COVID-19 & SURVEY OF ADULTS WITH DISABILITIES: HEALTH AND HEALTH CARE ACCESS

COMPARATIVE ANALYSIS OF RESULTS BY TYPE OF DISABILITY

American Association on Health & Disability

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Table of Contents

A. Introduction

People with disabilities experience unique risks during emergencies, disasters, epidemics, and pandemics that can impact health and health care. For example, access to on-going health care or prescriptions may be disrupted by an outbreak or emergency. Of particular concern is that, historically, persons with disabilities have not been a significant focus of emergency preparedness and surveillance activities, may be mistrustful of public health, yet experience a well-documented range of health disparities, including compromised quality of health care (Finkelstein & Finkelstein, 2020; Krahn et al., 2015). Despite some claims that in the absence of underlying chronic conditions, persons with disabilities are at no higher risk from COVID-19 then the general population, this opinion has not – to date – been substantiated in reports based on current data. In fact, the Centers for Disease Control and Prevention Human Infection only recently expanded the 2019 Novel Coronavirus Case Report Form from documenting neurologic, neurodevelopmental, and intellectual disabilities to also include vision, hearing, and physical disabilities (CDC, 2020).

Purpose

The purpose of the COVID-19 & Disability Survey (C-19D) was to conduct a rapid, real-time online assessment of the coronavirus pandemic's impact on adults with a range of disabilities. Online data-collection technologies permit efficient, rapid assessments that, despite limitations, are useful to begin understanding public health issues. Online surveys can also provide a safe and anonymous environment for vulnerable populations to express opinions. The C-19D Survey is especially important since *we do not know the full impact at the population level of COVID-19 on people with disabilities*.

The COVID-19 & Persons with Disabilities Comparative Analysis Report is the eighth full report developed by the American Association on Health and Disability (AAHD) based on our C-19D survey. The initial Summary Report presents findings combining all disability responses and subsequent reports focused on results by specific type of disability (see Drum et al., 2020[a-g]). This report examines comparisons between the disability groups.

Organization of the Comparative Analysis Report

The report describes the demographics of the sample, compares responses between the disability groups in the areas of COVID-19 information and impact, and access to regular healthcare and prescriptions.

B. Methodology

Survey Development

We reviewed existing COVID-19 surveys and either modified existing items or created new ones consistent with our areas of interest. The self-report survey included demographic questions, including disability identifiers, gender, ethnicity, race, geographic area, and type of health insurance. Because our focus was adults with disabilities, respondents who were 17 or younger were automatically disqualified. However, large numbers of youth with disabilities attempted the survey, indicating a significant unmet need to understand COVID-19 from a youth perspective.

The survey includes a set of questions on access to regular (non-COVID-19) health care and services, including access to needed health care treatment, prescriptions, and the utilization of direct care workers. Questions regarding COVID-19 information and impact were also developed, including sources of information about the Coronavirus pandemic, adherence to public health COVID-19 recommendations, testing, and access to emotional supports during the pandemic.

Survey Distribution

Print, electronic and social media platforms were used to solicit responses from people with a range of disabilities. Within the social media platforms, AAHD utilized Twitter, "boosted" Facebook posts and LinkedIn Groups. In addition, AAHD distributed the survey through existing partnerships and requested that other organizations and individuals distribute the survey invitation/link using their list servs, newsletters, social media platforms, and other print and electronic dissemination strategies. The survey was available online from April 17, 2020, until May 1, 2020.

Disability Identifiers

We adopted four of the six disability identifiers used by the CDC’s Behavioral Risk Factor Surveillance (BRFSS), the nation’s premier public health survey, the US Census Bureau, and other federal agencies. To ease respondent burden, we asked respondents for their *primary* disability, knowing that some respondents experience multiple disabilities.

The primary identifiers included:

1. Deaf or serious difficulty hearing (Deaf/HoH);
2. Blind or serious difficulty seeing, even when wearing glasses (Vision);
3. Serious difficulty walking or climbing stairs (Mobility); and

4. Because of a physical, mental, or emotional condition, serious difficulty concentrating, remembering, or making decisions (Cognition).

Data Analysis

Descriptive demographic statistics for this report were generated using the SurveyMonkey statistical platform, including disability, gender, ethnicity, race, geographic area, and type of health insurance. Statistical significance of responses between the four disability groups (Vision, Deaf/HoH, Mobility, Cognition) was primarily determined by examining the 95% confidence intervals for each estimated data point. Confidence intervals indicate that 95% of all samples drawn from the whole population will result in a point estimate somewhere within the given range. For one question, a Chi-Square Test of Association was used because of the presence of rank order data in the responses. Statistical significance was determined at the commonly accepted alpha level .05.

Data tables with confidence intervals also include colored highlighting to denote statistical significance between groups. Green indicates where a disability group's response is statistically higher (more likely) compared to another disability group or groups and gold indicates where a disability group's response is statistically lower (less likely) compared to another disability group or groups. Lack of highlighting means there is no statistically significant difference between the responses of the disability groups. Data presented in the Chi-Square table includes the observed cell totals, the expected cell total, and the chi-square statistic for each cell and is also color-coded for statistical significance.

C. Results

A total of 2,469 adults responded to the survey between April 17, 2020 and May 1, 2020. Because our survey focus was adults, 578 youth were excluded from the survey after determining their age. The overall survey completion rates varied among the disability groups, including Deaf/HoH (93%), Vision (93%), Mobility (94%), and Cognition (91%) disability groups, exclusive of skip patterns. Comparative results are described below. All results are rounded.

Demographics

As displayed in Table 1, out of a sample of 2,469 adults with disabilities, 58% experienced a Cognition disability, followed by Mobility (27%), Vision (8%), and Deaf/HoH disabilities (7%). The Cognition group was the youngest, with 68% of the sample in the 18-44 age range. Twenty-eight percent of the Vision group was 65 or older. All groups were predominately female, ranging from a low of 54% (Cognition group) to a high of 67% (Mobility group) and white, ranging from 80% (Cognition group) to 88% (Mobility group).

Many of the disability groups were from suburban locations (see Table 1), including the Cognition (51%), Mobility (40%), and Deaf/HoH (48%) disability groups, although the Vision disability group was split fairly equally across suburban (41%) and urban locations (45%). There was also significant participation by persons from rural locations across all types of disabilities, ranging from 14% (Vision disability) to 30% (Mobility disability). Participants were allowed to select multiple insurance types. Medicare Insurance was the most frequently chosen type of insurance across the disability groups (Deaf/HoH: 46%; Vision: 55%; and Mobility: 46%), with the exception of the Cognition group which were more likely to use Medicaid (56%). Substantial proportions of each disability group also had either Private insurance or Medicaid.

Table 1. Demographic Characteristics by Disability Group

	Group A: Hearing/HoH	**Group B: Vision**	**Group C: Mobility**	**Group D: Cognition**
Number:	182	193	663	1,431
Percentage	7%	8%	27%	58%
Age:				
18-44	34%	32%	35%	68%
45-64	43%	40%	46%	28%
65, plus	23%	28%	19%	5%
Gender:				
Female	64%	65%	67%	54%
Male	34%	32%	31%	41%
Transgender Female	0%	0%	0%	0%
Transgender Male	0%	0%	0%	0%
Gender Variant/Non-Conforming	1%	1%	1%	2%
Other	1%	1%	0%	1%
Race & Ethnicity:				
White	87%	87%	88%	80%
Black or African American	7%	6%	5%	11%
Hispanic	4%	6%	5%	5%
Asian	2%	3%	2%	4%

	Group A: Hearing/HoH	Group B: Vision	Group C: Mobility	Group D: Cognition
American Indian or Alaska Native	6%	5%	4%	3%
Native Hawaiian or Pacific Islander	0%	1%	0%	0%
Location:				
Urban	26%	45%	30%	22%
Suburban	48%	41%	40%	51%
Rural	25%	14%	30%	26%
Frontier	1%	0%	0%	1%
Health Insurance:				
Private Ins.	42%	41%	42%	34%
Medicaid	32%	28%	32%	56%
Medicare	46%	55%	46%	38%
VA/Gov't Ins.	9%	5%	9%	6%
Other	3%	9%	5%	5%
No Ins.	5%	2%	3%	2%

COVID-19 Information & Impact

The survey included a number of questions about the impact of COVID-19, such as where respondents obtained information about the Coronavirus pandemic, adherence to COVID-19 public health recommendations, testing, and access to emotional supports during the pandemic.

COVID-19 Information Sources

Respondents were asked to rank the three most important sources of information about COVID-19 out of nine options (Health Care Providers or Health Systems, Internet, Television, Radio, Social Media, Print Media, Friends, Relatives, Other). A full description of endorsement percentages is contained in each disability specific report and the summary report (see Drum et al., 2020[a-g]).

Table 2, below, compares the most important source of information endorsed by the largest percentage of respondents within each disability group. Television was ranked as the most important source of information by the largest percentage of respondents among the Vision (33%), Mobility (36%), and Cognition (29%) disability groups. Among the Deaf/HoH group, 34% selected the Internet as the most important source of information. The Internet was the second most important source of information among the Deaf/HoH (28%), Vision (26%), and Mobility (29%) groups. Twenty-six percent of the

Cognition group chose Television as the second most important source. Social Media was the third most important source of information among the Deaf/HoH (20%), Mobility (18%), and Cognition (15%) groups. Sixteen percent of the Vision group chose Television as the second most important source. As shown in Table 3, however, based on the Chi-square statistical test, there were no statistically significant differences between the groups in the expected ranking of their sources of information.

Table 2. Most Important Source of COVID-19 Information by Disability Group

Disability	**Group A: Deaf/HoH**	**Group B: Vision**	**Group C: Mobility**	**Group D: Cognition**
Most Important Source of Information	Internet: 34% (N=56)	Television: 33% (N=57)	Television: 36% (N=218)	Television: 29% (N=252)
Second Most Important Source of Information	Internet: 28% (N=47)	Internet: 26% (N=46)	Internet: 29% (N=179)	Television: 26% (N=336)
Third Most Important Source of Information	Social Media: 20% (N=33)	Internet: 16% (N=27)	Social Media: 18% (N=111)	Social Media: 15% (N=198)

Table 3. Chi-Square of Disability Groups and Importance of Information Sources

	Most Important Observed Total (Expected Total) [Chi-square]	**Second Most Important Observed Total (Expected Total) [Chi-square]**	**Third Most Important Observed Total (Expected Total) [Chi-square]**	**Row Total**
Hearing	56 (57.14) [.02]	47 (49.07) [0.09]	33 (29.78) [0.35]	136
Vision	57 (54.62) [.10]	46 (46.91) [0.02]	27 (28.47) [0.08]	130
Mobility	218 (213.45) [.10]	179 (183.30) [0.10]	111 (111.25) [0.00]	508
Cognition	377 (382.78) [.09]	336 (328.72) [0.16]	198 (199.50) [0.01]	911
Column Total	708	608	369	1685 (Grand Total)

No significant difference between group(s) ⬜
Statistically less likely compared to other group(s) 🟨
🟩

Statistically more likely compared to other group(s)

Following COVID-19 Recommendations

Respondents were asked if they were following public health recommendations, such as how to protect themselves, recognize symptoms, and getting tested after experiencing symptoms. As shown in Table 4, all four disability groups reported high levels of following COVID-19 public health recommendations ranging from a low of 94% (Cognition) to a high of 98% (Mobility). There were no statistical differences between the disability groups.

Table 4: Adherence to Public Health Recommendations by Disability Group

Disability	Group A: Deaf/HoH	Group B: Vision	Group C: Mobility	Group D: Cognition
Following CDC Recommendations?	Yes: 95% (N=95) 95% Confidence Interval: (88-98)	Yes: 97% (N=97) 95% Confidence Interval: (91-99)	Yes: 98% (N=413) 95% Confidence Interval: (96-99)	Yes: 94% (N=902) 95% Confidence Interval: (92-95)

No significant difference between group(s) ☐
Statistically less likely compared to other group(s) 🟧
Statistically more likely compared to other group(s) 🟩

COVID-19 Testing

Respondents were asked if they had been tested for COVID-19. Similar to national testing trends at the time of the survey, few respondents reported receiving COVID-19 tests. As displayed in Table 5, high percentages among every disability group reported not being tested, ranging from a low of 95% among the Mobility group to a high of 98% among the Vision group. There were no statistically significant differences between disability groups.

Table 5: COVID-19 Testing by Disability Group

Disability	Group A: Deaf/HoH	Group B: Vision	Group C: Mobility	Group D: Cognition
Tested for COVID-19?	No: 97% (N=95) 95% Confidence Interval: (91-99)	No: 98% (N97) 95% Confidence Interval: (93-100)	No: 95% (N=413) 95% Confidence Interval: (93-97)	No: 96% (N=902) 95% Confidence Interval: (95-98)

No significant difference between group(s) ⬜
Statistically less likely compared to other group(s) 🟨
Statistically more likely compared to other group(s) 🟩

Lack of COVID-19 Testing

Respondents in each disability group who had not received a COVID-19 test identified a range of reasons why they were not tested. A full listing of all reasons is found in each disability-specific report (see Drum et al., 2020[a-g]). Table 6 displays the most frequently cited reason for not obtaining a COVID-19 test and the percentages among each disability group. There were no statistically significant differences between the groups.

Table 6. Primary Reason for Not Obtaining COVID-19 Test by Disability Group

Disability	**Group A: Deaf/HoH**	**Group B: Vision**	**Group C: Mobility**	**Group D: Cognition**
Reason for Not Getting Tested?	Test Unavailable: 35% (N=25) 95% Confidence Interval: (24-47)	Test Unavailable: 27% (N=18) 95% Confidence Interval: (17-40)	Test Unavailable: 38% (N=75) 95% Confidence Interval: (32-46)	Test Unavailable: 43% (N=152) 95% Confidence Interval: (38-49)

No significant difference between group(s) ⬜
Statistically less likely compared to other group(s) 🟨
Statistically more likely compared to other group(s) 🟩

Access to Health Care & Services

A set of questions assessed if the coronavirus pandemic was impacting access to regular health care treatment (such as physical therapy, dialysis, bloodwork, etc.) and medications during the COVID-19 outbreak. Respondents were also asked if they were facing new challenges in accessing health care and prescriptions.

As shown in Table 7, less than fifty percent of each disability group was able to obtain regular healthcare during the pandemic (Mobility: 37%; Vision: 42%; Cognition: 42%; Deaf/HoH: 43%). There were no statistical differences between the disability groups.

Each disability group reported high levels of access to prescription medications, ranging from a low of 89% for the Deaf/HoH group to a high of 96% of the Cognition group. There were no statistically significant differences between disability groups at the 95% confidence level.

Table 7 also displays responses to whether respondents were experiencing *new* barriers to accessing health care and/or prescriptions during the pandemic. Affirmative responses ranged from 39% for the Deaf/HoH group, 46% of the Cognition group, 52% of the Vision group, and 61% of the Mobility group. The Mobility group was statistically more likely to experience new barriers to accessing health care and prescriptions compared to the Deaf/HoH group and the Cognition group, but not the Vision group.

Table 7: Access to Healthcare Treatment, Prescriptions, and New Challenges by Disability Group

Disability	**Group A: Deaf/HoH**	**Group B: Vision**	**Group C: Mobility**	**Group D: Cognition**
Able to Access Regular Health Care During the Pandemic?	Yes: 43% (N=53) 95% Confidence Interval: (30-58)	Yes: 42% (N=57) 95% Confidence Interval: (29-56)	Yes: 37% (N=315) 95% Confidence Interval: (31-42)	Yes: 42% (N=607) 95% Confidence Interval: (38-46)
Able to Access Prescriptions During the Pandemic?	Yes: 89% (N=83) 95% Confidence Interval: (80-95)	Yes: 95% (N=87) 95% Confidence Interval: (89-99)	Yes: 94% (N=381) 95% Confidence Interval: (91-96)	Yes: 96% (N=813) 95% Confidence Interval: (94-97)
Experiencing New Challenges During the Pandemic?	Yes: 39% (N=95) 95% Confidence Interval: (29-49)	Yes: 52% (N=95) 95% Confidence Interval: (41-62)	Yes: 61% (N=407) 95% Confidence Interval: (56-66)	Yes: 46% 95% Confidence Interval: (43-50)
	🟨 **Statistically Less Likely Compared to Group C**		🟩 **Statistically More Likely Compared to Groups A+D**	🟨 **Statistically Less Likely Compared to Group C**

No significant difference between group(s) ⬜
Statistically less likely compared to other group(s) 🟨
Statistically more likely compared to other group(s) 🟩

Anxiety & Depression

Respondents were asked if they were feeling anxiety or depression as a result of COVID-19 and, if so, if they were able to access emotional support or services. Disability groups reported varying degrees of access during the pandemic, including Deaf/HoH (64%), Mobility (72%), Cognition (78%), and Vision (85%) (see Table 8). The Deaf/HoH group was statistically significantly less likely to have access to emotional supports or services compared to the Vision and Cognition group, who were statistically more likely to access emotional supports and services compared to the Deaf/HoH group.

Table 8: Access to Emotional Support or Services by Disability Group

Disability	Group A: Deaf/HoH	Group B: Vision	Group C: Mobility	Group D: Cognition
Able to Access Emotional Support and Services During Pandemic?	Yes: 64% (N=95) 95% Confidence Interval: (54-74)	Yes: 85% (N=97) 95% Confidence Interval: (76-91)	Yes: 72% (N=413) 95% Confidence Interval (68-76)	Yes: 78% (N=902) 95% Confidence Interval: (76-81)
	🟧 **Statistically Less Likely Compared to Groups B+D**	🟩 **Statistically More Likely Compared to Group A**	⬜	🟩 **Statistically More Likely Compared to Group A**

No significant difference between group(s)	⬜
Statistically less likely compared to other group(s)	🟧
Statistically more likely compared to other group(s)	🟩

Use of Direct Care Workers & Impact of COVID-19

Respondents were asked: 1) if they used a Direct Care Worker (e.g., Home Health Aide, Personal Care Aide, Direct Service Provider, or Unpaid Family Caregiver) in their home; 2) if the Direct Care Worker was continuing to provide care during the pandemic; and 3) if respondents had been able to maintain a safe distance from their Direct Care Worker (e.g., six feet).

As displayed in Table 9, Direct Care Worker (DCW) use varied among the groups (Deaf/HoH: 13%; Vision: 22%; Mobility: 46%; and Cognition: 54%). The Mobility Group and the Cognition Group were statistically more likely to use a DCW compared to both the Deaf/HoH and Vision disability groups, who were statistically less likely to use a DCW. Continued DCW use rates *during the pandemic* varied between the Cognition and Vision groups (73%), Mobility (76%), and the Deaf/HoH group (83%), but there were no statistically significant differences between the disability groups regarding continued use.

Fifty percent or less of each disability group were able to maintain a safe distance from a DCW. The Mobility group was statistically less likely to maintain a safe distance from a DCW compared to the Cognition group, which was statistically more likely to maintain a safe distance from their DCW, but there were no other statistically significant differences between the groups.

Table 9: Direct Care Workers Use & Safety by Disability Group

Disability	**Group A: Deaf/HoH**	**Group B: Vision**	**Group C: Mobility**	**Group D: Cognition**
Use a Direct Care Worker in Home?	Yes: 13% (N=95) 95% Confidence Interval: (7-21) 🟨 **Statistically Less Likely Compared to Groups C+D**	Yes: 22% (N=97) 95% Confidence Interval: (14-31) 🟨 **Statistically Less Likely Compared to Groups C+D**	Yes: 46% (N=413) 95% Confidence Interval: (42-51) 🟩 **Statistically More Likely Compared to Groups A+B**	Yes: 54% (N=897) 95% Confidence Interval: (50-57) 🟩 **Statistically More Likely Compared to Groups A+B**
Use a Direct Care Worker in Home During the Pandemic?	Yes: 83% (N=12) 95% Confidence Interval: (52-98)	Yes: 73% (N=22) 95% Confidence Interval: (50-89)	Yes: 76% (N=191) 95% Confidence Interval: (70-82)	Yes: 73% (N=488) 95% Confidence Interval: (69-77)
Able to Maintain Safe Distance From Direct Care Worker?	Yes: 30% (N=10) 95% Confidence Interval: (7-65)	Yes: 47% (N=15) 95% Confidence Interval: (21-73)	Yes: 32% (N=145) 95% Confidence Interval: (25-41) 🟨 **Statistically Less Likely Compared to Group D**	Yes: 50% (N=354) 95% Confidence Interval: (44-55) 🟩 **Statistically More Likely Compared to Group C**

No significant difference between group(s) ⬜
Statistically less likely compared to other group(s) 🟨
🟩

Statistically more likely compared to other group(s)

D. Discussion

One of the limits of using a convenience sample is that results cannot be generalized to a larger population, although the research results can inform policy, programmatic, and additional research initiatives (e.g., Bethell, et al, 2004). Below, we discuss observations about the survey results in relation to the sample's demographics and responses to the COVID-19 Information and Impact and Access to Health Care and Prescriptions sections.

Demographics

The COVID-19 and Disability (C-19D) Survey sample is atypical from population-based disability samples on a number of dimensions. For example, the sample differs from population-based results in age (prevalence rates for the 18-44 age group ranged from a low of 32% to a high of 68%), was predominately female, White, and Suburban, and the largest disability group was the Cognition group. This convenience sample is, as a consequence, atypical of the general population. Despite this limitation, the results include a number of important findings worthy of discussion and exploration.

Differences Between Disability Groups

We compared responses from the COVID-19 and Disability survey between the four disability groups in seven key substantive areas encompassing 11 questions, including sources of COVID-19 information, following public health recommendations, testing, reasons for not getting tested, access to healthcare, prescriptions, and emotional supports, and Direct Care Worker use and safety.

We had anticipated there could be quite dissimilar responses between the four disability groups in many of the substantive areas and questions, but in general there were fairly consistent – but concerning – responses among the disability groups. Overall, there were only four questions with statistically significant differences between the groups. The four questions focused on experiencing new healthcare access challenges, accessing emotional supports or services, use of a Direct Care Worker (DCW), and maintaining a safe distance from the DCW. The number of statistically significant differences varied by disability group, but were primarily found in the Mobility group.

Mobility

The Mobility group was more likely to have statistically significant differences across three of the four questions. The Mobility group was more likely to use a DCW compared to the Deaf/HoH and Vision groups and less likely to maintain a safe distance from their

DCW compared to the Cognition group. The Mobility group was also statistically more likely to experience new barriers to accessing healthcare compared to the Deaf/HoH and Cognition groups. Given historical barriers to accessing healthcare (e.g., Krahn et al., 2015), it is particularly concerning that new barriers have emerged for the Mobility group. Some of these barriers may include the cancellation of appointments by providers, safety concerns about clinics and offices, a lack of access to transportation for both DCWs and people with mobility disabilities, and a loss of DCWs. The degree that these and other issues are present need to examined at the population level.

Higher use of DCWs by the Mobility group was expected. But the inability to maintain safe distancing practices speaks to a need to develop and communicate specific strategies for both persons with Mobility disabilities and their DCWs to mitigate the effects of the coronavirus.

Deaf/HoH

The Deaf/HoH group was less likely to use a DCW compared to the Mobility and Cognition groups and less likely to experience new challenges to accessing healthcare compared to the Mobility group. Significantly, the Deaf/HoH group was less likely to have access to emotional support and services during the pandemic compared to the Vision and Cognition groups. This may speak to the limitations of tele-health or video conference platforms for persons who are Deaf/HoH in reaching mental health professionals and/or family or friends that provide support or services.

Vision

The Vision group was less likely to use a DCW compared to the Mobility and Cognition groups, and statistically more likely to access emotional support and services compared to the Deaf/HoH group. Yet, for the 15% of the Vision group unable to access needed emotional supports, the consequences of access barriers may result in severe emotional consequences.

Cognition

The Cognition group was statistically more likely to use a DCW compared to the Deaf/HoH and Vision groups but statistically more likely to maintain a safe distance compared to the Mobility group, and statistically less likely to experience new challenges to healthcare and prescription access compared to the Mobility group. While the Cognition group was statistically more likely to maintain distancing compared to some groups, it is important to note that 50% of the Cognition group were unable to maintain safe distances and were being exposed to the virus.

Notable Group Responses

In addition to comparisons between groups, there are a number of responses across the groups that are important to evaluate both between disability groups and in comparison, with a non-disabled population. These are explored in greater depth below.

COVID-19 Information & Testing

Across all four groups, Television, the Internet, and Social Media were the most important sources of information. Television was the most important source among three groups, the Internet was second-most important among three groups, and Social Media was the third-most important source of pandemic information among three groups.

The importance of television was unexpected and needs to be considered when examining how to effectively reach disability populations, if the convenience sample results reflects more general trends. More specifically, there is a need to understand *how* respondents are using television to obtain information. Is it through listening to Public Service Announcements, televised town hall meetings, or weekly press conferences conducted by local, state, or national leaders? Is it from local, cable, or network news, each of which may demonstrate considerable variability in accuracy and partisanship? And how does one differentiate "the Internet" from social media, since social media is on an internet-based program? Similarly, who and what are the internet and social media information sources found by the respondents, knowing that the accuracy of online information varies greatly? It is also important to understand *why* Health Care Providers and Health Systems did not rise to the top tier of sources of information among this sample. Is it a trust issue? An inability to reach health care providers and/or health systems? It is equally important to determine if similar results would emerge from a population-based sample of disability groups and compared to the general population.

In addition to a better understanding of sources of information, it is also critical to ensure within this sample and for all persons with disabilities that they have access to informational products on the Internet and elsewhere in alternate formats such as Braille or large print needed by different disability groups. More broadly, are informational products being developed following integrated knowledge translation principles (Drum, 2018) that include involving persons with disabilities in their development and in the vocabulary, format, structure, and following transfer strategies preferred by disability groups such as relying on trusted knowledge brokers?

While several national polls report varying levels of endorsement for COVID-19 protection practices (e.g., Igielnik, 2020; Harris, 2020), across all disability groups the COVID-19 and Disability sample reported very high levels of compliance with public health recommendations. This suggests that this sample was taking the risks of the coronavirus pandemic very seriously in April and May. Yet, only a small percentage of respondents in each disability group (5% or less) had received a COVID-19 test. Notably, tests being unavailable was the single largest reason for not taking the COVID-19 test among all four disability groups. While a general lack of testing available in April may have been the cause, it is critical to determine if lack of testing access is an ongoing issue for this sample and at the population level.

Healthcare Treatment, Prescriptions, & Access Challenges

Of particular concern across the four disability groups is the disruption in being able to access regular healthcare treatment services during the pandemic. Significant proportions of each disability group – ranging from a low of 37% (Mobility) to a high of 43% (Deaf/HoH) – experienced interruptions to regular healthcare treatment, services that could maintain the health and functioning of disability group members. Clearly for this sample, strategies to maintain healthcare services need to be developed given the ongoing need for essential treatments such as dialysis. Reduced access to continued health care treatments can lead to serious deconditioning of disabilities, decreased quality of life, and reduced participation in daily activities.

In contrast, large proportions of each disability group were able to access their prescription medications, ranging from a low of 89% (Deaf/HoH) to a high of 95% (Vision). Yet, for any member of a disability group whose prescription medication access has been disrupted, this represents potentially life-threatening consequences and may lead to unintended loss of life.

In many ways, the novel coronavirus pandemic is presenting unfamiliar and unanticipated challenges for persons with and without disabilities. A key difference is that persons with disabilities already encounter documented disparities in accessing health care treatment and services and involvement in emergency planning programs and activities. It is troubling that a significant proportion of each disability group is experiencing new challenges to obtaining health care treatment, health care access, and/or prescriptions. Resolving long-time barriers such as negative attitudes and poor communication, physical features and structures, lack of transportation, and economic factors has been difficult enough, and the addition of new challenges presents a complicated problem for public health. Determining if new barriers exist at the population level is a necessary first step to develop new systematic efforts to ameliorate access barriers.

Anxiety & Depression

Anxiety and depression as a result of the pandemic has become a nationally recognized problem. At the time of the survey (April/May), among disability groups experiencing anxiety or depression, there were fairly high levels of access to emotional supports and services, ranging from a low of 64% to a high of 78% among the disability groups. Yet, it is uncertain if access has been maintained or reduced during the interim period and how deleterious a lack of emotional services and supports has been for the proportion of this sample not receiving these supports. It also speaks to the need to better understand the impact of anxiety and depression for disability groups at the population level.

Direct Care Workers

While the Mobility and Cognition groups had the highest use of Direct Care Workers, each group used DCWs and among these 50% or less of each group was able to maintain safe distancing from their DCW. Key questions for the sample and at the population level include whether continued exposure to a DCW has resulted in COVID-19 cases or if public health recommendations on how to protect oneself have been received, understood, and implemented? Did the DCW wear a mask and/or did the members of the disability group? Have safe practices been maintained over time? Are disability group members able to continue to perform daily activities of living without access to DCWs?

Limitations

The findings in this report are subject to at least seven limitations. First, the survey data are self-reported and may be subject to reporting or recall bias. Second, the responses represent a snap shot between April 17, 2020, until May 1, 2020, and the coronavirus pandemic situation may have changed since these responses were given. Third, persons without internet access were unable to access and complete the survey introducing a systematic bias in the sample. Fourth, the survey completion rate among adults ranged among disability groups, suggesting the presence of some response bias. Fifth, because of the use of a convenience sample, the results are not generalizable to the overall population of persons with disabilities. Sixth, the disability group samples varied in size, as did responses to particular questions. Seventh, persons with multiple disabilities may not be accurately identified since we asked for a person’s “main” disability.

E. Conclusion

The results of this survey provide insights into a challenging moment in time for persons with disabilities and others vulnerable populations during the coronavirus pandemic and reveal a strong need for leadership from public health. Observational data is an important tool for public health and tracking the number of persons with disabilities who have been infected and case outcomes is of fundamental importance. It is imperative that CDC observational data be analyzed and disseminated as quickly as possible and augmented by the analysis and dissemination of products by disability and health researchers.

Yet, equally important from a surveillance perspective are population-based surveys of persons with disabilities and the general population that are able to drill deeper into the impact of the COVID-19 pandemic and assess a broader range of contributors to negative health outcomes such as demographic characteristics (including race, ethnicity, income, and other social determinants of health), individual behaviors (such as risk taking), and health system attributes (such as a lack of insurance or inability to afford co-pays). Such surveys also need to be conducted on a longitudinal basis to understand this complex and dynamic pandemic. Based on the collection of ongoing evidence, informational products and public health programs can be developed to effectively reduce the risks and mitigate the negative impacts of COVID-19 for both persons with and without disabilities.

Public health inherently has political dimensions (Drum & Krahn, 2009), but data is apolitical and ought not be politicized. The combination of observational and population-based evidence needs to be collected to document if persons with disabilities and other vulnerable populations are experiencing health disparities during the COVID-19 pandemic. In turn, however, it is important to recognize a basic principle of public health: where a health disparity exists, it is the responsibility of public health to act. The ethical foundation of public health obligates it to speak the truth it knows in the moment – recognizing that knowledge changes over time as more evidence is obtained – and engage in vigorous and principled leadership and action in the face of evidence of health disparities.

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