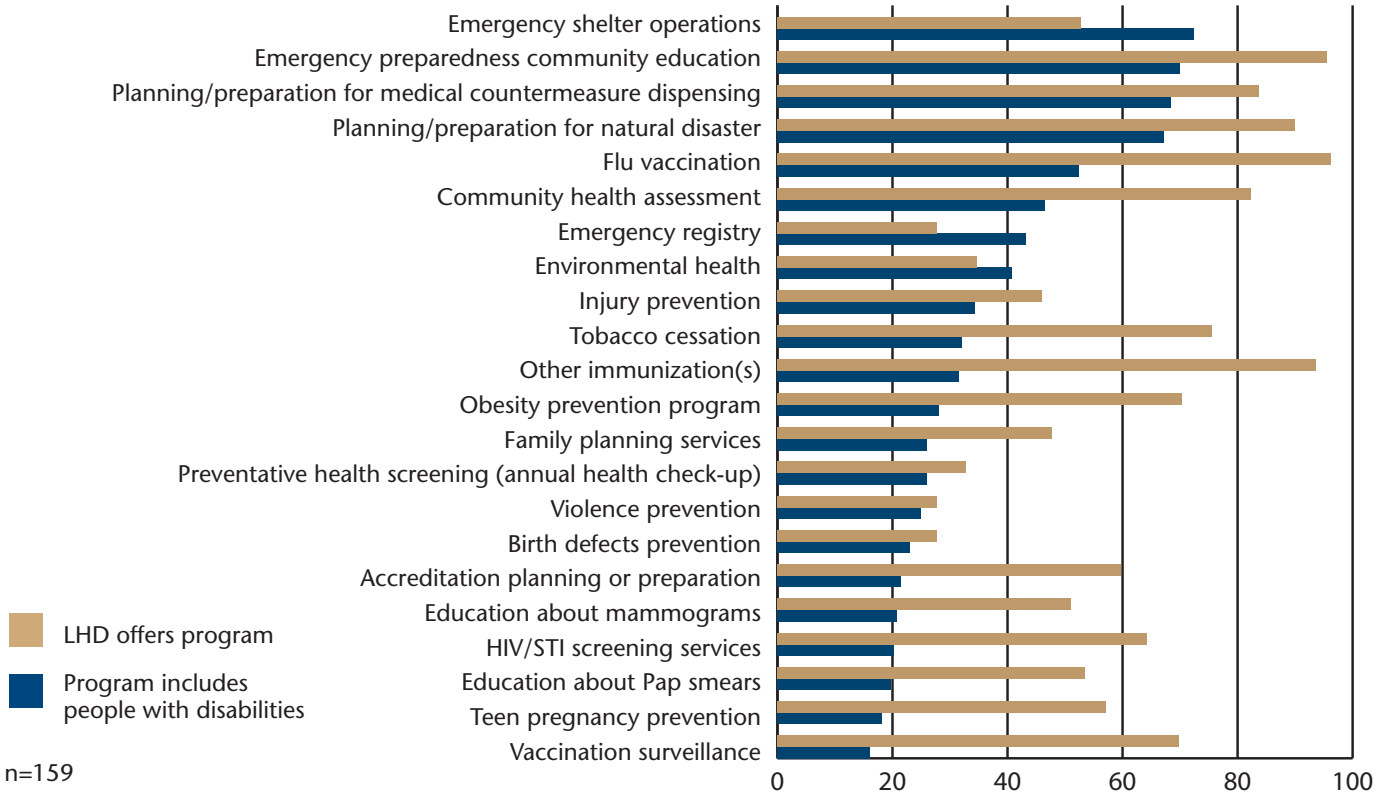
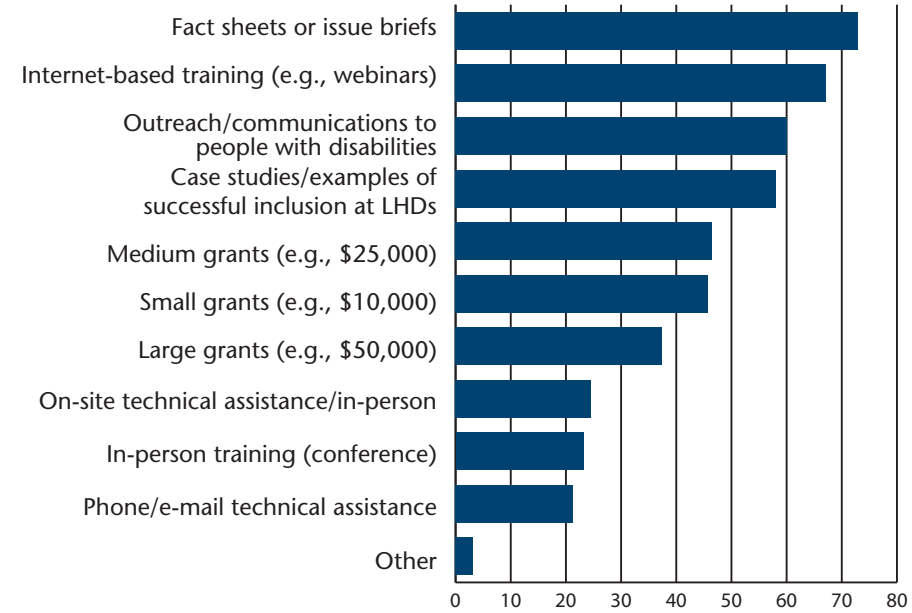


Figure 4 presents the results of the types of support that LHDs reported needing to implement programs inclusive of people with disabilities. When selecting from 11 types of supports listed in the questionnaire, about 73% of respondents indicated a desire for fact sheets or issue briefs. Internet-based training (e.g., webinars, e-learning courses, and podcasts), case study examples of successful inclusion programs, and outreach/communications to people with disabilities were other commonly cited types of needed supports (58.1%–67.1%).

The findings suggest that there is no significant difference between the inclusiveness of LHD programs/services offered by LHDs in CDC grantee states and those in non-grantee states (42% vs. 36% respectively, t=1.1879, p=0.24).

FIGURE 4. TYPES OF SUPPORT THAT LHDS NEED TO IMPLEMENT INCLUSIVE PROGRAMS



Discussion

The findings from this assessment suggest that the majority (86%) of LHDs included people with disabilities in some type of program or activity. Emergency preparedness/planning programs were the types of programs offered by LHDs that were most likely to include people with disabilities (58%–73%). For all other programs, a low proportion of LHDs (16%–45%) included people with disabilities as indicated in FIgure 3.

While nearly 60% of the LHDs that responded to the assessment questionnaire reported having knowledge of the accommodations needed to support people with disabilities in public health activities, less than 50% were aware of the prevalence of people with disabilities living in their LHDs' jurisdictions. Being able to estimate accurately the number of people with disabilities is an important step in planning and developing programs and activities that include people with disabilities.

Even though more than half of the LHD representatives who responded to the assessment questionnaire were aware of the secondary conditions experienced by people with disabilities, only 11% considered people with disabilities as a population that experienced health disparities. Qualitative findings suggest that LHDs tended to associate health inequities with low socioeconomic/minority populations and not necessarily with people with disabilities; this finding suggests a need for raising awareness among LHDs of health inequities affecting people with disabilities and the fact that people with disabilities are a unique population.[6] One possible way to minimize health inequities among people with disabilities is by engaging and including people with disabilities in all public health programs/activities offered by LHDs. The inclusion of people with disabilities in LHDs' programs and outreach activities will help support the health promotion of people with disabilities and thus reduce or prevent the secondary conditions experienced by this population.[22]

A majority of the LHD representatives who responded (73%) to this assessment questionnaire indicated a need for fact sheets/issue briefs on the topic of including people with disabilities. The sampled LHDs also reported that Internet-based training (webinars, e-learning courses, and podcasts), case studies, and examples of how their peers address the needs of people with disabilities would be helpful resources. The data from this quantitative assessment suggest that having a State Health and Disability Program supported by the CDC does not necessarily mean that LHDs within the supported states implement more inclusive programs than in those states without CDC support.

One possible way to minimize health inequities among people with disabilities is by engaging and including people with disabilities in all public health programs/activities offered by LHDs.

The association between health inequities and secondary conditions among people with disabilities increases the need for public health programs to include people with disabilities.[23] Educating LHDs about the unique healthcare and health promotion needs of people with disabilities is also essential to improving the health status of this population. In response to the open-ended question on the assessment questionnaire, a few LHDs noted that they thought that they were including people with disabilities by providing materials to non-English speaking populations. This finding highlights the importance of raising awareness among LHDs of people with disabilities as a unique population group separate from non-English speaking and minority populations; public health workers could benefit from a clearer definition of the "disability population."

Strengths and Limitations

The primary strength of this assessment is that it is the first known assessment to examine the nationwide inclusion of people with disabilities in LHD programs/activities using a stratified random sampling technique. The assessment has some possible limitations, mainly that the data were collected using a self-report method, which increases the chance of possible response bias. The response rate of 29% may appear to be a limitation; however, this response rate is consistent with other online survey research.[24]

Conclusion

This assessment illustrates that LHDs do not appear to exclude people with disabilities intentionally; however, LHDs may lack awareness of the prevalence of people with disabilities in their jurisdictions and have poor knowledge of health inequities affecting people with disabilities. The responses to the open-ended question on the assessment questionnaire indicate that some LHDs associate health inequities only with low socioeconomic or minority populations and not with people with disabilities. LHDs appear not to fully recognize the health inequities commonly experienced by people with disabilities, which may limit their ability to successfully include people with disabilities in public health programs and services. The LHDs that participated in this assessment indicated that fact sheets/issue briefs, Internet-based training, and case study examples would be helpful resources to promote successful inclusion of people with disabilities. Following are six recommendations that NACCHO developed based on the findings from this assessment to help LHDs include people with disabilities in programs, products, and services.

Recommendations

NACCHO recommends the following actions to help LHDs include people with disabilities in programs, products, and services:

1. **Quantify or estimate the number of people with disabilities living in LHD jurisdictions.** LHDs should take this step first when planning inclusive programs and determining resource allocation. NACCHO can help LHDs identify data sources for disability population statistics and connect LHDs with appropriate resources.

2. **Train and educate all LHD staff about the population of people with disabilities.** Fact sheets, issue briefs, eLearning courses, and podcasts may help LHDs train and educate staff. Trainings should raise knowledge and awareness of the population of people with disabilities and secondary conditions and health inequities experienced by people with disabilities.

3. **State Disability and Health CDC grantees should be required to work with LHDs.** Examples of ways that CDC grantee states can work with LHDs include the following: providing technical assistance to LHDs, training LHDs, and assisting LHDs in connecting with members of the disability community. LHDs can find out if their state is a CDC grantee state at http://www.cdc.gov/ncbddd/disabilityandhealth/programs.html.

4. **Involve and partner with community-based agencies/organizations that serve people with disabilities.** These agencies/organizations can provide information and referral services to people with disabilities about various public health programs implemented by LHDs. This assistance will help in reducing health disparities faced by people with disabilities, including negative outcomes after an emergency or disaster. NACCHO's *Directory of Community-Based Organizations Serving People with Disabilities* is available at http://eweb.naccho.org/prd/?na597pdf.

5. **Consider strategies for including people with disabilities in planning/developing public health programs and activities offered by LHDs.** LHDs should take this essential step when planning/developing programs and activities because people with disabilities can share insight that will make programs even more inclusive. NACCHO's *Strategies for Successfully Including People with Disabilities in Health Department Programs, Plans, and Services* is available at http://eweb.naccho.org/prd/?na598pdf.

6. **Share LHD success stories with NACCHO.** LHDs are encouraged to share with NACCHO when they successfully include people with disabilities in public health programs/activities. LHDs may submit their stories at http://www.nacchostories.org.

Acknowledgments

This report was made possible through the support of the Centers for Disease Control and Prevention, cooperative agreement #5U38OT000172-02. NACCHO is grateful for this support. The views expressed within do not necessarily represent the official views of the sponsor. NACCHO thanks the following individuals who contributed to this report: Anuradha Jetty, MPH; Kendall Leser, MS; Sarah C. Yates, JD; Jennifer Li, MHS; James P. Mahoehney, MPH; Jiali Ye, PhD; and Carolyn Leep, MS, MPH.

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