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Defining the Barriers to Political Participation for Individuals with Disabilities

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I. Executive Summary

This report examines the barriers to political participation that can exist for individuals with disabilities. Such studies can be difficult because there are few studies that examine both disability status and political variables such as party identification and ideology. No studies directly ask about whether a person's disability status directly interferes with the various aspects of political participation, such as getting news about candidates or navigating the polling place in order to vote. The analyses that follow utilize data from several surveys, including the Current Population Survey, the 2008 Study of the Performance of American Elections, and the 2008 Cooperative Congressional Election Study.

Demographics

There are approximately 33.4 million individuals with disabilities over 18 years of age in the United States.¹ According to the U.S. Census American Community Survey from 2010,

- approximately 10% of individuals 18 to 64 years of age report having a disability, and
- almost 37% of individuals aged 65 and older report having a disability.

The most common disabilities for individuals under age 65 are mobility difficulties, cognitive difficulties, and difficulties associated with independent living. For

¹ See, for example, <http://www.census.gov/prod/2010pubs/acsbr09-12.pdf> and <http://factfinder2.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t> for data related to people with disabilities.

individuals 65 years of age and older, the most common reported disabilities are related to mobility, independent living, and hearing.

For political participation, there are two demographic characteristics that are highly related to voting: education and income. When we compare the educational attainments of individuals reporting a disability with those individuals not reporting a disability, we see that:

- individuals with disabilities are 9 percentage points more likely to report living below the poverty level compared to individuals not reporting a disability (21% versus 12.3%),
- 61% of individuals with disabilities have a high school degree or less in education, compared to 39% of the population not reporting a disability
- only 21% of people with disabilities work, compared to 64% of people not reporting a disability.²

Voter Registration

People with disabilities report being registered to vote at lower rates than the population of people not reporting a disability.³ Specifically:

- in 2008, people with disabilities were 4.6 percentage points less likely to be registered to vote compared to people not reporting a disability,
- in 2010, people with disabilities were 1.2 percentage points less likely to be registered to vote.

² These data come from the American Factfinder (footnote 1).

³ These data come from our analysis of the Current Population Survey from 2008 and 2010.

People with cognitive disabilities are the least likely to vote, followed by people with self-care and independent living difficulties.

Most people – including individuals with disabilities – do not register to vote because they do not think that voting would matter and they are not interested in politics.

Voting

Individuals with disabilities report voting at lower rates compared to people not reporting a disability.⁴ Specifically:

- in 2008, individuals with disabilities were 7 percentage points less likely to vote compared to individuals not reporting a disability,
- in 2010, individuals with disabilities were 3 percentage points less likely to vote.

As was the case with registration, the individuals who are least likely to report voting are those reporting a cognitive disability, a self-care difficulty, or an independent living difficulty. The biggest barriers to voting for individuals reporting a disability are transportation, not liking the candidate choices, and having an illness.

Voting Experiences

Individuals with disabilities do have somewhat different experiences at the polls.⁵ In the 2008 election, individuals with disabilities were:

- more likely to report having had a voter registration problem;
- more likely to report having had a problem with the voting equipment;
- more likely to report having needed help voting; and

⁴ These data come from our analysis of the 2008 and 2010 CPS.

⁵ These data come from our analysis of the 2008 Survey of the Performance of American Elections.

- less likely to report having had to wait in line to vote.

Individuals with disabilities also report voting by mail at much higher rates than do individuals not reporting a disability. This is especially true for people with disabilities that constrain them getting out of the house – people with self-care and independent living difficulties.

Convenience Voting and Registration

Given the number of individuals with disabilities reporting voting by mail, we examined that issue further and determined that there is evidence that living in a state with no-excuse absentee makes it easier for individuals with disabilities to vote, compared to living in a state requiring an excuse to absentee vote. Living in a state with early voting does not boost turnout. There is also evidence that having Election Day Voter Registration (EDR) has a small but significant positive effect on turnout for individuals with disabilities.

Other Forms of Participation

Individuals with disabilities report being less likely to engage in certain political activities compared to individuals not reporting a disability.⁶ However, comparing voters with disabilities to voters not reporting a disability, we can see that individuals with disabilities report participating at similar rates except for attending public meetings and contributing money to campaigns. Lower participation in these two areas likely reflects difficulties associated with transportation for individuals with disabilities and the lower income levels that they have.

⁶ These data come from our analysis of the 2008 Cooperative Congressional Election Study.

II. Defining Disability

Barriers to political participation among the population of individuals with disabilities have been studied in the United States. However, there are still many issues related to studying the political participation this population.⁷ For example:

- Surveys that examine the types of disabilities – blindness, deafness, mobility limitations, and emotional or cognitive disabilities – do not generally ask questions regarding political participation.
- Surveys that examine political participation – voting, contacting political principals, protesting, and the like – do not ask detailed questions about disabilities.
- The typical large-scale survey approach to studying political participation may be inadequate for studying participation among the disabled population as they a diverse population.
- Finally, the issues the disabled population faces with participation in the political process involve a complex interaction between their health condition and the environment within which they engage in political activity.

Another issue in studying the political participation of the disabled population in the United States regards how we define the concept of disability. One recognized way of defining disability in research is to use the *International Classification of Functioning Disability and Health* (ICF). The ICF defines the term “disability” as “functioning in multiple life areas. Simply seeing, walking, taking a bath, working, going to school,

⁷ See Appendix D for a full bibliography of research in this area.

accessing social services and many such domains are included in the definition.”⁸ The ICF also defines a disability as having two components, resulting from an interaction between:

1. A person with a specific health condition, and
2. The environmental factors and personal factors that are that person’s life context.

Therefore, a disability occurs when the impairment in body function and structures limits activity and limits participation. It is not something that a person has, but is a result of the interaction between the person and a given environment. In the context of elections, consider the following two examples.

1. An individual who is a quadriplegic may have difficulty registering to vote and voting, because the physical act of manipulating a paper form or working a voting machine is difficult. However, when considering their ability to gain access to information about the elections on the news – via the television or radio – the person may not be disabled at all.
2. A person who is blind, who attempts to vote using a paper ballot is operating in an environment where their disability might be seen as severe; the person cannot function or complete the task without assistance. The same blind person voting on a machine that can read the ballot and which has accessible functionalities might be considered equally functional to a person with perfect vision. It is the person-environment interaction that matters.

In order to use this definition in our analyses, we need data or information that measures the following:

⁸ <http://www.who.int/classifications/icf/en/>

1. A person's health conditions,
2. The environment in which they operated, and
3. The level of participation that they have in various political activities.

With these data, we could compare people with and without specific health conditions, in different environments, to determine what interactions of health and environment created barriers to political participation. In an ideal study, we would conduct two parallel surveys. One would be a large sample study of individuals in the United States who do not identify as disabled and the other would be a large sample study of individuals who do identify as disabled. Such large sample studies ensure that each survey includes subsamples across varying health conditions and environments. This would allow us to determine what interactions of health and environment create barriers to participation.

Unfortunately, existing surveys that examine political participation by individuals with disabilities are less than ideal for several reasons. First, in order to study political participation by people with disabilities, there is a need for data regarding (1) the person's political characteristics – the person's party identification, ideology, and related factors – and (2) specific information about that person's disability. There are few surveys in the United States that ask questions both about political characteristics of voters, which are important correlates of participation, and detailed questions about disability that allow us to differentiate between individuals with various forms of disabilities. Second, few surveys have a large enough sample of disabled individuals to allow for detailed analyses of participation across disabilities. Thus, studying individuals

with disabilities using existing data requires making a tradeoff between having quality data about disability, or having quality data about political participation.

Another important issue that we wish to raise at the outset is that in this study we generally define political participation narrowly, primarily along the lines of the important administrative avenues of participation in elections: registering to vote and casting a ballot. These have long been the primary ways in which social scientists have defined political participation --- primarily because these activities generate data that can be easily gathered and analyzed. Obviously there are many other ways in which individuals can be engaged in politics, ranging from attending political gatherings, to posting a campaign sign in their yard, to contributing money to political campaigns. Although we do not widely study these many forms of participation and engagement for the disabled community in the United States here, we think that future research needs to broaden the definition of participation to include these many other forms of political activity as many might be mechanisms that the disabled population may employ in addition to the administrative acts of registration and turnout.⁹

In the next section, we provide an overview of key surveys that can be used to examine voting by people with disabilities, identifying the strengths and weaknesses of each survey.

⁹ For a thorough discussion of this issue, see Sidney Verba, Kay Lehman Schlozman and Henry E. Brady, *Voice and Equality: Civic Voluntarism in American Politics*. Harvard University Press, 1995.

III. Definitions of Disability in Surveys

There are a limited number of surveys that ask questions about health-related disabilities and also ask questions about political participation. In the tables below, we list the definitions of disability that exist in such surveys.

Current Population Survey

The Current Population Survey (CPS) is a monthly survey of about 50,000 households conducted by the Bureau of the Census and is the primary source of information on the labor force characteristics of the U.S. population. In 2008, the CPS began to include questions regarding people with disabilities.¹⁰ The CPS uses the questions below to identify persons with disabilities in the entire population, which includes both citizens and non-citizens. However, for our analyses of voting, we exclude the non-citizens and examine only citizen voters.¹¹ A yes response to any questions indicates that the person has a disability.

QUESTION: This month we want to learn about people who have physical, mental, or emotional conditions that cause serious difficulty with their daily activities.

Please answer for household members who are 15 years old or over.

- Is anyone deaf or does anyone have serious difficulty hearing?
 - Is anyone blind or does anyone have serious difficulty seeing even when wearing glasses?
 - Because of a physical, mental, or emotional condition, does anyone have serious difficulty concentrating, remembering, or making decisions?
 - Does anyone have serious difficulty walking or climbing stairs?
 - Does anyone have difficulty dressing or bathing?
-

¹⁰ http://www.bls.gov/cps/cpsdisability_faq.htm

¹¹ In section III, where we discuss the disability population, we are using the American Community Survey data, which does not differentiate between citizen and non-citizens.

-
- Because of a physical, mental, or emotional condition, does anyone have difficulty doing errands alone such as visiting a doctor's office or shopping?
-

The CPS has questions related to voter registration and to voting that are considered to be the standard questions on voting and voter registration.¹² Specifically, the CPS asks,

For Registration: (Were you/Was name) registered to vote in the November 2, 2010 election? Yes, No

In any election, some people are not able to vote because they are sick or busy or have some other reason, and others do not want to vote. Did (you/name) vote in the election held on Tuesday, November 2, 2010? Yes, No

The CPS also has excellent demographic questions. Unfortunately, it lacks questions about political parties, ideology, and questions about political activities other than voting (e.g., donating time or money to campaigns).

Political Participation Surveys: 2008

In 2008, there were two major surveys regarding the election that were conducted that evaluated the voting experience and political participation. *The 2008 Survey of the Performance of American Elections (SPAЕ)* asked 200 voters in each of the 50 states (10,000 respondents in total) about whether they voted, and for those who voted, about their voting experience. This survey has an array of questions about the voting experience and asks if the person voted on the 2008 election. The survey includes a basic measure of disability, captured in the following question:

¹² Information on the CPS can be found at <http://www.census.gov/cps/about/index.html>

Does a health problem, disability, or handicap CURRENTLY keep you from participating fully in work, school, housework, or other activities?

The survey includes many contextual voting factors, including whether the voter is in a state with convenience voting (easy early and absentee voting). The large sample allows for a national assessment of individuals with disabilities and their experience voting.

The *2008 Cooperative Congressional Election Study* (CCES) was a national survey of political participation in the 2008 election. This is an online survey conducted by YouGov/Polimetrix that had over 35,000 respondents.¹³ This survey had data on an array of participation metrics, including voting, participating in other political events, interest in politics, and following political news. It also has data on early and absentee voting. This survey has a very basic measure of disability, captured in this question and responses:

“What is your employment status? Employed Full-time, Employed Part-time, Temporarily laid off, Unemployed, Retired, ***Permanently disabled***, Homemaker, Student, Other.”

These surveys provide us with three different measures of disability and three different types of outcome data.

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http://projects.iq.harvard.edu/cces/data?dvn_subpage=/faces/study/StudyPage.xhtml?globalId=hdl:1902.1/14003

- The Census provides the best definition of disability – divided by specific disability – and, in the CPS, has excellent data regarding voter registration and voting. It lacks data regarding the partisanship and ideology of the respondent, as well as data on other forms of participation and data on the voting experience.
- The SPAE has a basic but standard definition of disability and has the best data on voting experiences in the 2008 election. This survey lacks data regarding other forms of political participation.
- The CCES has the weakest definition of disability, but has excellent data on voting experiences and political participation.

We will use the data from these surveys to quantify various aspects of the population of individuals with disabilities, determine what barriers exist to their participation, and identify potential mechanisms for overcoming these barriers. First, though, in the next section, we use data from the Census to show the size of the disabled population in the United States.

IV. The Disability Population in the United States

The U.S. government has asked questions about disability status in surveys for some time. However, there have been questions raised about the most efficacious way in which to ask about disability. Beginning in 2003, the Office of Management and Budget convened an interagency working group to determine the best way to ask questions about disability. The working group tested different forms of disability questions in an effort to lower non-response rates and ensure that the population of individuals with disabilities was being properly identified. The result of this process was a change in the way in which the Census asked questions regarding disability. The primary change was to discontinue a question regarding disability and employment, because respondents were often misinterpreting the question. This change and other modest adjustments to the surveys resulted in a reduction of the population of people with disabilities who are over 5-years of age by 6 million people – from 41 million to 36 million – between the 2007 and 2008 American Community Surveys (ACS).¹⁴ Today, the Census uses the questions about disability presented in the previous section.

We created the table below – and all tables in this section – using data on people with disabilities taken from the 2010 ACS. We break the data out between two age categories, (1) people aged 18 to 64 and (2) people 65 and older, to show the differences between these populations in regards to the prevalence of certain disabilities.¹⁵ These data show that there are wide variations in the prevalence of

¹⁴ A complete summary of the work of this Interagency Working Group can be found in the report, “Review of Changes to the Measurement of Disability in the 2008 American Community Survey.” http://www.census.gov/hhes/www/disability/2008ACS_disability.pdf. The Census used the age range of 5 years and older for most of their analyses.

¹⁵ These data come from the US Census Bureau “Report S1810. Disability Characteristics. 2010 American Community Survey 1-Year Estimates.”

different disabilities in the United States and across age categories. We see that ambulatory disabilities – those that limit mobility are most common and vision difficulties are least common across the categories captured by the Census. Cognitive disabilities, which might be considered as under-measured and under-considered within the context of voting, are also quite prevalent. These data also suggest that older individuals suffer from disabilities at different rates compared to younger individuals; age brings a different level of prevalence of disability.

Table 1: Disability Types, by Age Categories

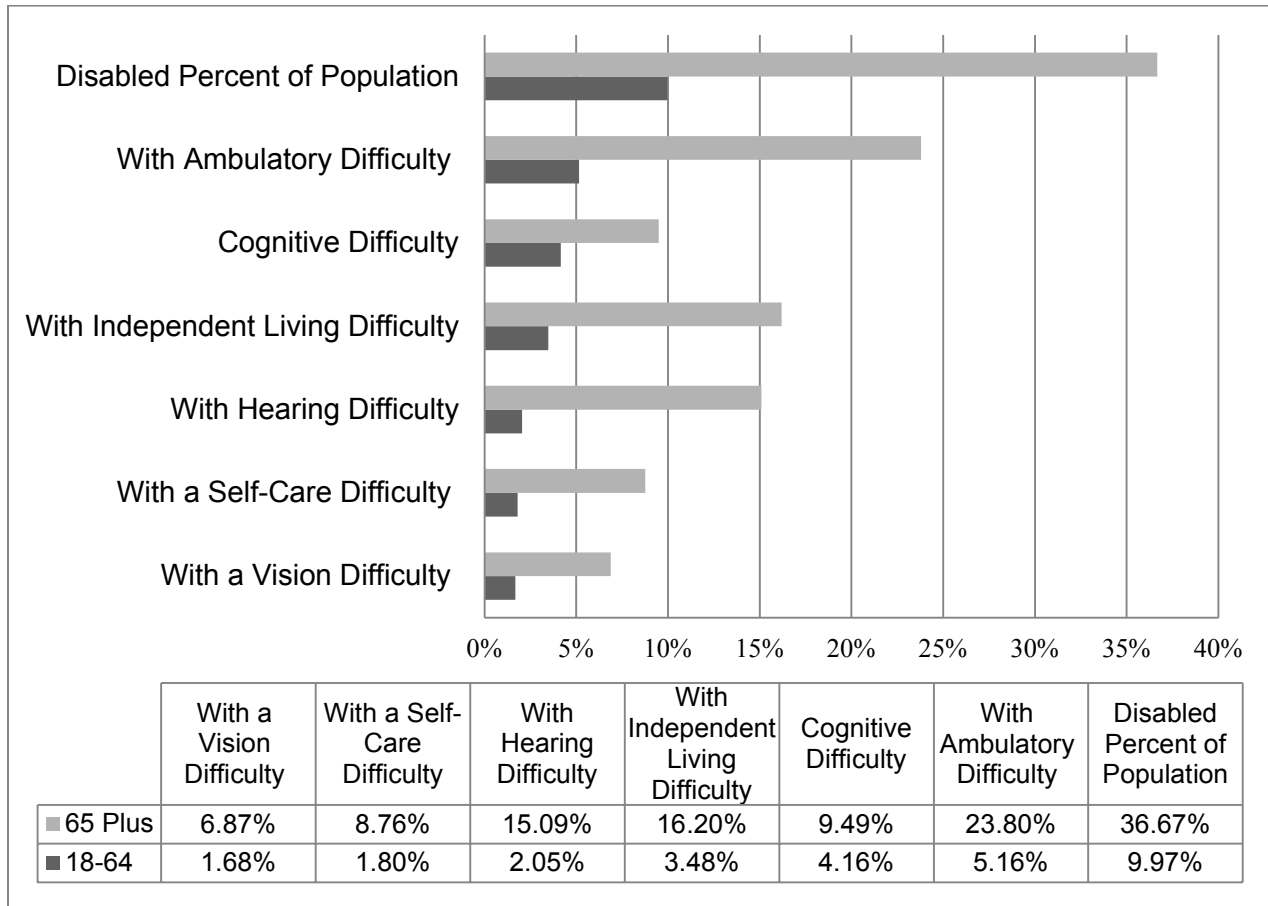
	18-64	65 Or Older	Total
Vision Difficulty	3,209,067	2,688,346	5,897,413
Self-Care Difficulty	3,444,202	3,427,851	6,872,053
Hearing Difficulty	3,924,360	5,903,990	9,828,350
Independent Living Difficulty	6,648,058	6,337,568	12,985,626
Cognitive Difficulty	7,943,002	3,712,397	11,655,399
Ambulatory Difficulty	9,856,708	9,314,687	19,171,395
Total Disabled Population (18 & Older)	19,048,426	14,351,651	33,400,077
Total US Population (18 and Older)	191,138,060	39,132,252	230,270,312

Note: Numbers do not sum because a person can have multiple disabilities.

In the graphic below, we can see the trends related to disability and age more clearly. Although the total number of people with disabilities is higher among those 18

to 64 compared to those 65 and older, the prevalence in percentage terms for all disabilities is higher for those individuals 65 and older. Not surprisingly, as we age, certain disabilities become more prevalent, especially those related to mobility.

Figure 1: Percent of Population with Disabilities, by Age Cohort



Note: Percentages do not sum because a person can have multiple disabilities.

When we consider other demographics of the population of people with disabilities and compare those with the population reporting no disability, we see that there are stark differences between these two populations. People with disabilities are more likely to be out of the workforce and are more than twice as likely to not have a high school diploma. Only 13.5% of the population of people with disabilities report

having a college degree. We also see that people with disabilities are much more likely to be below the poverty level and their median earnings are \$10,000 lower than those reporting no disabilities.

Table 2: Characteristics of the Disabled Population, 2010¹⁶

		Civilian Non-institutional Population	With a Disability	No Disability
	Aged 16 and Over	238,836,064	33,861,981	204,974,083
	Work Status, Working	58.2%	21.8%	64.2%
Education	Less Than High School Graduate	14.1%	26.6%	11.8%
	High School Graduate, GED, Or Alternative	28.4%	34.5%	27.2%
	Some College Or Associate's Degree	29.0%	25.4%	29.6%
	Bachelor's Degree Or Higher	28.5%	13.5%	31.4%
Income	Median Earnings	29,010	19,500	29,997
Poverty Status	Below 100 Percent Of The Poverty Level	13.6%	21.0%	12.3%
	100 To 149 Percent Of The Poverty Level	9.0%	14.4%	8.1%
	At Or Above 150 Percent Of The Poverty Level	77.4%	64.6%	79.6%

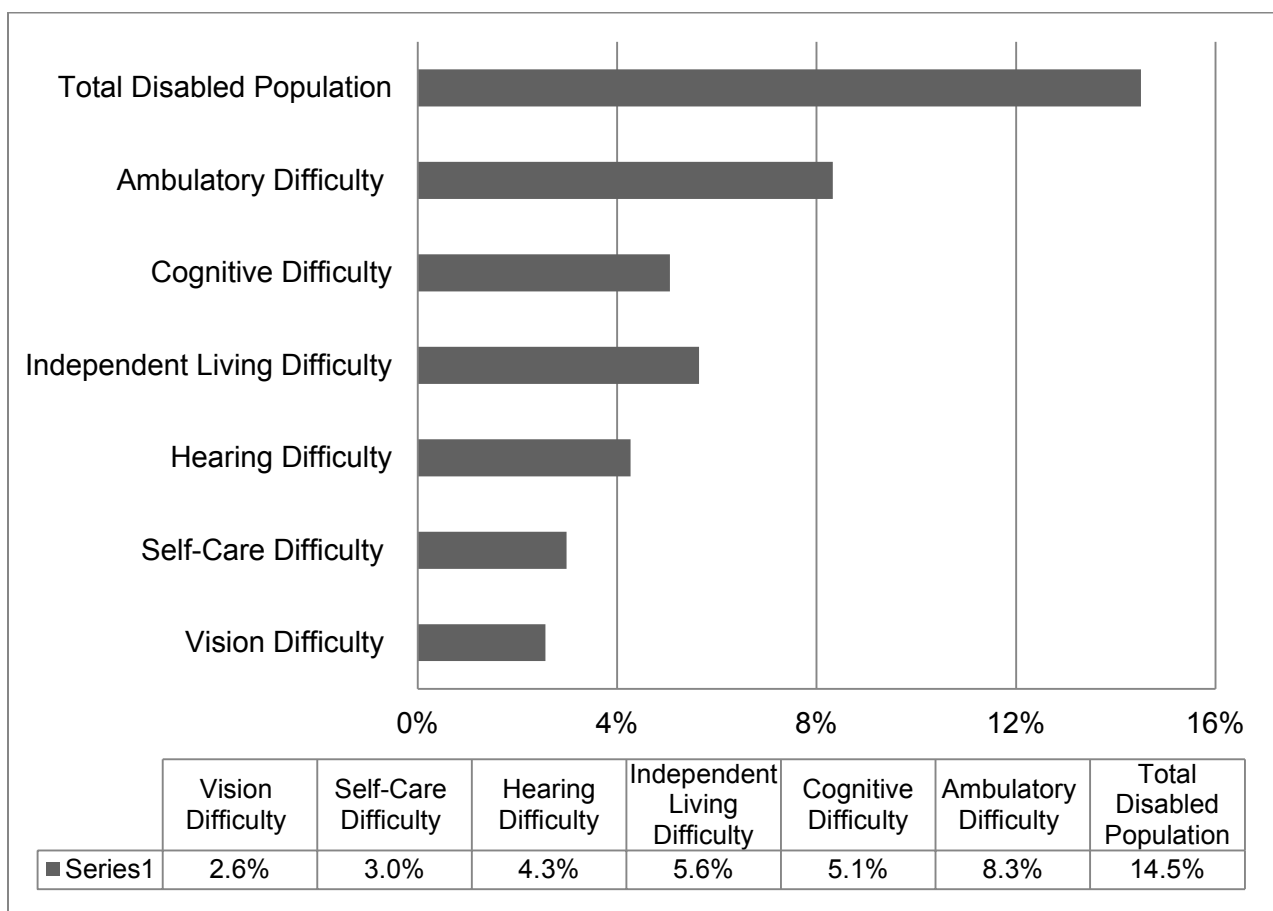
Disability Demographics and Implications for Voting

As shown in the figure below, 14.5% of the population has some form of disability; for those 65 and older, the percentage is over 36%. Just getting to the polling place is a problem for those individuals with ambulatory difficulties, and it is likely also a problem for individuals with self-care and independent living difficulties. This issue is especially prevalent among those individuals 65 and older; almost 25% of them have either self-

¹⁶ From the 2010 American Community Survey
http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_10_1YR_S1811&prodType=table b

care or independent living issues and just over 25% have ambulatory issues (these populations may overlap). For these individuals, convenience voting methods, especially absentee voting, are likely to be important modes of voting because they keep this population from having to attempt to leave their homes to vote on election day.

Figure 2: Percent of Population with a Disability



In addition, these data also show that cognitive disabilities may be an understudied issue by scholars, as well as an under-considered issue on the part of election administrators. For these individuals, issues such as noise, crowds, and time

pressures for voting may be problematic. This population includes a variety of people, including veterans who experienced trauma in wartime, and this population is also not one that is easily identifiable by poll workers, in comparison to some individuals with disabilities that can be more easily identifiable (such as an individual in a wheelchair or a person who is blind).

V. Political Participation among People with Disabilities:

Registration

In order to participate in the voting process, an individual needs to be registered to vote. The registration rules vary by state, but in general, the process for registration is more uniform today than it has been for some time because of the Help America Vote Act and the National Voter Registration Act.¹⁷

The CPS asks specific questions about registration and about why a person is not registered to vote. In the table below, we present registration data from the 2008 and 2010 CPS, broken out by disability status and then by various socio-economic variables. We see that on almost every variable, people with disabilities are more likely to report being unregistered compared to people who do not report having a disability. However, when we consider respondents with the lowest incomes and the lowest levels of reported education, we see that the numbers of respondents reporting being not registered are roughly equal. The data for the 2010 CPS look very similar, with the primary difference being that fewer people overall report being registered to vote.

¹⁷ For a discussion of NVRA, see <http://www.eac.gov/NVRA/>. For information about the HAVA, see http://www.eac.gov/about_the_eac/help_america_vote_act.aspx.

Table 3: Registration Rates in 2008 by Disability and Socio-Economic Factors (CPS)

		No Disability			Disability		
		Not Registered	Registered	No Response	Not Registered	Registered	No Response
Age	18 to 30	21.6%	61.8%	16.6%	32.1%	53.5%	14.3%
	31 to 45	14.7%	70.9%	14.4%	26.9%	57.6%	15.6%
	46 to 64	10.3%	76.0%	13.7%	19.5%	67.4%	13.1%
	65 and older	8.3%	79.0%	12.6%	14.7%	74.0%	11.3%
Education	HS Diploma	22.5%	60.4%	17.1%	25.6%	61.3%	13.2%
	Some College	11.6%	75.1%	13.3%	10.8%	77.3%	11.9%
	College Degree	5.8%	81.3%	12.9%	7.8%	80.1%	12.1%
	Post Grad Degree	3.6%	86.0%	10.5%	4.6%	83.4%	12.0%
Income Level	Lowest Quartile	25.3%	64.7%	10.0%	24.8%	66.8%	8.4%
	Second Quartile	17.5%	73.4%	9.1%	18.9%	74.9%	6.2%
	Third Quartile	11.4%	80.6%	7.9%	13.8%	78.4%	7.8%
	Highest Quartile	7.4%	84.7%	7.9%	11.7%	81.9%	6.5%
Gender	Male	15.8%	69.4%	14.8%	21.1%	66.7%	12.2%
	Female	12.5%	73.3%	14.2%	17.6%	69.4%	13.1%
Race/ Ethnicity	White	14.0%	72.5%	13.5%	19.2%	68.6%	12.2%
	Black	11.3%	69.9%	18.8%	15.7%	68.4%	16.0%
	Other Race	21.3%	59.1%	19.6%	29.5%	59.1%	11.4%

Table 4: Registration Rates in 2010 by Disability and Socio-Economic Factors (CPS)

		No Disability			Disability		
		Not Registered	Registered	No Response	Not Registered	Registered	No Response
Age	18 to 30	29.5%	50.0%	20.4%	43.9%	39.3%	16.8%
	31 to 45	18.0%	65.5%	16.5%	27.5%	53.2%	19.3%
	46 to 64	12.3%	71.8%	15.9%	22.7%	63.5%	13.7%
	65 and older	9.1%	76.5%	14.5%	16.2%	71.3%	12.4%
Education	HS Diploma/Less	26.4%	54.1%	19.4%	28.3%	57.4%	14.3%
	Some College	15.7%	68.0%	16.2%	14.4%	71.2%	14.3%
	College Degree	9.5%	75.1%	15.4%	7.4%	79.6%	13.0%
	Post-Graduate Degree	6.1%	81.1%	12.8%	8.6%	79.8%	11.6%
Income Level	Lowest Quartile	26.6%	55.2%	18.2%	26.7%	59.0%	14.3%
	Second Quartile	19.9%	62.3%	17.8%	19.8%	66.5%	13.7%
	Third Quartile	13.8%	69.9%	16.4%	14.3%	70.9%	14.8%
	Fourth Quartile	9.9%	74.9%	15.2%	13.3%	74.2%	12.5%
Gender	Male	18.9%	63.7%	17.4%	22.6%	62.8%	14.6%
	Female	16.6%	66.8%	16.6%	21.2%	65.2%	13.5%
Race/ Ethnicity	White	17.3%	66.6%	16.1%	21.7%	64.8%	13.5%
	Black	16.2%	62.8%	20.9%	19.8%	63.0%	17.2%
	Other Race	26.6%	52.2%	21.2%	30.0%	55.5%	14.6%

Registration Rates by Disability

In this section, we consider registration rates by specific disability. Below, we examine differences in registration rates by reported type of disability. It is important that these data be interpreted carefully; the number of respondents who are surveyed with disabilities is relatively small and the confidence intervals for people with disabilities in the 2008 or 2010 surveys are likely to be large.¹⁸ Before we consider the registration rates, we want to start off by presenting the raw data from the CPS for 2008 and 2010 so that readers can see the size of the population surveyed by disability and the raw number of respondents who stated that they were registered, were not registered, or did not answer the question.

Table 5: Registration Rates in 2008 and 2010, by Specific Disability (CPS)

	2008			2010		
	Registered	Not Registered	No Response	Registered	Not Registered	No Response
Hearing Difficulty	2,504	529	343	2,485	586	445
Vision Difficulty	1,229	361	208	1,084	382	225
Cognitive Difficulty	2,075	931	494	1,901	1,030	542
Ambulatory Difficulty	5,047	1,282	904	4,774	1,447	953
Self-Care Difficulty	1,201	425	295	1,100	495	295
Independent Living Difficulty	2,415	950	579	2,295	1,052	598
Disability	8,340	2,247	1,437	7,842	2,565	1,653

¹⁸ http://www.census.gov/hhes/www/socdemo/voting/publications/p20/2010/CPS2010-Voting_S&A.pdf In the report they note specifically that the 90 percent confidence intervals for subpopulations – such as voters in New York with a college degree – can be 2 percentage points. The small differences we find across disability classifications here, therefore, should not be over-interpreted.

	2008			2010		
	Registered	Not Registered	No Response	Registered	Not Registered	No Response
No Disability	58,360	11,260	10,694	54,595	14,204	13,306

Reporting the data by subpopulation does provide important information when we see large variations across subsamples. For example, we see that the lowest rate of registration is for individuals with cognitive disabilities, followed by people with self care and independent living issues. We also see that reported registration rates are higher in 2008, a presidential election year, than in 2010.

Table 6: Comparing Voter Registration Rates in the 2008 and 2010 CPS Across Disability Status

	2008		2010	
	Reported Registered	Difference Disabled v. Not Disabled	Reported Registered	Difference Disabled v. Not Disabled
Cognitive difficulty	58.8	-13.9	53.3	-12.0
Self-care difficulty	59.8	-12.9	57.4	-7.9
Independent living difficulty	60.3	-12.5	57.4	-7.9
Vision difficulty	67.3	-5.4	62.9	-2.4
Any Disability	68.2	-4.6	64.1	-1.2
No Disability	71.4		65.3	
Ambulatory difficulty	68.6	-4.1	66.0	0.7
Hearing difficulty	72.7	1.3	70.2	4.9

Barriers to Registration

These data raise the obvious question as to why some individuals are not registered to vote. The CPS provides respondents who answer that they are not registered to vote with several possible answers as to why they are not registered. In both 2008 and 2010, these answers fall into several categories:¹⁹

- A large percentage of individuals are not registered because they are not interested in politics or do not think that voting would matter. This is more true for people without disabilities compared to those with disabilities;
- Approximately 17-18% of people either missed the registration deadline or were not sure how to register to vote;
- People had barriers to registration related to illness or language barriers. This is a serious problem for people with disabilities, with approximately one-quarter of individuals with disabilities stating they are not registered because of illness or their disability.
- There is a small but important population – between 6% and 7% -- who are not registered to vote because they are not eligible to vote for some reason.

It is important to note that the results of why people with disabilities are not registered to vote are skewed because the survey includes the response “permanent illness or disability” as an option. The response is potentially capturing an array of actual answers for the disability population, such as being able to gain access to a registration form (for people who are homebound or have mobility issues), understanding the form, providing the required identification (first time registrants/voters

¹⁹ Taken from the 2008 and 2010 CPS.

have to show photo identification, and those would be true if they voted by mail the first time).

Table 7: Reasons Not Registered – 2008 and 2010 – Current Population Survey

	2008			2010		
	No Disability	With Disability	Total	No Disability	With Disability	Total
Did not meet registration deadlines	15.3	7.2	14.0	13.0	6.6	12.1
Did not know where or how to register	3.8	2.6	3.6	5.1	3.5	4.9
Did not meet residency requirements/did not live here long enough	3.8	1.8	3.5	4.7	2.2	4.3
Permanent illness or disability	1.3	25.1	5.1	1.3	22.2	4.3
Difficulty with English	1.3	1.7	1.4	1.7	1.9	1.7
Not interested in the election or not involved in politics	40.3	31.7	38.9	45.4	37.0	44.2
My vote would not make a difference	4.0	3.5	3.9	3.5	4.1	3.6
Not eligible to vote	7.9	5.7	7.6	6.4	4.4	6.1
Other reason	17.1	17.6	17.2	14.3	15.1	14.4
No Response/Don't Know/Refused	5.1%	3.1%	4.8%	4.6%	3.0%	4.4%

V. Participation among People with Disabilities: Voting

Once a person is registered to vote, they are eligible to vote. Unlike registration, there are many ways in which people can vote across states. These include the use of different voting technologies and the way in which they implement different modes of voting – early voting, absentee voting, and Election Day voting. For example, all states have some form of absentee voting, but in some states, such as New York, the rules for obtaining an absentee voting are quite strict; a person must meet very specific absentee voting criteria. In other states, such as California, any voter can be a permanent absentee voter.

We start our consideration of voting by examining the demographics of the voting population in 2010 with disabilities and without disabilities. As was the case with examining voter registration, we again use the CPS, which asks specific questions about if a person voted and why they did not vote if they are a registered non-voter. In the table below, we present self-reported voting data from the 2008 and 2010 CPS, broken out by disability status and then by various socio-economic variables.

For both 2008 and 2010, we see a pattern similar to what we saw with voter registration. First, we see that there are differences in the response rates for people with disabilities and those not reporting a disability in that people with disabilities were less likely to not answer the voting question. This is important in evaluating the responses for several demographic questions, such as education. Note that people with high school degrees or less had roughly equal reported rates of voting between the disability and no disability groups.

Table 8: 2008, Voting by Disability and Socio-Demographic Factors, CPS

		No Disability			With Disability		
		Voted	Did Not Vote	No Response	Voted	Did Not Vote	No Response
Age	18 to 30	52.0%	31.9%	16.1%	41.6%	44.9%	13.5%
	31 to 45	63.6%	22.6%	13.8%	46.2%	38.9%	14.9%
	46 to 64	70.8%	15.8%	13.4%	58.3%	29.5%	12.2%
	65 and older	74.1%	13.5%	12.4%	62.3%	27.4%	10.3%
Education	HS Diploma/Less	51.4%	32.4%	16.2%	48.3%	39.8%	11.9%
	Some College	68.0%	19.0%	13.1%	68.6%	19.8%	11.6%
	College Graduate	77.1%	10.0%	12.9%	74.9%	13.2%	11.9%
	Post-Graduate Degree	83.1%	6.4%	10.5%	77.4%	11.2%	11.5%
Income	Lowest Quartile	54.5%	36.1%	9.4%	52.9%	39.6%	7.5%
	Second Quartile	64.8%	26.8%	8.5%	64.9%	29.8%	5.3%
	Third Quartile	74.5%	17.9%	7.5%	70.6%	22.1%	7.2%
	Fourth Quartile	79.6%	12.4%	8.0%	75.4%	18.2%	6.4%
Gender	Male	62.0%	23.7%	14.3%	57.5%	31.3%	11.3%
	Female	66.9%	19.2%	13.8%	57.2%	30.6%	12.2%
Race	White	65.4%	21.6%	13.0%	57.1%	31.5%	11.3%
	Black	65.2%	16.2%	18.6%	61.3%	23.3%	15.5%
	Other Race	50.6%	30.0%	19.4%	49.2%	41.4%	9.4%

Table 9: 2010 Voting by Disability and Socio-Demographic Factors, CPS

		No Disability			With Disability		
		Voted	Did Not Vote	No Response	Voted	Did Not Vote	No Response
Age	18 to 30	25.0%	56.0%	19.0%	13.6%	70.3%	16.2%
	31 to 45	42.1%	41.9%	16.0%	27.9%	53.9%	18.2%
	46 to 64	56.6%	27.9%	15.6%	42.9%	44.0%	13.1%
	65 and older	65.0%	20.5%	14.4%	51.3%	37.5%	11.1%
Education	HS Diploma/Less	34.6%	47.3%	18.1%	35.1%	52.0%	12.9%
	Some College	46.0%	38.1%	15.9%	49.3%	36.7%	14.0%
	College Graduate	57.4%	27.2%	15.5%	62.3%	25.7%	12.0%
	Post-Graduate Degree	67.1%	19.9%	13.0%	66.7%	21.3%	12.0%
Income	Lowest Quartile	33.8%	49.2%	17.0%	35.3%	51.9%	12.7%
	Second Quartile	42.7%	40.5%	16.9%	46.7%	40.5%	12.8%
	Third Quartile	51.1%	32.8%	16.1%	52.9%	32.5%	14.6%
	Fourth Quartile	57.2%	27.4%	15.4%	55.5%	31.4%	13.1%
Gender	Male	44.9%	38.3%	16.8%	44.0%	42.1%	13.9%
	Female	46.8%	37.1%	16.1%	41.9%	45.9%	12.3%
Race	White	47.2%	37.3%	15.5%	43.3%	44.2%	12.5%
	Black	43.6%	35.9%	20.5%	42.7%	40.9%	16.4%
	Other Race	33.4%	46.0%	20.6%	35.7%	50.4%	13.8%

Second, we again see that education, income, and age are highly predictive as to whether an individual votes, regardless of disability status. Voting rates for people with disabilities, however, are lower across most socio-demographic groupings compared to those who do not report a disability.

Voting Rates by Disability

In this section, we consider voting rates by specific disability. We want to start off by presenting the unweighted data from the CPS for 2008 and 2010 so that readers can see the size of the population surveyed by disability and the number of respondents who voted, did not vote, and did not respond.²⁰

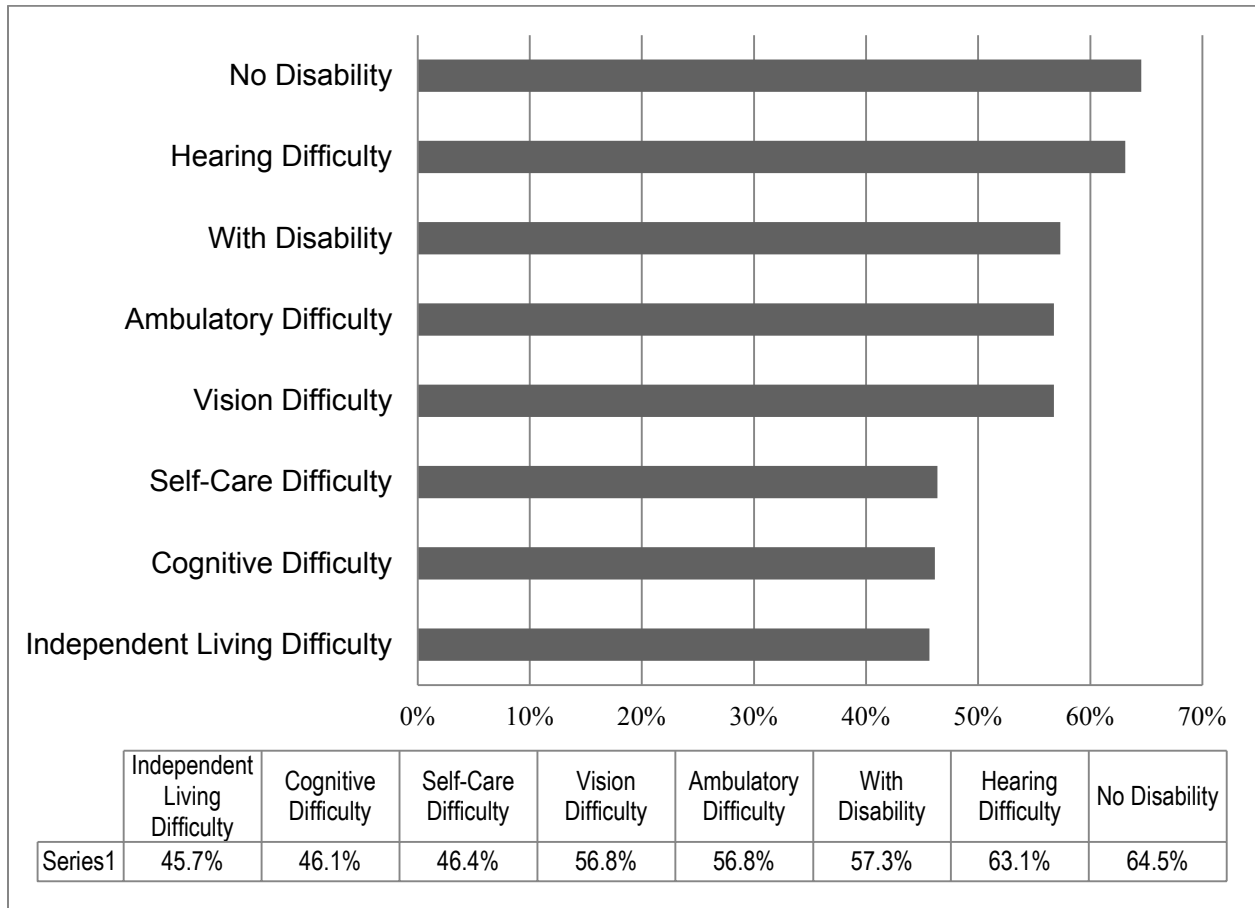
Table 10: Number of Respondents, by Disability Status and Voting Status

	2008			2010		
	Voted	Did Not Vote	No Response	Voted	Did Not Vote	No Response
Hearing Difficulty	2,166	901	310	1,818	1,290	408
Vision Difficulty	1,030	582	186	692	797	203
Cognitive Difficulty	1,621	1,431	449	1,092	1,882	501
Ambulatory Difficulty	4,183	2,216	835	3,192	3,098	887
Self-Care Difficulty	922	729	272	626	995	269
Independent Living Difficulty	1,837	1,583	526	1,321	2,086	540
Disability	7,016	3,677	1,334	5,357	5,176	1,531
No Disability	52,959	17,015	10,359	39,445	29,841	12,858

The data here show that there are variations in the number of respondents, and in the number of non-responses across the various disability categories.

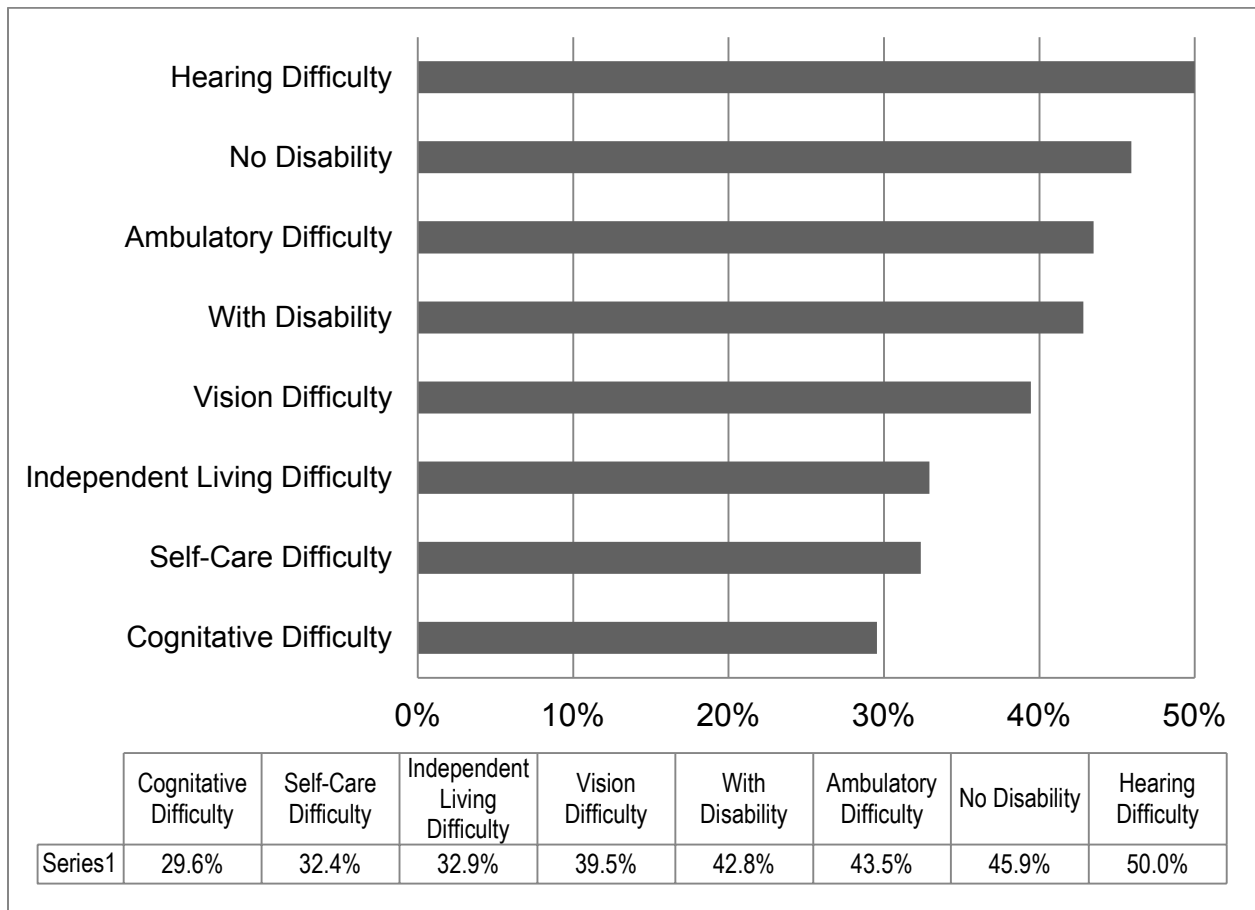
²⁰ A nice explanation of why we conduct statistical weighting can be found at <http://aspe.hhs.gov/daltcp/reports/TANFitcA.pdf>

Figure 3: Voting Rates in 2008, By Disability, CPS



We see similar findings when we look at voting and consider the specific disabilities people report and compare their voting rates with those of people not reporting a disability. In the figures below, we see that the disability voting rate is lower than the rate for people without disabilities. This is again especially true for individuals with cognitive disabilities, people who have difficulty leaving their homes, or difficulty with self-care.

Figure 4: Voting Rates in 2010, By Disability, CPS



These figures suggest that voters with the most difficulty leaving home or those who worry about potentially navigating crowded, loud locations, or feeling pressured to vote in a specific time frame, are least likely to vote. For these voters, it may be that one barrier to voting is a lack of access to convenience voting.

Barriers to Not Voting: SPAE Data

The 2008 Survey on the Performance of American Elections (SPAЕ) was the first nationwide effort to gauge the quality of the election experience from the perspective of voters.²¹ The study consisted of two parts: (1) an internet survey of 10,000 registered voters nationwide (200 in each state) asking about topics such as encountering problems with their voter registration or experienced long lines to vote and (2) a parallel survey administered via telephone to 200 respondents in 10 states — 2,000 total — to help calibrate the newer Internet method against the more traditional telephone method. Based on answers to the survey questions, the voting experience in 2008 was a positive one for the vast majority of American voters. This study used the following question to measure disability:

“Does a health problem, disability, or handicap CURRENTLY keep you from participating fully in work, school, housework, or other activities?”

The 2008 SPAЕ used a different approach to measure reported voting. Instead of asking the respondents to choose the best answer for why they did not vote, as is done in the Census, in the SPAЕ the respondents were asked about each potential barrier to voting and asked to say if each reason was a major factor, minor factor, or not a factor in the reason that they did not vote. Below we present, in two tables, the

²¹ The following description of the Survey of the Performance of American Elections is drawn directly from the survey report, which can be found at <http://vote.caltech.edu/drupal/files/report/Final%20report20090218.pdf>

various possible barriers to voting and the percentage answering each possible response category, for both people with disabilities and those without disabilities.

Table 11: Reasons for Not Voting: SPAE

		Disabled Voter			Cases
		No Disability	Disabled	Total	
Wrong ID	Not a Factor	89.90%	89.30%	89.73%	673
	Minor Factor	3.51%	3.74%	3.57%	
	Major Factor	6.60%	6.95%	6.70%	
Illness	Not a Factor	88.34%	52.17%	78.45%	673
	Minor Factor	2.86%	11.41%	5.20%	
	Major Factor	8.79%	36.41%	16.34%	
Out of Town	Not a Factor	82.82%	81.48%	82.45%	677
	Minor Factor	3.48%	3.17%	3.39%	
	Major Factor	13.70%	15.34%	14.16%	
Forgot	Not a Factor	92.75%	89.47%	91.83%	672
	Minor Factor	3.11%	5.26%	3.71%	
	Major Factor	4.14%	5.26%	4.46%	
Did Not Receive Absentee Ballot	Not a Factor	91.18%	84.21%	89.19%	666
	Minor Factor	2.73%	5.79%	3.60%	
	Major Factor	6.09%	10.00%	7.21%	
Too Busy	Not a Factor	62.06%	75.13%	65.78%	677
	Minor Factor	10.93%	6.74%	9.73%	
	Major Factor	27.01%	18.13%	24.48%	
Transportation	Not a Factor	86.25%	67.01%	80.71%	674
	Minor Factor	3.54%	8.76%	5.04%	
	Major Factor	10.21%	24.23%	14.24%	
Did Not Like Choices	Not a Factor	57.23%	58.64%	57.63%	668
	Minor Factor	12.58%	11.52%	12.28%	
	Major Factor	30.19%	29.84%	30.09%	

In the first table, we see that illness is a barrier to voting for people with disabilities, but it is only a major factor for 36% of respondents. The two largest barriers after illness are transportation problems and not liking the candidate choices. One-

quarter of people with disabilities reported not voting because transportation issues kept them from being able to vote. Being busy, not receiving an absentee ballot on time, and being out of town are all problems that were listed as major factors for not voting by between 10 and 20 percent of respondents. Other possible responses were listed less than 10% of the time.

Table 12: Reasons for Not Voting Continued: SPAE

		No Disability	Disabled	Total	Significant Differences	Cases
Registration Problems	Not a Factor	82.64%	78.26%	81.42%	No	663
	Minor Factor	5.44%	10.33%	6.80%		
	Major Factor	11.92%	11.41%	11.78%		
Weather	Not a Factor	94.42%	88.65%	92.83%	Yes	669
	Minor Factor	4.13%	7.57%	5.08%		
	Major Factor	1.45%	3.78%	2.09%		
Bad Time/Location	Not a Factor	80.13%	82.20%	80.72%	No	669
	Minor Factor	9.83%	7.85%	9.27%		
	Major Factor	10.04%	9.95%	10.01%		
Lines Too Long	Not a Factor	81.36%	78.42%	80.51%	No	662
	Minor Factor	8.69%	9.47%	8.91%		
	Major Factor	9.96%	12.11%	10.57%		
Did Not Know Where to Go	Not a Factor	82.50%	79.38%	81.60%	No	674
	Minor Factor	8.54%	12.89%	9.79%		
	Major Factor	8.96%	7.73%	8.61%		
Did Not Receive Ballot/Not On Time	Not a Factor	85.71%	79.47%	83.93%	No	666
	Minor Factor	3.36%	4.21%	3.60%		
	Major Factor	10.92%	16.32%	12.46%		

In Table 12, we see that, among the reasons for not voting, voter registration problems affect about 12 percent of all voters and 10 percent say that the timing of the election or the location of the polling place deters them. We also see again that getting

an absentee ballot on-time is a problem for 16 percent of potential voters with disabilities.

Barriers to Voting: CPS Reasons for Not Voting

The CPS asks a standard set of questions regarding why individuals do not vote. We present these data in the table below.²²

Table 13: Reason for Not Voting by Year and Disability Status, CPS

	2008			2010		
	No Disability	With Disability	Total	No Disability	With Disability	Total
Too busy, conflicting schedule	21.7	3.9	17.5	29.5	8.2	26.6
Not interested	15.1	9.3	13.4	17.0	12.2	16.4
Did not like candidates or campaign issues	13.5	13.6	12.9	8.5	9.0	8.6
Other reason	12.1	10.4	11.3	8.9	9.4	9.0
Out of town	10.5	3.7	8.8	9.9	4.2	9.2
Illness or disability	9.3	43.0	14.9	7.0	38.9	11.3
Registration problems	6.9	3.4	6.0	3.3	3.0	3.3
Forgot to vote	3.1	1.0	2.6	8.3	6.3	8.0
Inconvenient polling place	3.0	2.2	2.7	2.3	0.7	2.1
Transportation problems	1.8	6.9	2.6	1.9	6.0	2.4
Bad weather conditions	0.2	0.3	0.2	0.1	0.4	0.1

²² The data produced from a crosstab of disability status by “why didn’t vote,” the totals produced are different from the totals produced from running a frequency on the CPS question “why didn’t vote.” The difference seems to be all in the “Refused” category. Here, for the total category, we use the CPS frequencies.

One of the limitations of using the CPS data to examine reasons for not voting in the context of a study of participation by people with disabilities is that being disabled is an option given for why a person did not vote. Because of this, it is difficult to determine why a person with disabilities actually did not vote. For example, a person who cannot easily leave their home because of a disability might report not voting because of a disability, when the actual reason they did not vote may be one of transportation to a polling place or having easy access to a ballot via absentee voting because they cannot physically leave their home. When we look at the other responses, we see that not having an interest in politics is an important answer but we also see that sizable percentages of people with disabilities do not vote because of transportation problems, registration problems, of conflicting schedules.

In-Person Voting: Experience in 2008 for People with Disabilities

As mentioned earlier, the 2008 SPAE was designed to evaluate the voting experience. We turn again to these data to consider the voting experience of individuals with disabilities and how this experience is similar or different compared to those who do not report having a disability.

Table 14: Precinct Voting Experience, Confidence and Poll Workers, SPAE

Question	Person	N	Mean	Significant Difference
Voter Confidence	No Disability	9405	73.2%	Yes
	Person w/Disability	1637	69.5%	
Knew poll worker	No Disability	7152	16.7%	Yes
	Person w/Disability	1166	18.0%	
Excellent Poll Worker	No Disability	7882	69.8%	No

Question	Person	N	Mean	Significant Difference
	Person w/Disability	1279	70.8%	
Polling Place Intimidation	No Disability	7888	0.9%	Yes
	Person w/Disability	1280	1.4%	

We start our analysis by considering several summary measures of voter confidence and voting experience. If we compare the actual voting experiences of people with disabilities with those without disabilities, we see that they do in many respects have different experiences at the polls. Voters with disabilities express less confidence in their vote being counted accurately by a small but statistically significant margin. However, they have similar experiences with their poll workers. One issue of interest here is that neither group claimed that polling place intimidation was common but people with disabilities were more likely – by one-half of a percentage point – to state it was a concern in their polling place.

Precinct Voting: Polling Places Lines, Process, and Technology

The experience of voters at the polls can vary based on time of day, the percentage of voters who cast early ballots, and the quality of the poll workers. When we examine Election Day voting in 2008, we see that there are interesting differences in the experiences of the two populations. First, we see that poll workers, in general, do a good job of servicing the needs of people with disabilities when it comes to them waiting in line. Most people with disabilities waited in short lines on Election Day, more so than did people who did not have a disability. Voters with disabilities were more likely to encounter a problem with their voter registration, a problem with their voting machine, and require help voting.

These are all low incidence events but it is important to remember that, in large elections, low incident event still affect a large number of individuals. For example, it is estimated that 132,653,958 people voted in the 2008 presidential election and the CPS estimates that 57% of the 33,400,077 people with disabilities voted in that election, for a total of 19,038,043 voters with disabilities.²³ This means that if a problem affected 1% of the voting population in 2008, it affected 1.32 million people total, including 190,000 people with disabilities.²⁴

Table 15: 2008 SPAE Data on Polling Places

Question	Person	N	Mean	Significant Difference
Very Well Run Polls	No Disability	7890	84.1%	No
	Person w/Disability	1280	83.0%	
No Voter Registration Problem	No Disability	7889	98.2%	Yes
	Person w/Disability	1281	97.7%	
No Line	No Disability	7891	42.2%	Yes
	Person w/Disability	1283	46.3%	
Less Than 10 Minute Line	No Disability	7891	27.3%	No
	Person w/Disability	1283	27.8%	
10-30 Minute Line	No Disability	7891	16.6%	Yes
	Person w/Disability	1283	15.0%	
30 minute to 1 Hour Line	No Disability	7891	8.8%	Yes
	Person w/Disability	1283	7.2%	
One Hour Plus Line	No Disability	7891	5.2%	Yes
	Person w/Disability	1283	3.8%	
Voting Equipment Problem	No Disability	7881	1.7%	Yes
	Person w/Disability	1283	2.9%	
Voter Required Help	No Disability	7889	5.5%	Yes
	Person w/Disability	1285	7.9%	

²³ See http://elections.gmu.edu/Turnout_2008G.html for a definitive analysis of turnout in 2008.

²⁴ It is important to remember, however, that you cannot assume that a problem that affected 1 percent of voters voting in precincts affected 1.32 million voters, because approximately one quarter of people with disabilities and 15 percent of people not reporting a disability voted absentee in 2008.

Voter Identification

In the SPAE, all respondents were asked a set of questions regarding the forms of identification that they have. The table below shows the answers for both individuals with disabilities and others. People with disabilities are less likely to have most forms of identification compared to people with no disability. The only forms of identification both groups tend to have in equal rates are birth certificates. Also, although people with disabilities have driver's licenses at lower rates, they also have other forms of identification at higher rates, which may include government identification.

Table 16: Prevalence of Various Forms of ID, 2008 SPAE

		N	Average	Significant Difference
Driver's License	No Disability	10049	96.04%	Yes
	People with Disabilities	1892	89.15%	
Passport	No Disability	10022	43.19%	Yes
	People with Disabilities	1887	25.60%	
Other	No Disability	10004	22.45%	Yes
	People with Disabilities	1882	30.83%	
Birth Certificate	No Disability	9862	87.90%	No
	People with Disabilities	1837	87.99%	

VI. In-Person Voting: Experience in 2008 for People with Disabilities

The legal environment in which people vote varies by state and these environments can be categorized as follows:

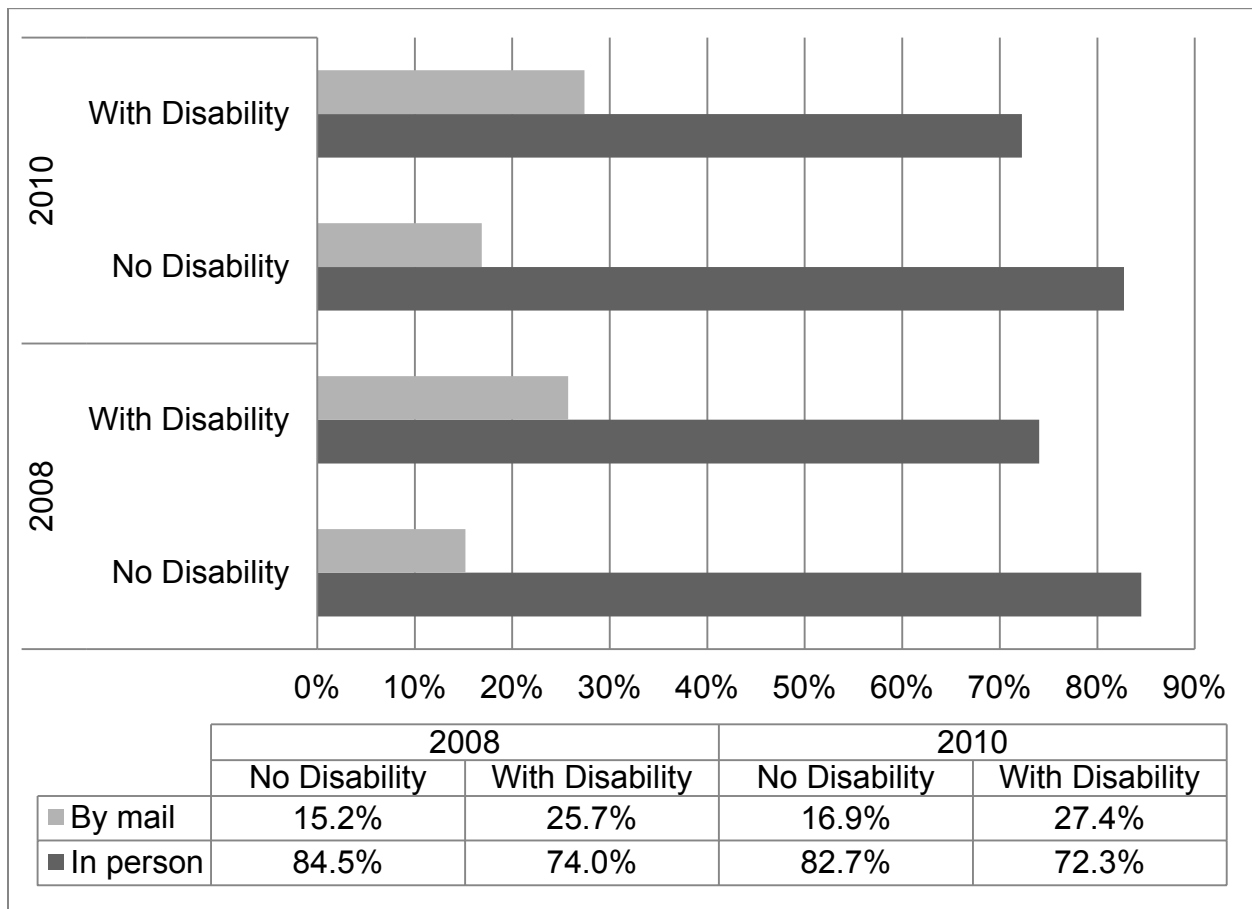
- All states except Oregon and Washington have Election Day precinct voting.
- Several states have in-person early voting, where voters can vote in person prior to Election Day.
- All states have some form of absentee voting. However, the states with absentee voting vary between:
 - those states that require an excuse in order to request and receive an absentee ballot;
 - states with no-excuse absentee voting, where anyone can receive an absentee ballot;
 - permanent absentee voting, where a person can be asked to receive all ballots for all elections by-mail; and
 - vote-by-mail states, where all voters cast absentee ballots for all elections.

As was noted previously, people with disabilities reported not voting because of transportation problems, illness, and saying that they were too busy which may reflect the complexities associated with the lives of people with disabilities. In addition, the lowest turnout rates were for those people with disabilities that make daily living most difficult – they have difficulty with self-care and independent living. It may be that voters in different legal environments, therefore, have different rates of voting.

Using data from the 2008 and 2010 Census, we can determine the frequency with which people with disabilities use absentee voting versus in person voting (both

early in person voting and Election Day in person voting, since the Census does not differentiate between the two modes). In these data, we see that people with disabilities use absentee voting at much higher rates than do people who do not report having a disability.

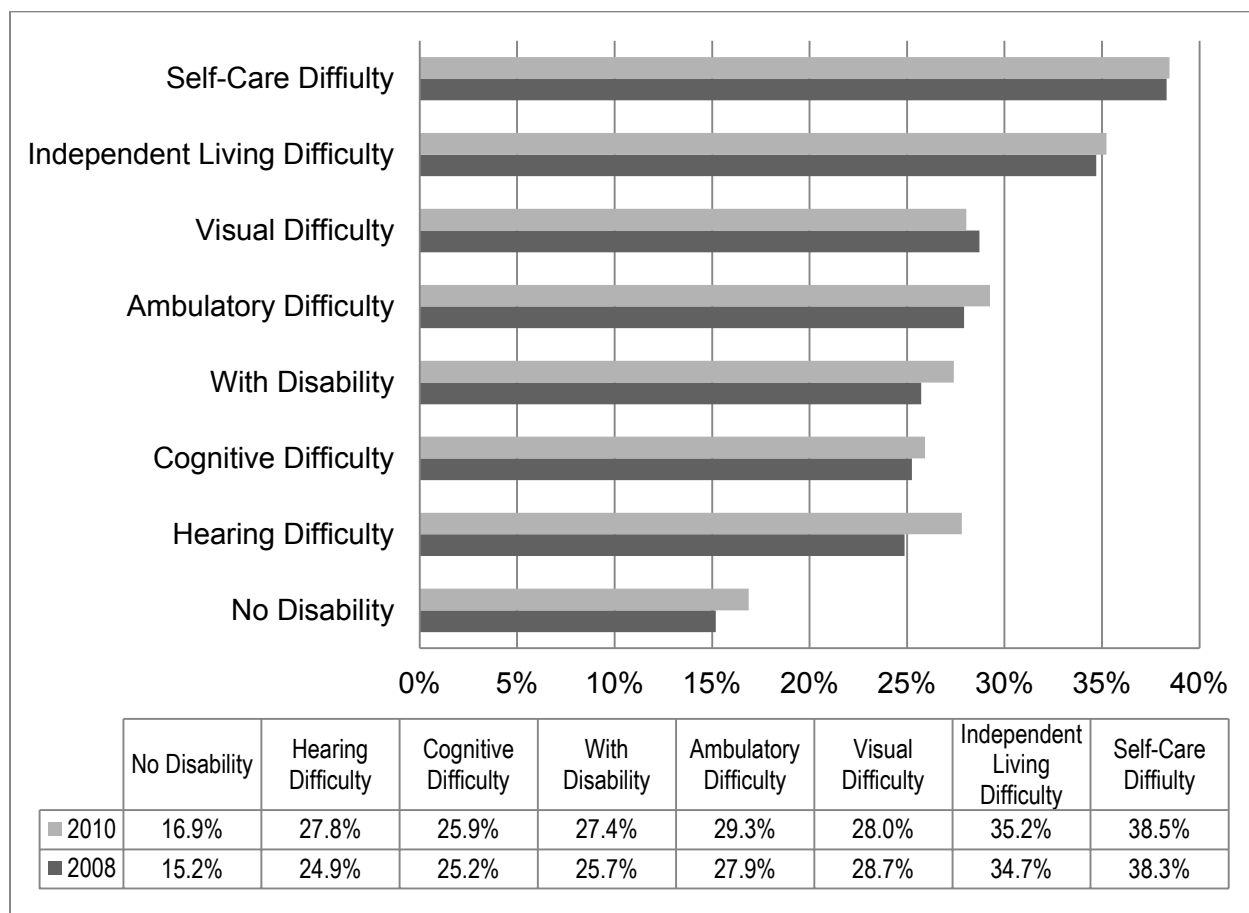
Figure 5: Voting by Mode, 2008 and 2010, CPS



If we examine the rate of absentee voting by subpopulation of people with disabilities, we see that absentee ballots are used by the voters you would most expect – people with mobility issues and those with issues that would prevent them from

leaving their residence easily. In the figure below, we see that people who have disabilities that keep them at home vote by absentee ballot at rates that exceed 30%. This is more than twice the rate of absentee voting among the population reporting no disabilities. As we discuss later, states that have barriers to absentee voting are serving to enhance the disability for these voters by not providing them with a mechanism by which they can more easily overcome barriers to participation.

Figure 6: Absentee Voting Rates by Disability Type



The Absentee Voting Experience

When we consider experiences with absentee voting, we find that the primary difference in looking at the impact of disability on absentee voters is that people with disabilities are more likely to require assistance, as is the case with polling place voting too. They were neither more likely to have other problems with the absentee process nor were they likely to claim feeling pressured regarding how they voted.

Table 18: Experiences Absentee Voting, 2008 SPAE

Question	Person	N	Mean	Significant Difference
Contacted Regarding Absentee Ballot	No Disability	1362	18.4%	No
	Person w/Disability	343	16.9%	
Problem Getting Absentee Ballot	No Disability	1634	1.7%	No
	Person w/Disability	391	1.8%	
Problem Absentee Ballot	No Disability	1623	1.8%	No
	Person w/Disability	392	1.4%	
Help With Absentee Ballot	No Disability	1637	2.9%	Yes
	Person w/Disability	389	5.1%	
Pressure Regarding Absentee Ballot	No Disability	1632	0.7%	No
	Person w/Disability	392	0.4%	

Excuse Required Absentee Voting

The findings on voting suggest that requiring an excuse for absentee voting puts a burden on disabled voters, especially in off-year elections, when there is less mobilization of voters. Given this finding, in Appendix A, we consider the way in which requiring an excuse to obtain an absentee ballot can create a barrier to participation for people with disabilities.

VII. The Experiences of People with Disabilities: The Results of a Focus Group

In 2010, the Los Angeles County Registrar-Recorder/County Clerk worked with the Caltech/MIT Voting Technology Project (VTP) and a private firm (The Connections Group) to conduct a series of focus groups with various populations within Los Angeles County – including persons with disabilities – regarding the voting experience and voter attitudes toward voting technologies. These focus groups provide an opportunity to learn about the voting experience from the perspectives of these groups and drill down into the issues affecting their ability to register and to vote. By analyzing the responses that people with disabilities gave to the focus group questions, we can determine some of the basic issues faced by this population in the voting process.

There were twelve focus groups conducted that were intended to examine the expectations of voters regarding an array of issues, including the accessibility of voting technologies. Each focus group lasted two hours and were held between April 5 and May 5, 2010. The focus groups were with vote-by-mail voters, voters with disabilities, Mandarin Chinese speaking voters, English and Spanish speaking Latino/Latina voters, Korean speaking voters, young voters, voters where English was their second language, registered voters who have yet to vote, and longtime consistent voters.

There were 113 focus group participants. The Connections Group conducted the focus groups, which were in held at a professional focus group facility. For the focus groups with people with disabilities, The Connections Group recruited and screened the participants directly. Each focus group had between eight and ten participants.

The Voting Experience in Los Angeles: Some Context

In order to appreciate the focus group data from Los Angeles County, it is helpful to put the jurisdiction into context. Los Angeles County has 9.8 million residents, making it larger than all but eight states in the country. Geographically, it is one of the largest counties in the United States as well, covering more than 4,000 square miles. In 2011, the County had 4.35 million registered voters. In a general election, the County will have almost 5,000 polling places and 25,000 poll workers working in the election. In the 2008 presidential election, almost one-quarter of the 3.4 million votes cast in the election were cast by-mail. The city has a population that is 50% White; Latinos, Asians, and African Americans all constitute large segments of the population. The County is required under the Voting Rights Act to provide ballots in seven different languages and provide interpretive services to these voters. Voters in Los Angeles vote using a unique voting system called the InkaVote Plus, which replaced the County's punch card voting system in 2003.²⁵

In 2010, Los Angeles County initiated the Voting Systems Assessment Project (VSAP), a partnership between the County and the VTP to study public attitudes toward voting systems in Los Angeles County. This multi-pronged study included the conduct of voter surveys, poll worker surveys, and focus groups of various subpopulations of voters. These focus groups are the focus of the analysis here, although other data will be drawn on as appropriate.

In each focus group, the discussion typically focused on a series of questions, designed to tap into several distinct factors. First, the questions examine how people

²⁵ http://www.lavote.net/voter/PDFS/INKAVOTE_PLUS_FAQS.pdf The InkaVote is essentially a hybrid of a punch card voting machine and an optical scan voting technology.

feel about the elections process in the United States generally and in Los Angeles specifically. This includes asking voters what they do and do not like about the voting process. Second, the questions examine how voters view the various types of voting technologies used in the United States, such as electronic voting, optical scan voting, and the InkaVote system used in Los Angeles. Third, voters were asked how they viewed the future of voting technology, looking forward.

The questions tap into the attitudes that voters bring to the electoral process. Given that voting is one of the government activities in which the public participates, understanding these attitudes is important for election officials, who must serve people who bring many previous voting experiences with them as they vote. These experiences are both personal – How was *my* last voting experience? – and collective – How did I feel about the last election broadly, as experienced through the media, my friends, and people like me (politically or demographically)? Together, these experiences help to inform how the voter will evaluate further voting experiences and also affect whether the voter views elections as legitimate, democratic, and well-administered.

Issues Identified by People with Disabilities

In the focus groups held with people with disabilities, the participants identified numerous issues associated with the traditional voting process and expressed certain preferences in voting. As we discuss below, voters expressed preferences for absentee voting, concerns about how they are served by poll workers, and about the accessibility of voting equipment.

Absentee Voting

Many of the participants in the focus group for individuals with disabilities in Los Angeles County expressed a preference for absentee voting. In part, this preference reflects a frustration for the costs that they have to bear going to a polling place to vote. Participants in the focus groups with people with disabilities expressed a general view that absentee voting is easier for them. As one participant stated, “I vote by absentee ballot because it’s too hard to get there, to wait in line, and it’s just easier.” Like other voters, people with disabilities find absentee voting easier because there are fewer transaction costs.

Time for Voting

A second issue identified by the focus group participants relates to the time it takes to vote. As several of the participants noted, they may need assistance having someone read them the ballot, they may find the terms and language used on the ballot confusing, and they may feel rushed to vote in a polling place. These types of comments illustrate that voting is costly and that having convenience voting can make it easier. On a long ballot – and most elections in the United States have a long ballot with multiple federal, state, and local races – a person need time to cast a ballot and review their vote choices. The language used on these ballots can also be confusing. Often, ballots use technical or legal language for initiatives that can be difficult to understand. Ballot fonts can also be small and difficult for people with visual acuity problems to read. Finally, a voter with disabilities may feel rushed, which may affect the voter’s confidence that they have marked their ballot correctly and affect their ability to

correctly mark their ballot. A voter feeling pressure to finish voting may not vote all of the races on the ballot, denying them their ability to participate fully in the election.

Polling Place Problems

Some of the voters who had voted in polling places also stated specific problems that they had encountered casting ballots at the polls. Two examples are that it can be hard to access a voting booth in a wheelchair and the crowded nature of a polling place can make voting difficult. First, a voter may arrive at the polling place and have no barrier to parking and entering the polling place. However, they may then find that navigating within the polling place to get to the voting booth and machine designated for people with disabilities is difficult. Even if the voting booth and voting machine are set up correctly, it can be difficult for people with disabilities to vote at this specially designed voting booth.

Second, all voters, but especially people with disabilities, can feel rushed in a busy polling place. Crowded polling places may create concerns for voters with physical disabilities, who may worry about being able to navigate unimpeded. Turning their wheelchair around, walking with a cane, or walking with a seeing eye-dog can be more difficult and more daunting in a crowded space. For voters with cognitive disabilities, crowds may exacerbate their disability.

VIII. Other Forms of Participation

Voting is just one form of political participation. There are numerous other ways in which people can participate in politics, from volunteering on campaigns to giving money. Using data from the 2008 Cooperative Congressional Election Study (CCES), we can examine an important aspect of the disabled population; their interest in and participation in political activity.

The CCES has a relatively limited definition of disabled that we are able to use. The CCES question asked, “Are you permanently disabled?” in relation to a person’s work status. The first analysis of voting, in Table 18, we do with the CCES is to examine not only registration and voting in the 2008 general election, but also in the primaries and caucuses. We see that, across all election modes, there are statistically significant differences in participation, with people with disabilities participating less than those without. People with disabilities in the CCES sample are less likely to be registered to vote, less likely to report voting in the general election, less likely to report voting in primary elections, and were less likely to report participating in a presidential caucus.

Table 18: Voting in 2008 Elections, CCES

	No Disability	With Disability	Total
Registered to vote	81.75%	76.19%	81.47%
Voted in 2008 General Election	71.45%	58.70%	70.78%
Primary Voter	51.08%	45.55%	50.80%
Caucus Participant	4.06%	2.69%	3.99%

Percent Participating in Political Activities

When we compare participation in various political actions across people with and without disabilities, we see that people with disabilities are less likely to participate in any political activity. They are especially not likely to contribute political campaigns, which likely reflects their overall lack of financial resources.

Table 19: Participation in Various Political Activities 2008, CCES

	No Disability	With Disability	Total
Attend local political meetings	12.9%	8.2%	12.7%
Persuade someone to vote	54.2%	47.7%	53.8%
Put up political sign	28.9%	22.9%	28.6%
Work for a candidate or campaign	11.2%	7.9%	11.0%
Comment on political blog	27.6%	24.6%	27.4%
Donate money to candidate or campaign	29.9%	19.3%	29.4%

On the next page we break out political participation across people who do and do not vote. Here, we see that, for voters, there are only statistically significant differences between people with and without disabilities as it pertains to attending local political meetings and donating money to campaigns. In all other respects, they participate equally. The lack of participation in these two areas likely reflects the barriers associated with having a disability. People with disabilities report lower incomes than people without disabilities and the time it takes to attend political meetings, which are often held at night, may reflect the overall difficulties associated with transportation and mobility generally for people with disabilities.

Table 20: Comparing Political Participation in 2008 for People with Disabilities with those Not Reporting a Disability, Controlling for Voting Status

	Non-Voter				Voter			
		N	Mean	Significant Difference		N	Mean	Significant
Attend local political meetings	No Disability	7047	5.00%	YES	No Disability	17634	16.11%	YES
	Disabled	565	2.27%		Disabled	803	12.39%	
Persuade someone to vote	No Disability	7047	26.01%	YES	No Disability	17634	65.45%	NO
	Disabled	565	20.26%		Disabled	803	66.86%	
Put up political sign	No Disability	7047	9.09%	NO	No Disability	17634	36.78%	NO
	Disabled	565	7.26%		Disabled	803	34.01%	
Work for a candidate or campaign	No Disability	7047	2.18%	NO	No Disability	17634	14.73%	NO
	Disabled	565	1.33%		Disabled	803	12.47%	
Comment on political blog	No Disability	7047	14.49%	NO	No Disability	17634	32.78%	NO
	Disabled	565	13.08%		Disabled	803	32.58%	
Donate money to candidate or campaign	No Disability	7047	6.76%	NO	No Disability	17634	39.23%	YES
	Disabled	565	4.96%		Disabled	803	29.55%	

Media Use

An important aspect of political socialization is having knowledge about political issues.

One basic way in which people get this information is through the news media.

Therefore, we consider here the uptake of political information by people with disabilities across various media outlets. When we examine media use across people with disabilities and those without, we see that people with disabilities use all media less than do those without disabilities, the exception of television. When it comes to watching television news, people with disabilities are more likely to watch local news but less likely to watch national news. People with disabilities are much less likely to listen to the news on the radio and to read political blogs.

Table 21: Media Use 2008, CCES

	Answer	No Disability	With Disability	Total
Read a blog	Yes	27.43%	18.39%	26.97%
Watched TV news	Yes	80.19%	84.18%	80.39%
Read a newspaper	Yes	62.03%	50.03%	61.42%
Listened to radio	Yes	47.25%	27.04%	46.22%
None of these	Yes	6.53%	7.64%	6.59%
TV News, Type Watched	Local Newscast	24.48%	29.65%	24.76%
	National Newscast	22.85%	15.75%	22.47%
	Both	52.67%	54.60%	52.78%
Newspaper, Mode of Reading for those who read the paper	Print	35.15%	34.49%	35.12%
	Online	30.33%	37.84%	30.64%
	Both	34.52%	27.66%	34.23%

XI. Convenience Voting and People with Disability

Given the data reported in the CPS and the SPAE regarding the use of convenience voting methods by people with disabilities, we want to give special consideration to convenience voting methods at the end of the report and conduct some preliminary analyses of how convenience voting tools may benefit people with disabilities. We want to state at the outset that our ability to evaluate some of these methods is limited, either because of data constraints or because the reforms have not been around for long enough to evaluate effectively. We start by giving a short review of convenience voting issues.

The theoretical rationale for convenience voting is simple: making it easier for people to vote by lowering the barriers and cost of registered to vote or casting a ballot will increase turnout.²⁶ In the calculus of voting, the cost of getting to the polls is a key issue and these costs are borne differently by different groups. For instance, lower income individuals, less well educated people, people who have a life change (e.g., divorce or moving), and individuals with disabilities all have higher costs associated with voting. These groups may be less familiar with the voting process, be less informed about the candidates in the election, and also have time constraints related to voting. Most reforms designed to make voting easier only serve to make it easier for individuals who would vote anyway to cast their ballot.²⁷ For example, a study of early voting in Texas found that it brought voters to the polls who were better educated and highly

²⁶ See Riker, William H., & Ordeshook, Peter C. (1968). A Theory of the Calculus of Voting. *American Political Science Review*, 62, 25-42 or Wolfinger, Raymond E. and Stephen J. Rosenstone. 1980. *Who Votes?* New Haven: Yale University Press.

²⁷ Berinsky, Adam J (2005). The Perverse Consequences of Electoral Reform in the United States. *American Politics Research*, Vol. 33 No. 4, July 2005 471-491.

partisan and there have been similar findings in research on convenience voting more generally.²⁸

For individuals with disabilities, the costs of voting can be very high. Studies by the Government Accountability Office (GAO) have repeatedly found that a relatively small but persistent number of polling locations are physically inaccessible to voters.²⁹ These barriers may include doors not being wide enough for wheelchairs, doors being too heavy, polling locations not having ramps, or not having disability accessible parking. Once in a polling location, a voter with disability may have difficulty reading the ballot, because the type is too small and there are not appropriate magnification equipment or because the voter is blind and cannot see the ballot the voter may need to have the ballot read using an electronic ballot reader. Studies have found that, in some polling places, this equipment are not set up appropriately and thus are not really of use to the voter.³⁰ Ballots in the United States are also quite long and can require a lot of time to complete, especially if voters have cognitive disabilities.

Since the Civil War, some states have allowed absentee voting for people away from home on Election Day.³¹ However, absentee voting has become a form of convenience voting in recent years, used by voters to make it easier to vote and by election officials to improve the efficiency of polling places (by reducing the number of

²⁸ Stein, Robert M. 1998. Introduction: Early Voting. *Public Opinion Quarterly* 62(1): 57-69; Gronke, Paul, Galanes-Rosenbaum, Eva, Miller, Peter A., & Toffey. Daniel (2009). Convenience Voting. *Annual Review of Political Science*, Vol. 11: 437-455.

²⁹ Government Accountability Office (2009). More Polling Places Had No Potential Impediments Than in 2000, but Challenges Remain. GAO-09-685, Jun 10, 2009.

³⁰ Alvarez, R. Michael, Atkeson, Lonna Rae, & Hall, Thad E. (2007). The New Mexico Election Administration Report: The 2006 November General Election. August 2007.

³¹ Alvarez, R. Michael, Hall, Thad E., & Roberts, Brian (2007). Military Voting and the Law: Procedural and Technological Solutions to the Ballot Transit Problem. *Fordham Urban Law Review*, XXXIV, 3: 935-996.

voters casting ballots on election day) and to increase control over election-related activities.³²

Some states, such as California and Utah, allow voters to become permanent absentee voters. In these states, voters who sign up for this service receive an absentee ballot before every election. However, some states require absentee voters to provide a reason for obtaining an absentee ballot before every election. For individuals with disabilities, this requirement can pose an especially large barrier to participating in an election. Voters may not have the physical, mental, or emotional ability to climb over the hurdles required to get an absentee ballot for every election. Considering that some states have multiple elections in a single year – for example, most states in 2012 will have a Presidential primary election, a general primary election, possibly a primary-runoff election, and a general election – a voter who cannot be a permanent absentee ballot but needs to vote in that manner has to complete the same tasks over and over in a given year.

The research in this area raises questions as to whether convenience voting will boost turnout among people with disabilities or will just serve to make it easier for those people who would already vote to vote. We use the CPS data from 2008 and 2010, supplemented with data on various convenience voting methods used in the various states, to attempt to get a sense as to whether convenience voting may benefit individuals with disabilities.

³² Alvarez, R. Michael & Hall, Thad E. (2006). Controlling Democracy: The Principal-Agent Problems in Election Administration. *Policy Studies Journal*, 34, 4: 491-510. See also Gronke et al. 2009.

Convenience Registration

As was noted previously, many reforms have been made to make it easier to register to vote in the United States. In recent years, there have been two primary means of improving registration in the United States. First, in the last several years there have been efforts to move voter registration online. Such reforms are designed to allow for effective remote voter registration and build on the idea that technology can help people overcome the costs of registration. Unfortunately, this reform has only been adopted by a small number of states and has been adopted quite recently, so is very difficult to evaluate today in regards to how they may affect voter registration and access to voting by people with disabilities.

A second reform for making registration easier is Election Day Registration (EDR) and, unlike other reforms, EDR has been around long enough to evaluate its impact on registration rates for individuals with and without disabilities. EDR allows a person to arrive at the polls on Election Day and then register to vote and vote. There are nine (9) states with EDR: Idaho, Iowa, Minnesota, Montana, New Hampshire, North Carolina, North Dakota, Wisconsin, and Wyoming.³³

One difficulty with evaluating the impact of EDR on people with disabilities is that we do not have any survey data – from the CPS or other sources – regarding whether people used EDR to register and then vote in an election. However, we can use the CPS to examine whether respondents in EDR states report being registered to vote at higher rates than do respondents who do not live in an EDR state. We do this by

³³ We would note that North Dakota does not have voter registration but they do have a voter file and uses a very liberal form of EDR. See <https://vip.sos.nd.gov/pdfs/Portals/2012%20Election%20Law%20Book%20with%20Index.pdf>, “Chapter 16.1-02 – Central Voter File.”

comparing the mean registration response rate for respondents in EDR states with the mean registration response rate in non-EDR states and examining if the means are different. Again, this result should be interpreted with some caution; this is a macro-level evaluation; we do not know how many individuals in these states used EDR.³⁴

Table 22: Effects of EDR on Registration: Registration Rates by States With and Without EDR

		2008	2010
	EDR	Mean	Mean
All Voters	No	55.8%	47.8%
	Yes	65.8%	55.0%
No Disability	No	55.9%	47.6%
	Yes	66.3%	55.1%
With Disability	No	54.8%	49.6%
	Yes	62.0%	54.5%

Looking at the effects of EDR, we see that people who live in EDR states report being registered to vote rates that are approximately 10 percentage points higher than for people living in states without EDR. For people with disabilities, we see that, in 2008, respondents living in states with EDR were just over 7 percent more likely to report being registered to vote compared to those in non-EDR states. In 2010, the difference was 5%. The potential benefits of EDR for people with disabilities would be highest for

³⁴ We recognize that there is a potential ecological fallacy with this type of analysis but it does provide a basic evaluation of the registration issue. It is important to note too that the CPS question for voter registration is rather tricky to work with. The question on voter registration, “Were you registered to vote in the November 4, 2008 election?” is only coded “yes” if the registered voter did not vote. It is coded “Blank” if the person voted.” Therefore, you have to include voters, who are not counted as “yes” in the registration question and create a new variable for registration that counts both voters and registered non-voters. Also, for this analysis, all “don’t know/no response/refused” responses are coded 0, as if the person was not registered to vote.

those who have encountered a barrier to registration that is not related to mobility, especially mobility issues that limit the ability to leave the home. For those people with mobility issues, remote registration would be most effective.

The best way to analyze the factors that affect registration is to conduct what is referred to as a multivariate analysis, where you determine which factors, in fact, affect registration rates. In this model, we control for the affects of age, education, gender, race, having EDR, and living in battleground state in 2008, or a state with a competitive statewide race in 2010. We can then determine what the impact is of each of the various factors on registration rates.³⁵

Registration in 2008

We report the actual results of these statistical analyses in Appendix B. For ease of reading we present in the next table the factors that affect registration. In doing this, we create a baseline registered voter – a white college educated male in his 40s who lives in a political battleground state without EDR and does not report having a disability – and then compare how changing a person’s demographics affects their likelihood of being registered. There are three models presented in the table. In the first column, we examine the factors that affect registration for all voters. In the second column, we examine all voters but include a specific variable intended to measure the benefit of EDR for people with disabilities. In the third column, we run this analysis only for people reporting a disability.

³⁵ Specifically, we are using what is commonly referred to as a logit regression, where the dependent variable is registered/not registered. We then use a program called Clarify to determine what happens when you move from being a “typical case” to something different.

In the first column and second columns, being disabled lowers the likelihood that a person is registered to vote by 7 to 8 percentage points compared to a person without a disability, a statistically significant difference. However, there are other barriers that are also problematic for people with disabilities. For instance, the biggest barrier to registration is having a low level of education. We know from our analysis earlier in the report that many people with disabilities also have low education levels and these factors would be additive. So, a person with a disability (8 percentage points less likely to vote) and who only has a high school education (18 percentage points less likely to vote) is almost 25 percentage points less likely to be registered to vote compared to a person without a disability with a college degree. We also see that age matters; moving from being 30 years-old to being 63 years-old increases registration rates by 13 percentage points. In the overall model, living in an EDR state also boosts registration rates by 5 percentage points, a significant boost in registration.

Table 23: Changes in Probabilities of Person Registering to Vote, 2008

	Model 1	Model 2	Model 3
	All Voters	All Voters, Disability Interactions	Only Voters with Disabilities
High School or Less	-18%	-18%	-17%
Some College	-6%	-6%	-5%
Age (30 to 63)	13%	13%	13%
Black	1%	1%	2%
Other Race	-14%	-14%	-6%
Battleground State	1%	1%	1%
Has Disability	-8%	7%	
State has Election Day Voter Registration	5%	5%	3%
Disabled Voter in EDR State		-2%	

In the second and third models, however, we see that EDR is of less benefit to people with disabilities than it is for people not reporting a disability. EDR boosts turnout for people with disabilities, but does so at a rate 2 percentage points lower than is the case for people without a reported disability. Part of the problem here is that EDR is only helpful if a person can get to the polling place and, given that transportation and mobility are issues for many people with disabilities, EDR alone cannot overcome this barrier.

Registration in 2010

For the 2010 election, we conduct the same analysis, again comparing the likelihood of registering to vote with a white college educated male in his 40s who lives in a battleground state without EDR and does not report having a disability. In the first analysis of all voters, we see that being disabled lowers the likelihood that a person is registered to vote by 9 percentage points compared to a person without a disability. However, we see again that the biggest barrier to registration having a low level of education. We also see that moving from being 30 to being 63 increases the likelihood an individual is registered to vote by 19 percentage points. In the overall model, living in an EDR state also increases the likelihood an individual will be registered to vote by 4 percentage points, a significant amount.

When we examine the second and third models, we again see that, as was the case in 2008, EDR has a benefit for people with disabilities but it is lower than the benefit received by people without disabilities. The interaction between EDR and disability shows that EDR has a small and statistically insignificant negative effect on the likelihood a person with a disability will be registered to vote. We see this too in the

model that only considered individuals with disabilities. Here, living in an EDR state does increase the likelihood that an individual with a disability will be registered to vote by 3 percentage points, a small but statistically significant amount.

Table 24: Changes in Probabilities of Person Registering to Vote, 2010

	Model 1	Model 2	Model 3
	All Voters	All Voters, Disability Interactions	Only Voters with Disabilities
High School or Less	-17%	-18%	-17%
Some College	-5%	5%	0%
Age (30 to 63)	19%	19%	16%
Black	-1%	1%	0%
Other Race	-14%	-14%	-9%
Battleground State	1%	1%	1%
Has Disability	-9%	-9%	
State has Election Day Voter Registration	4%	4%	3%
Disabled Voter in EDR State		-1%	

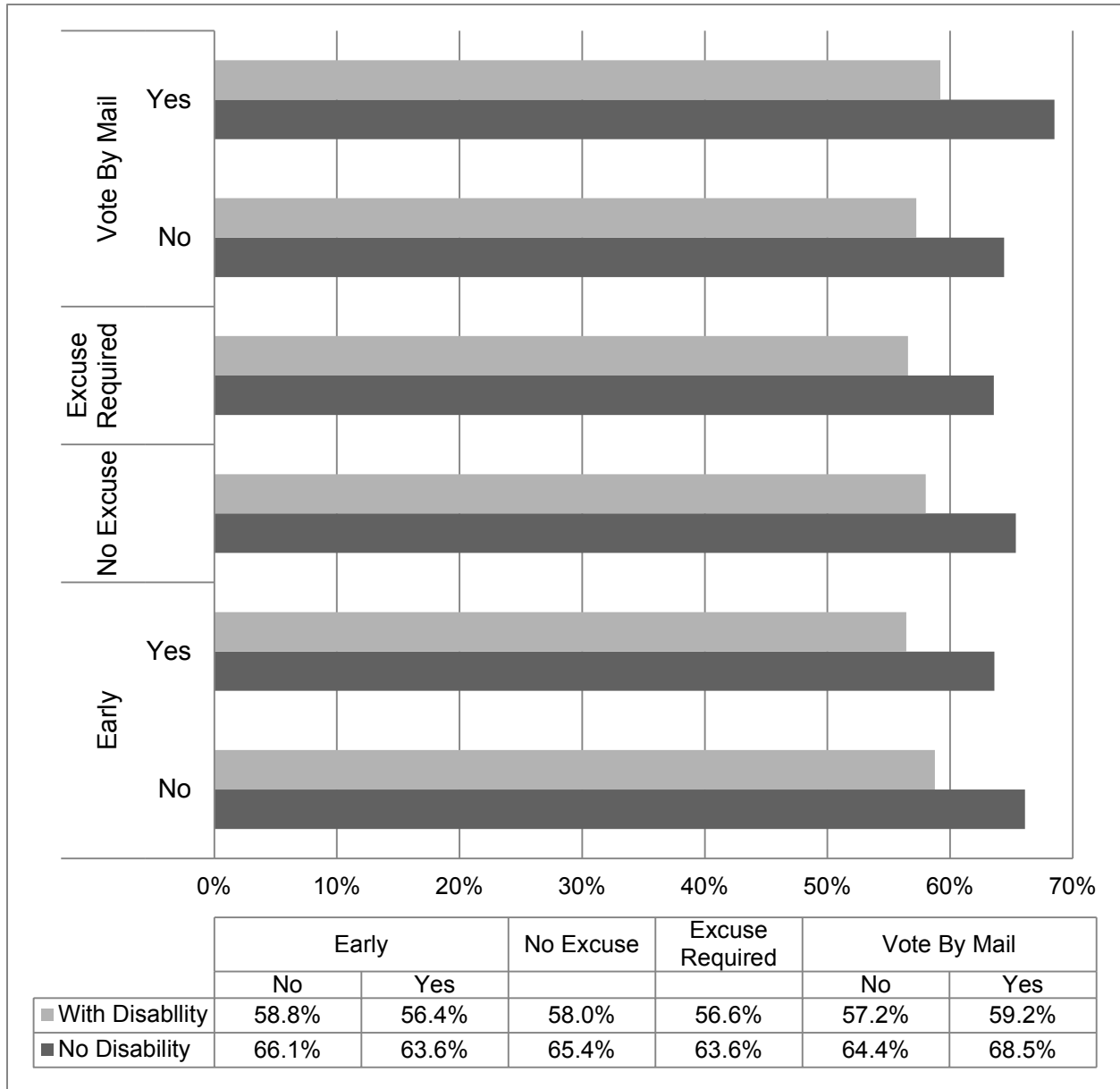
Convenience Voting

Earlier, we presented data showing that people with disabilities use convenience voting methods more than do people who do not claim a disability. Again, we use CPS data to examine turnout across states with and without convenience voting.³⁶ Here, we divide states into categories: states with vote-by-mail elections (Oregon and Washington), states requiring an excuse to absentee vote, states with no-excuse absentee voting, and states with in-person early voting. As we noted in the discussion of EDR, it is important to interpret these results with caution, given that there are also differences

³⁶ We use the National Conference of State Legislative data on convenience voting. <http://www.ncsl.org/legislatures-elections/elections/absentee-and-early-voting.aspx#early>

across states related to demographics, campaign effects, and other factors that affect turnout and affect the decision to adopt convenience voting in the first place.³⁷

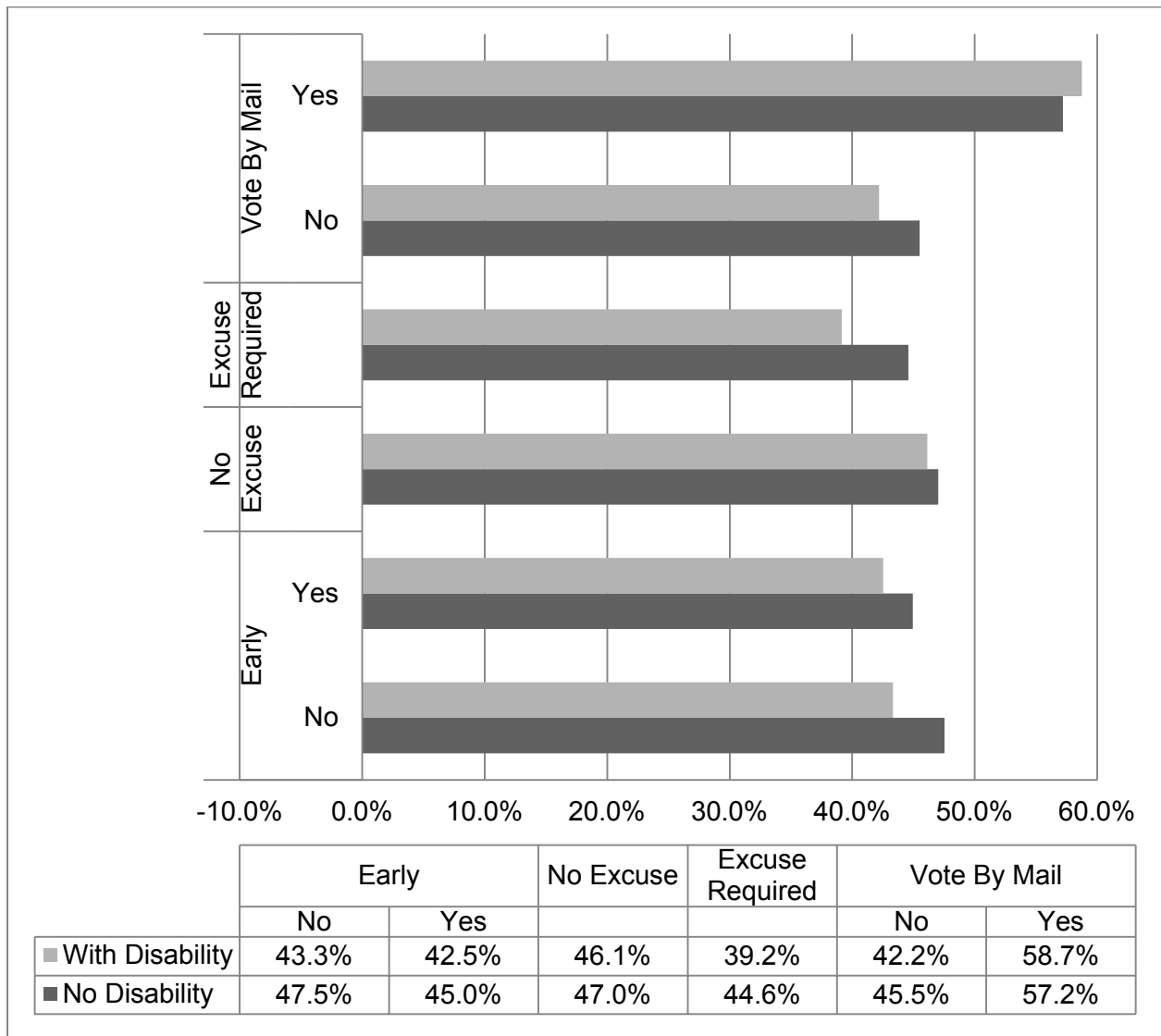
Figure 7: Turnout Across States With and Without Convenience Voting, 2008



³⁷ For example, a state may adopt convenience voting measures because they have low turnout but these reforms cannot fix structural issues – such as a lack of political competitiveness – that may be the cause of low turnout.

In Figure 7, we see that some forms of convenience voting seem to be related to higher turnout and others are not. For instance, turnout in states without early voting is actually higher than in states with early voting, although early voting should not be interpreted as causing lower turnout. We do see that turnout is higher among people with disabilities in states with no-excuse absentee voting and vote-by-mail and lower in states with excuse required absentee voting.

Figure 8: Turnout Across States With and Without Convenience Voting, 2010



The data from 2010 are starker in illustrating the differences across convenience voting modes. Here we see great differences between states requiring an excuse for absentee voting and those that do not require an excuse. We also see very high turnout in states with VBM, although this is only two states and so should be interpreted carefully.

Voting in 2008

We examine the factors that affect turnout using the same statistical method we used to examine voter registration.³⁸ In the next table, we present the factors that affect turnout in the 2008 election. In the left column of the table, we examine all respondents, and compare the likelihood of voting with a white college educated male in his 40s who lives in a battleground state with an excuse required for absentee voting, and no early voting and does not report having a disability. We find that being disabled lowers the likelihood that a person votes by 17 percentage points compared to a person without a disability. However, having a low level of education also reduces turnout significantly. A person with a disability and who only has a high school education is almost 21 percentage points less likely to vote compared to a person without a disability with a college degree. We also see that moving from being 30 to being 63 increases voting rates by 17 percentage points. Other race voters also much less likely to vote compared to our baseline.

In the first model, when we look at the effects of convenience voting on turnout, we see that living in a state with early voting does not increase the likelihood that a

³⁸ Specifically, we are using what is commonly referred to as a logit regression, where the dependent variable is voted, did not vote. We then use a program called Clarify to determine what happens when you move from being a “typical case” to something different.

person will vote. Most important for people with disabilities is that people who live in a state that has no-excuse absentee voting is 6 percentage points more likely to vote compared to the baseline voter in a state requiring an excuse to vote. Living in a permanent absentee voting state boosts turnout by a small and insignificant amount.

In model 2, we add in several new factors, where we examine the effects of being disabled and living in a state with (1) early voting, (2) no-excuse absentee voting, and (3) a state with permanent absentee voting. We find there that the model changes somewhat compared to the previous model, in that being disabled now reduced the likelihood a person will vote by 19 percentage points. In order to interpret the interactions, we have to do math and add together the basic benefit of no-excuse absentee voting with the disability-no-excuse variable and do the same for the disability-permanent absentee voting. Here, we see that being disabled and living in a no-excuse absentee voting state increases the likelihood a person with disability will vote by 9 percentage points (6 percent plus 3 percent) and living in an permanent absentee voting increases the likelihood of voting by 1 percentage point (-1 percent plus 2 percent). In essence what we are seeing here is the fact that people with disabilities like to vote absentee and they can do it more readily in a state with no-excuse absentee voting laws. In model 3, we see results confirming this, with disabled voters just more likely to vote absentee but much more likely to vote if they live in a no-excuse absentee voting state.

Across all three models, we also see that early voting does not increase the likelihood of voting. We also see that campaign affects benefit everyone; living in a state

where there is a lot of political activity – a battleground state – increases the likelihood of voting by 3 percentage points.

Table 25: Changes in Probabilities of a Person Voting, 2008

	Model 1	Model 2	Model 3
	All Voters	All Voters, Disability Interactions	Only Voters with Disabilities
High School or Less	-21%	-21%	-27%
Some College	-8%	-8%	-7%
Age (30 to 63)	17%	17%	12%
Black	9%	9%	11%
Other Race	-15%	-15%	9%
Battleground State	3%	3%	2%
Has Disability	-17%	-19%	
Early Voting State	-5%	- 6%	-5%
No-excuse Absentee Voting State	6%	6%	6%
Permanent Absentee Voting State	1%	-1%	1%
Disabled Voter in Early Voting State		2%	
Disabled Voter in Excuse Required AV State		3%	
Disabled Voter in No-excuse AV State		2%	

Voting in 2010

For the 2010 election, we conduct the same analysis and examine all respondents, and compare the likelihood of voting with a white college educated male in his 40s who lives in a battleground state (here, a state with a competitive US Senate race or competitive governor’s race) with no-excuse absentee voting and no early voting and does not report having a disability. In the first column of the table below, we see being disabled lowers the likelihood that a person votes by 19 percentage points compared to a person

without a disability. A person with a disability and who only has a high school education is almost 45 percentage points less likely to vote compared to a person without a disability with a college degree. We also see that moving from being 30 years old to being 63 years old increases voting rates by 34 percentage points.

In this model, when we look at the effects of convenience voting on turnout, we see that voters who live in a state with early voting are 5 percentage points less likely to turnout. We also see that the likelihood of voting is 8 percentage points higher for people who live in a state with no-excuse absentee voting and is 2 percent higher for people who live in a state with permanent absentee voting.

Table 26: Change in Probability of a Person Voting, 2010

	Model 1	Model 2	Model 3
	All Voters	All Voters, Disability Interactions	Only Voters with Disabilities
High School or Less	-26%	-27%	29%
Some College	-7%	7%	-6%
Age (30 to 63)	34%	34%	21%
Black	6%	6%	5%
Other Race	14%	-13%	-10%
Battleground State	1%	1%	1%
Has Disability	-19%	-22%	
Early Voting State	-5%	-6%	-6%
No-excuse Absentee Voting State	8%	8%	11%
Permanent Absentee Voter	2%	1%	3%
Disabled Voter in Early Voting State		-1%	
Disabled Voter in No-excuse AV State		5%	
Disabled Voter in Permanent AV State		2%	

In the second model, we again include the interaction terms -- variables that allow us to measure the specific impact of convenience voting methods on people with disabilities. We see that living in a state with no-excuse or permanent absentee voting increases the likelihood that a person with a disability will vote. In a permanent absentee voting state, the likelihood a person with a disability will vote is 3 percentage points higher and it is 13 percentage points higher in a state with no-excuse absentee voting. Living in a state with early voting lowers the likelihood a person with a disability will vote by 6 percentage points. When we examine just individuals with disabilities and compare the likelihood of registering to vote with a white college educated male in his 40s who lives in a state with excuse-required absentee voting and no early voting and reports having a disability, we again see that the likelihood of voting if a person lives in a no-excuse absentee voting state or a permanent absentee voting is statistically higher compared to living in a state with excuse required absentee voting.

X Conclusions

This study has identified several barriers to participation for individuals with disabilities. First, we see that participation by people with disabilities is, in part, related to socio-economic characteristics and partially associated specifically with the disability that they have. In the overview of the disability population, we saw that individuals reporting a disability were also more likely to report having a high school education or less and to report being in the lower quartiles of income attainment. Research on registration and voting has found that education and income have strong effects on participation, so the fact that individuals with disabilities fall disproportionately into the lower levels of educational attainment and lower income brackets affects their likely participation, independent of their disability status.

Second, we see that, all things being equal having a disability does lower the likelihood that a person will be registered or vote. However, it is not entirely clear if the reason why people with disabilities are registered and also vote at lower rates is a function of their disability or a function of the barriers that exist for registering and voting. This is an important question for future research.

Third, and directly related to the comment above, we see that people with disabilities prefer to vote using absentee voting. This makes sense, given that many of the individuals with disabilities have mobility difficulties or difficulties going outside their homes. For these individuals, going to vote on Election Day may be a practical impossibility; they can only participate if the ballot comes to them. If it is the traveling to and navigating through the polling place that is the problem, then any barrier remote registration and to easy absentee voting will be a barrier to participation. This also is a

finding that needs further study. While obtaining a ballot by mail may be vastly easier and more convenient for voters with disabilities, it is also the case that these voters are not able to take advantage of technologies used by in-precinct voters to verify that their ballots are an accurate reflection of their actual vote intention. Furthermore, any voters who cast ballots by mail must be well-informed of the deadlines associated with returning their ballots, and in jurisdictions where it is easy to track a ballot cast by mail through the election administration process these voters should be educated about those tools to insure that they can verify that their returned ballot is received and included in the electoral tabulation.

Fourth, more data and more research on political participation among people with disabilities is clearly needed. Researchers need to turn their attention to the disabled population, and policymakers should seek more data and better analyses upon which to base their decisions. We need to know more specifically how the disabled register to vote, how they voted, and how these factors vary by type of disability. We need more information on the experiences of the disabled population when they participate, and we need more analysis of the exact effects that election reforms have on the disabled population. With better data and more analysis, it would be possible to examine these questions more readily and determine what the true barriers to participation are for this important population of voters.

Appendix A: States Requiring a Reason to Vote Absentee³⁹

There are 15 states that do not provide an option for early voting, and also require a reason of individuals wishing to vote via absentee ballot. These states are: Alabama, Connecticut, Delaware, Kentucky, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Hampshire, New York, Pennsylvania, Rhode Island, South Carolina, and Virginia. The following outlines the requirements and procedures in each of these states, as specified in each state's codes of law and absentee voting statutes.

Alabama

Section 17-11 in the state code of Alabama says that an applicant must fill out and send or deliver an application in order to receive an absentee ballot. The application must include the applicant's name, address, and a verification that the individual is registered to vote. A ballot is then mailed or handed to the voter. The applicant must return the ballot with an affidavit regarding why he/she is voting via absentee ballot. The absentee ballot is not permanent – an applicant must reapply for any subsequent election in which he/she wishes to vote with an absentee ballot. The state of Alabama defines disability as a "physical illness or infirmity" that prevents attendance at the polls (17-11-3).

Connecticut

In Chapter 145, Section 9-133 f, the Connecticut law states that to receive an absentee ballot, an application must be completed and mailed or hand-delivered to the clerk of the municipality in which the applicant is eligible or has applied to vote. If the applicant had help filling out his/her application, this person must sign the application

³⁹ This Appendix was prepared by Ms. Stephanie Pitcher. We greatly appreciate the work she did examining these laws and issues.

and include his/her resident address and telephone number. Signatures by both the applicant and the individual assisting the applicant (if any) are made under the penalties of false statement.

An application may be obtained by fax, mail, in person, or by other electronic means, if available and so requested. Subsequently, applications can be returned by fax or other electronic means if the clerk has such capabilities, and if the applicant also mails in the original application. The clerk will send the absentee voting set to the applicant via mail, unless the applicant submits the application in person and asks for the voting set immediately. The clerk and head moderator are to both endorse the envelope and write the date at which it was received. The absentee ballot is not permanent.

Disability is included among acceptable reasons for requesting an absentee ballot in Connecticut. Disability is defined as a physical impairment (see section 9-135).

Delaware

Section 55 in the state code of Delaware stipulates that an absentee ballot may be requested by filing a hand-written or electronically prepared affidavit. The information provided must include the applicant's name, address, date of birth, political party affiliation, expected location on Election Day, a phone number or email address, reason why the applicant is unable to appear in person, and signature. The applicant's social security number is also requested, but not required. The applicant must take an oath before an officer stating the information in the affidavit is correct. The application must be dated in the calendar year upon which the election will be held. It can be mailed or hand-delivered. An absentee ballot will be given upon approval of the application.

The state of Delaware recognizes physical disabilities as a condition that qualifies the applicant to apply for an absentee ballot. The absentee ballot is not permanent. An individual whose application has been submitted for an absentee ballot is valid for all elections in a calendar year (5503 f.1). After such time, the applicant must re-apply for a new absentee ballot.

Kentucky

Section 117.075 of the Kentucky law states that any qualified voter who has not been declared mentally disabled by a court of competent jurisdiction and, because of his/her disability, cannot appear at the polls on election day may apply for an absentee ballot. The applicant can apply via phone, fax, mail, or in person. The application must be submitted at least seven days before the date of the election in which the applicant wishes to vote. An absentee ballot in Kentucky is not permanent. The term 'disability' does not seem to be clearly defined within the context of the state's absentee voting laws.

Massachusetts

In C. 54 section 86, any form of written communication showing a desire to obtain an absentee ballot has the same effect as an application form. An application must be received before noon the day before the election for which the absentee voting ballot is requested. The applicant may request an absentee ballot for each regular or special primary and regular or special election within the calendar year. A family member may apply on behalf of the applicant, but must state his/her relationship to the applicant and must sign under penalties of perjury.

Under the Massachusetts law, disability is defined as a physical impairment. Individuals with permanent disabilities can file a certificate completed by a registered physician who knows the voter and is aware of his/her physical disability. Upon receipt of this certificate, the city or town clerk will add the applicant to a list of permanently disabled voters. These voters will not be required to file a future certification to accompany their absentee voter applications. The clerk will send each voter whose name is on the permanently disabled voters list an application for an absentee ballot, with all the information filled in except for the voter's signature.

Michigan

Michigan's absentee voting laws are presented in Sections 168.758 to 168.769a of the state code, which also refer to some parts of the Michigan Constitution (specifically Article 11, Section 4). The current law states that any time 75 days prior to a given election, a qualified absentee voter who is registered to vote can apply for an absentee ballot. The elector must apply in person or by mail in the town or city in which he/she is registered. An application may be made via a written request stating the statutory grounds for making the application, on an application form provided by the clerk, or on a federal postcard application. The applicant must provide his/her name, election for which he/she will vote, reason why he/she is apply to vote with an absentee ballot, address, date, and signature. For presidential primaries, a revised absentee voter application exists where applicants must also indicate the political party with which they are affiliated. The application can be returned personally or via mail, or can be delivered by someone chosen by the applicant, so long as the individual signs the certificate on the application.

An absentee ballot is not permanent. It is only valid for that primary or for the primary and the subsequent election that follows. For the purpose of absentee voting, the Michigan law defines disability as a physical impairment (Section 758 a). Section 168.758 (a) refers readers to Section 1, Article II of the Michigan Constitution, which states: “The legislature may by law exclude persons from voting because of mental incompetence or commitment to a jail or penal institution.”

Minnesota

Minnesota law Section 203B states that an application for an absentee voting ballot may be submitted at any time, not less than one day before Election Day. The application must be submitted to the county auditor of the county where the applicant lives, or to the municipal clerk or the municipality, or school district in the applicant’s residence, if applicable. The application must include the voter’s name, residence, mailing address, and reason why the applicant is an eligible absentee voter. The voter’s date of birth may also be required. The application can be delivered in person, or via mail or fax. If delivered by someone other than the applicant, the application must be delivered within ten days after it has been dated by the voter and no later than six days before the election.

Permanent absentee voting status is available in the state of Minnesota (Section 203B.04 Subd. 5). The term disability within the absentee voting laws does not seem to be clearly defined.

Mississippi

Section 23-15-627 of the state code of Mississippi says that an application for an absentee ballot may be requested verbally or in writing, and may be requested on

behalf of the applicant by a parent, child, spouse, sibling, legal guardian, or those with power of attorney. The applicant must fill out the application and include his/her name, reason for voting via absentee ballot, and signature. The signature of an official authorized to administer oaths is required. The application must also have the seal of the circuit or municipal court and be initiated by the registrar or his/her deputy. If an individual will deliver the application on behalf of the applicant, he/she must also provide a signature.

Absentee ballots are not permanent in Mississippi. Disability under the absentee voting laws is defined in physical terms.

Missouri

In Section 115.284, the Missouri law states that a registered voter can request an application for an absentee ballot to the local election authority in his/her place of residence. The application must include the voter's name, address, state, county/city, and a signed declaration of the voter's permanent disability. Upon receipt of the application, the election authority will enter the voter's name on a list of voters qualified to participate as absentee voters. The election authority will send the voter an absentee ballot application prior to each election from that point forward. If the request is returned on the Wednesday before the election, the election authority will send the applicant an absentee ballot.

The absentee ballot in Missouri can be permanent. Disability within the absentee voting laws is not clearly specified (text reads "persons with permanent disabilities").

New Hampshire

Sections 654.16 and 654.17 denote the absentee voting laws for the state of New Hampshire. The current laws state that a registered voter who is qualified to vote in the next election must apply for a voter registration form and an absentee registration affidavit. The affidavit must include the voter's name, residence, the date of the election in which the applicant wishes to vote, confirmation of physical disability, and a signed affirmation under the penalties of voting fraud. The applicant must also submit in conjunction with his/her application a copy of his/her current and valid New Hampshire driver's license or other photo ID issued by the United States government that shows the applicant's name and address, or a copy of a current and valid photo ID and a copy of a current utility bill, bank statement, government check, paycheck, or other government document that shows name and address, or a letter from the administrator of a nursing home or similar care facility that affirms the applicant is a resident of that facility.

The absentee ballot cannot be permanent. Under the New Hampshire absentee voting laws, disability is defined in physical terms (654.16).

New York

Section 8-400 in the New York state code of laws says that a voter must fill out and file an application form or send a letter requesting an absentee ballot. The application form or letter must include the voter's name, address, a statement that the applicant is a qualified and registered voter, and a statement that the applicant, on the day of the election in which he/she wishes to vote, is or will be physically disabled. Upon approval of the application, a ballot is mailed or handed to the voter.

New York does allow qualified voters to receive absentee ballots on a permanent basis. Disability is defined in the context of the absentee voting laws in physical terms.

Pennsylvania

The Pennsylvania absentee voting laws, found in 25 P.S. C.S.A. Section 3146, state that a voter wishing to vote via an absentee ballot must fill out an application and include his/her name, occupation, date of birth, residence at the time of becoming bedridden or hospitalized, the length of time he/she has been a resident in the voting district, his/her current voting district (if known), place of residence, post office address, and other such information. The application must also include a declaration stating the nature of the applicant's disability or illness, and the name, office address, and office telephone number of the applicant's attending physician. If the applicant is unable to sign his/her application, he/she is excused from doing so by making a statement that must be witnessed by one adult person. This statement should declare that the applicant is unable to sign his/her application without assistance because he/she is "unable to write by reason of [his/her] physical disability." The applicant is instead permitted to receive assistance in making a mark in lieu of a signature.

Apart from affirming the applicant's physical disability, the applicant can qualify to vote via an absentee ballot by an inability to "attend his voting place or operate a voting machine and secure assistance by distinct and audible statement as required in section 1218 of this act;" (25 P.S. Section 3058).

The absentee ballot is not permanent. Under the absentee voting laws, disability is defined in physical terms.

Rhode Island

Section 17-20-9 of the Rhode Island codes of law states that a voter who is indefinitely confined because of physical illness or infirmity, or who is disabled for an indefinite period may request, fill out, and sign an affidavit and request an absentee ballot application be sent to him/her automatically for every election, allowing the voter to vote via absentee ballot on a permanent basis. Though the text specifies that an individual is eligible if he/she is “disabled for an indefinite period,” the term disability is not clearly defined.

South Carolina

The South Carolina absentee voting laws, outlined in Section 7-15-110, state that an absentee ballot may be obtained by filling out an application form, which must include the voter’s name, affirmation that the voter is a citizen of the United States of the State of South Carolina, the voter’s date of birth, an affirmation of physical disability due to injury or illness, the voter’s home address, mailing address, state House of Representative district number (if known), social security number, and signature. The conviction of a list of crimes such as burglary, adultery, housebreaking, etc. disqualifies the applicant from registering and voting. Either the applicant, a relative, or a friend of the applicant can request the registration form on the applicant’s behalf. The application must be returned via mail.

Section 7-15-320 notes that a qualified elector with a physical disability shall be permitted to vote by absentee ballot in all election. However, it seems as though the voter must re-apply for an application at each election. South Carolina’s absentee voting laws define disability in physical terms.

Virginia

Section 24-2-700 and 24-2-443 specify the stipulations for applying for and obtaining an absentee ballot in the state of Virginia. An individual can request an absentee ballot electronically through the Internet. A person with a disability is eligible to file a special annual application to receive ballots for all elections in which he is able to vote in a calendar year. His/her first application must be accompanied by a statement signed by the voter and his/her physician, provider, or religious practitioner affirming that the voter is eligible to vote via an absentee ballot because of his/her disability and will likely remain eligible for the remainder of the calendar year (Section 24.3.703-1). The registrar will then send each enrolled applicant a blank application by December 15 for the upcoming calendar year. Upon completion of the application, the voter is eligible to receive ballots for all elections in which he is eligible to vote in that year. Absentee ballots cannot be automatically obtained on a permanent basis.

Virginia's absentee voting laws defines disability as a physical or mental impairment "that substantially limits one or more of [the voter's] major life activities or has a record of such impairment" (Section 24.2-700 (4)).

Application Required for Absentee Ballot

In the 15 states examined in Table 1, persons with disabilities who seek an absentee ballot in order to vote in a given election must fill out and return an application form to request the absentee ballot. These individuals are required to provide to their municipal election authority a reason as to why they are no able to appear at the polls on Election Day. Each absentee voter application asks, as a minimum, the name, address, date of birth, and signature of the applicant. More extensive requirements to the application

process are detailed in part III below. The voter must fill out and return this application before he is able to obtain and vote with an absentee ballot.

Table A1: Trend in 15 States Requiring a Reason to Obtain an Absentee Ballot

State	Statute	Permanent	Definition of Disability
Alabama	§ 17-11	No	Physical
Connecticut	Ch. 145, Section 9-133f	No	Physical
Delaware	§ 55	No	Physical
Kentucky	§ 117.075	No	Not clearly defined
Massachusetts	C. 54 §86	No	Physical
Michigan	§ 168.758 to 168.769a, MI Const Art 11 §4	No	Physical
Minnesota	§ 203B	Yes	Not clearly defined
Mississippi	§ 23-15-627	No	Physical
Missouri	§ 115.284	Yes	Not clearly defined
New Hampshire	§ 654.16, 654.17	No	Physical
New York	§ 8-400	Yes	Physical
Pennsylvania	25 P.S. C.S.A. § 3146	No	Physical
Rhode Island	§ 17-20-9	Yes	Not clearly defined
South Carolina	§ 7-15-110	No	Physical
Virginia	§ 24-2-700 and § 24-2-443	No	Physical, mental

Defining ‘Disability’

The 15 states requiring an application and reason for voting with an absentee ballot, do not define the term ‘disability’ uniformly. Some states defer to their constitution for a definition, while other states define the term within the context of those statutes

regarding absentee voting. Ten states recognize the physical disability as the sole prerequisite that qualifies a person as eligible to obtain an absentee ballot. Virginia provides the exception, recognizing persons with a physical or *mental* impairment as eligible to vote by means of an absentee ballot. Four states, Kentucky, Minnesota, Missouri and Rhode Island, do not provide a clear definition of the term.

Additional Requirements for Requesting a Ballot

- 1) *Additional verification documents.* Some states require extensive additional documentation from an applicant in order to process his/her application to receive an absentee ballot. New Hampshire, for example, requests a copy of the voter's current driver's license or other government-issued photo ID, a copy of a current utility bill, bank statement, or government document that shows name and address, or a letter from a nursing home administrator stating that the applicant is a resident of that facility. South Carolina asks for the social security number of the applicant and his/her House of Representatives district number.
- 2) *Physician's signature.* In some states, persons with disabilities requesting an absentee ballot are required to have, in conjunction with their application, a physician's signature (or a religious practitioner in the case of Virginia) and affirmation that the applicant does indeed have a physical disability. Some states also require the name, address, and telephone number of the applicant's physician.
- 3) *Taking an oath.* In some states, individuals with disabilities who qualify to vote via an absentee ballot must take an oath affirming the information in their application is correct. States requiring a statement under oath are Alabama, Delaware,

Mississippi, and Rhode Island. States requiring that the applicant sign his/her application under penalties of false statement or voting fraud are Connecticut, New Hampshire.

Permanence of Absentee Ballot

Only 3 states (Minnesota, New York, Rhode Island) allow persons with disabilities the option of registering to receive an absentee ballot on a permanent basis. While some other states may keep a list of individuals who have confirmed permanent disabilities and who qualify to vote with an absentee ballot in the future, these individuals still have to renew their application form. Persons with disabilities in all other states where the municipality or election official does not keep a list of permanently disabled voters must re-apply either for each subsequent election or with each new calendar year.

Timeframe

The timeframe by which a voter must turn in his/her application for absentee voting varies from state to state. Michigan, for example, requires that applications be received 75 days prior to the date of the election in which the applicant wishes to vote. On the other hand, Minnesota will accept applications up to the day prior to Election Day.

Appendix B: Regression Results for Registration and Voting

Table B1: Registration Rates, EDR v. Non-EDR States 2008

		Model 1			Model 2			Model 3		
		All Voters			All Voters, Disability Interactions			Only Voters with Disabilities		
		Coefficient	Standard Error	Statistically Significant	Coefficient	Standard Error	Statistically Significant	Coefficient	Standard Error	Statistically Significant
Education	High School or Less	-1.113	0.033	Yes	-1.113	0.033	Yes	-0.950	0.113	Yes
	Some College	-0.267	0.038	Yes	-0.267	0.038	Yes	-0.201	0.136	No
	Male	-0.167	0.015	Yes	-0.167	0.015	Yes	-0.054	0.041	No
	Age	0.018	0.000	Yes	0.018	0.000	Yes	0.018	0.001	Yes
Race	Black	0.038	0.025	No	0.038	0.025	No	0.111	0.066	No
	Other Race	-0.590	0.029	Yes	-0.589	0.029	Yes	-0.245	0.088	Yes
	Battleground State	0.057	0.017	Yes	0.057	0.017	Yes	0.048	0.045	No
	Has Disability	-0.335	0.023	Yes	-0.320	0.025	Yes			
Voting Rules in State	Election Day Voter Registration	0.229	0.022	Yes	0.243	0.024	Yes	0.150	0.059	Yes
Disability Interactions	Disabled Voter in EDR State				-0.102	0.062	No			
	Constant	1.117	0.040	Yes	1.115	0.040	Yes	0.562	0.137	Yes
	Number of Cases		92,360			92,360			12,027	
	Log Likelihood		-51,943.6			-51,942.3			-7,175.9	
	Pseudo R2		0.048			0.048			0.030	

Table B2: Registration Rates, EDR v. Non-EDR States 2008

		Model 1			Model 2			Model 3		
		All Voters			All Voters, Disability Interactions			Only Voters with Disabilities		
		Coefficient	Standard Error	Statistically Significant	Coefficient	Standard Error	Statistically Significant	Coefficient	Standard Error	Statistically Significant
Education	High School or Less	-0.952	0.028	Yes	-0.953	0.028	Yes	-0.865	0.099	Yes
	Some College	-0.206	0.033	Yes	-0.206	0.033	Yes	-0.003	0.122	No
	Male	-0.106	0.014	Yes	-0.106	0.014	Yes	-0.051	0.040	No
	Age	0.025	0.000	Yes	0.025	0.000	Yes	0.022	0.001	Yes
Race	Black	-0.045	0.024	Yes	-0.045	0.024	Yes	-0.007	0.064	No
	Other Race	-0.587	0.028	Yes	-0.586	0.028	Yes	-0.354	0.083	Yes
	Battleground State	0.034	0.016	Yes	0.034	0.016	Yes	0.061	0.044	No
	Has Disability	-0.363	0.022	Yes	-0.355	0.024	Yes			
Voting Rules in State	Election Day Voter Registration	0.162	0.0202195	Yes	0.169	0.022	Yes	0.118	0.055	Yes
Disability Interactions	Disabled Voter in EDR State				-0.055	0.059	No			
	Constant	0.357	0.036	Yes	0.356	0.036	Yes	0.065	0.125	No
	Number of Cases		94,208			94,208			12,046	
	Log Likelihood		-56,768			-56,767.6			-7,485.6	
	Pseudo R2		0.057			0.057			0.041	

Table B3: Voting Rates and Convenience Voting, 2008

		Model 1			Model 2			Model 3		
		All Voters			All Voters, Disability Interactions			Only Voters with Disabilities		
		Coefficient	Standard Error	Statistically Significant	Coefficient	Standard Error	Statistically Significant	Coefficient	Standard Error	Statistically Significant
Education	High School or Less	-1.751	0.046	Yes	-1.750956	0.046	Yes			
	Some College	-0.393	0.052	Yes	-0.392994	0.052	Yes	-1.541	0.13515	Yes
	Male	-0.213	0.017	Yes	-0.213594	0.017	Yes	-0.276	0.16159	No
	Age	0.025	0.001	Yes	0.025256	0.001	Yes	0.037	0.0424	No
Race	Black	0.535	0.032	Yes	0.535532	0.032	Yes	0.016	0.0012	Yes
	Other Race	-0.657	0.034	Yes	-0.656207	0.034	Yes	0.500	0.07344	Yes
	Battleground State	0.139	0.020	Yes	0.13874	0.020	Yes	-0.354	0.09272	Yes
	Has Disability	-0.749	0.025	Yes	-0.815277	0.041	Yes	0.121	0.04862	Yes
Voting Rules in State	Early Vote State	-0.288	0.025	Yes	-0.300464	0.027	Yes	-0.227	0.06021	Yes
	No-excuse AV State	0.269	0.026	Yes	0.270183	0.029	Yes	0.250	0.0635	Yes
	Permanent AV State	-0.024	0.026	No	-0.041287	0.028	No	0.051	0.06616	No
Disability Interactions	Disabled Voter in Early Vote State				0.082847	0.064798	No			
	Disabled Voter in No-excuse AV State				-0.014348	0.069	No			
	Disabled Voter in Permanent AV State				0.125834	0.071	No			
	Constant	1.539	0.054	Yes	1.54957	0.054	Yes	0.958	0.15969	Yes
	Number of Cases		80,667			80,667		10,693		
	Log Likelihood		-41,461.9			41,460.5		-6,534.3		
	Pseudo R2		0.097			0.097		-0.051		

Table B4: Voting Rates and Convenience Voting, 2010

		Model 1			Model 2			Model 3		
		All Voters			All Voters, Disability Interactions			Only Voters with Disabilities		
		Coefficient	Standard Error	Statistically Significant	Coefficient	Standard Error	Statistically Significant	Coefficient	Standard Error	Statistically Significant
Education	High School or Less	-1.232	0.029	Yes	-1.231	0.029	Yes	-1.296	0.101	Yes
	Some College	-0.272	0.033	Yes	-0.272	0.033	Yes	-0.259	0.121	Yes
	Male	0.006	0.016	No	0.006	0.016	No	0.212	0.041	Yes
	Age	0.041	0.000	Yes	0.041	0.000	Yes	0.027	0.001	Yes
Race	Black	0.240	0.027	Yes	0.242	0.027	Yes	0.197	0.069	Yes
	Other Race	-0.546	0.033	Yes	-0.545	0.033	Yes	-0.420	0.092	Yes
	Battleground State	0.067	0.018	Yes	0.067	0.018	Yes	0.037	0.047	No
	Has Disability	-0.797	0.024	Yes	-0.891	0.039	Yes			
Voting Rules in State	Early Vote State	-0.208	0.023	Yes	-0.202	0.024	Yes	-0.258	0.060	Yes
	No-excuse AV State	0.332	0.025	Yes	0.305	0.026	Yes	0.484	0.064	Yes
	Permanent Absentee Voting	0.065	0.023	Yes	0.056	0.025	Yes	0.123	0.063	Yes
Disability Interactions	Disabled Voter in Early Vote State				-0.04147	0.066	No			
	Disabled Voter in Excuse Required AV State				0.190	0.069021	Yes			
	Disabled Voter in Perm AV State				0.086	0.068699	No			
	Constant	-0.752	0.038	Yes	-0.740	0.038619	Yes	-0.724719	0.13346	Yes
	Number of Cases		79,819			79,819			10,533	

		Model 1			Model 2			Model 3		
		All Voters			All Voters, Disability Interactions			Only Voters with Disabilities		
		Coefficient	Standard Error	Statistically Significant	Coefficient	Standard Error	Statistically Significant	Coefficient	Standard Error	Statistically Significant
	Log Likelihood		-48,357		-48,347			-6,776		
	Pseudo R2		0.116		0.117			0.072		

Appendix C: Current Population Survey and Handling Missing Cases

One issue associated with Current Population Survey is how the CPS handles missing data in their analyses of data from the voting supplement. In any survey, there are questions that individuals may choose not to answer. For example, people may not want to talk about how much money they make, may want to avoid expressing an opinion on a socially divisive issue, or may be somewhat embarrassed to admit that they did not engage in an activity that many view as socially desirable, such as voting. When a person does not answer questions in a survey questionnaire, there are data missing from this person's set of responses that must be addressed in order to conduct a data analysis from all respondents. It is important to account for these missing data in any analysis.

Treating Missing Data as Missing and Including in the Analysis

As we note here, there are several ways in which the missing data problem can be addressed.

Present All Data and All Responses, Including Missing

First, it is possible to just present the data as it is. For example, the 2010 Voting and Registration Supplement to the CPS includes the data in the two tables below, which were extracted from "Table 1. Reported Voting and Registration, by Sex and Single Years of Age: November 2010."⁴⁰ Here, the data on non-responses are included in the table, along with information on those individuals who are reported as registered/not registered and voted/did not vote. (In the table, the numbers are in thousands).

⁴⁰ <http://www.census.gov/hhes/www/socdemo/voting/publications/p20/2010/tables.html>

Table C1: 2010 CPS, Rate of Non-Response for Registration

Total Citizen Population	Reported registered		Reported not registered		No response to registration ¹	
	N	%	N	%	N	%
210,800	137263	65.1	38516	18.3	35021	16.6

¹ 'No response to registration' includes those who were not asked if they were registered as well as those who responded 'Don't Know,' and 'Refused.'

Table C2: 2010 CPS, Rate of Non-Response for Voting

Total Citizen Population	Reported voted		Reported did not vote		No response to voting ²	
	N	%	N	%	N	%
210,800	95,987	45.5	81105	38.5	33707	16.0

² 'No response to voting' includes those who were not asked if they voted as well as those who responded 'Don't Know,' and 'Refused.'

In both tables we see that approximately 16 percent of respondents are listed as “no response.” However, this category combines two very different groups of people.

- **Some people did not respond because they did not know the answer to the question or because they refused to answer the question.** As noted above, people do not know or refuse to answer questions for a variety of reasons. For instance, a person might refuse to answer a registration or voting question because they are concerned about their privacy, because they feel that they

should be registered, or because they believe they should have voted and refusing to answer saves them from admitting that they did not engage in this activity that is generally viewed as being socially desirable. Some of the non-respondents may indeed just not remember whether they are registered or whether they voted.

- **Some people were not asked the question.** These individuals may have registered and may have voted but were not given the opportunity to answer the question. If we just consider the breakdown based on people who were asked these questions, we would assume that these people would register and vote at the same rate as those who were asked the question. However, they are being included as “No Response” even though we would expect that about 84 percent of these individuals to answer the question (this is the percentage of respondents who were asked the question and who answered it).

However, when the Census reports overall registration and voting data, percentage terms, they include all cases, and include the “no response” cases in the denominator – which is the total used to calculate. For example,

- Percent Citizens Registered = Number of Respondents Answering “Registered” / (Number of Respondents Answering “Not Registered” + Number of Respondents Included in “No Response”).

This is a problematic formulation for several reasons. First, as we noted before, we know that some of the people in the no response category are likely registered or voted but were not given the opportunity to answer the question, or because they didn't

want to answer the question. There are people being included as not-registered or as non-voters who were not asked the question, and may have registered or voted.

Second, there are many reasons why data may be missing for these questions, and many implications for decisions about how to deal with these non-respondents. As we have noted above, there are many reasons why a particular respondent might not have an answer recorded for an important survey question, like whether or not they are registered or voted in the past election. They may not answer because they truly don't know; they may be concerned about privacy and not wish to reveal to an interviewer their behavior; or they may now want to be seen by the interviewer as not engaging in socially desirable behavior. We neither know the underlying individual motivations for non-response nor do we even have estimates as to how many respondents may fit into a particular category.

However, it is safe to assume that there are very different motivations and explanations for non-response in this survey and that those different motivations and explanations come from different types of respondents. If this is the case, we should not assume that the non-respondents are otherwise identical to those who actually said to the interviewer that they are not registered or did not vote.

Researchers have many tools to deal with non-response in surveys like these. Some researchers will proceed as is done with the CPS data and assume that the non-respondents are otherwise the same as one of the reported types of respondent. However, a second strategy is what researchers call "listwise deletion," where you simply drop from the analysis all cases where there is any non-response and only look at survey respondents who indeed answered all of the questions in the analysis. This

practice is quite common. According to one study, 94% of all articles published between 1993 and 1997 in major political science journals used list-wise deletion to analyze survey data.⁴¹ Listwise deletion is helpful for several reasons. First, allows for conducting advanced statistical analyses that are easily interpretable. If the variable of interest – the dependent variable – does not have missing data coded in its own category it is much easier to interpret the results. For example, it is easier to interpret the results of an analysis where Voting is coded as “Voted/Did Not Vote” as opposed to having to account for a third, “No Response” category. Second, any cases included in an analysis that have missing data will be deleted from the analysis automatically, if it is coded as missing. The benefit of this approach is that it uses only actual reports of behavior and attitudes from survey respondents; the downside is that it can drastically reduce the number of cases available for analysis and can also bias the sample towards those respondents who are able and willing to answer all the survey questions posed to them.

A third strategy is to estimate, or “impute” the missing data.⁴² Such estimates, now commonly practiced as “multiple imputation”, are widely used in statistics and social sciences (and also by the U.S. Census Bureau in many of their studies). Multiple imputation has the benefit of allowing the researcher to study all of the cases in the survey, but they do need to make some quite strong assumptions about the data so that multiple imputation can work as hoped. In particular, the patterns of missingness must

⁴¹ See Gary King, James Honaker, Anne Joseph, Kenneth Scheve. 2001. "Analyzing Incomplete Political Science Data: An Alternative Algorithm for Multiple Imputation." *American Political Science Review*. 95, 1: 49-69.

⁴² The classic textbook on imputation is Roderick J.A. Little and Donald B. Rubin, “Statistical Analysis with Missing Data”, second edition (2002). An approachable study is Gary King, James Honaker, Anne Joseph and Kenneth Scheve, “Analyzing Incomplete Political Science Data: An Alternative Algorithm for Multiple Imputation”, *American Political Science Review*, 95(1), March 2001, 49-69.

generally be random --- and in the case of missing information about registration and voting in the CPS this is unlikely to be a valid assumption.

There is no right or wrong way to deal with missing data. In studies like this, where the ultimate goal is multivariate analysis, either listwise deletion or multiple imputation are typically the preferred approach. In the analysis of convenience voting in the report, we used listwise deletion, as it yields a more straightforward statistical estimation process, and because we lack confidence that the missing data meets the assumptions required for multiple imputation. For the descriptive statistics in the body of the report, we used the Census data as reported by the Census, with the “refused/no response/not asked” responses in the denominator. In future research, we plan to tackle the problem of missing data in the CPS more directly.

In the tables below, we compare the descriptive statistical differences between presenting all data and listwise deletion.

Table C3a: Registration Demographics All Respondents, 2008

	2008 All Respondents					
	No Disability			Disability		
	Not Registered	Registered	No Response	Not Registered	Registered	No Response
18 to 30	21.6%	61.8%	16.6%	32.1%	53.5%	14.3%
31 to 45	14.7%	70.9%	14.4%	26.9%	57.6%	15.6%
46 to 64	10.3%	76.0%	13.7%	19.5%	67.4%	13.1%
65 and older	8.3%	79.0%	12.6%	14.7%	74.0%	11.3%
HS Diploma	22.5%	60.4%	17.1%	25.6%	61.3%	13.2%
Some College	11.6%	75.1%	13.3%	10.8%	77.3%	11.9%
College Degree	5.8%	81.3%	12.9%	7.8%	80.1%	12.1%
Post Grad Degree	3.6%	86.0%	10.5%	4.6%	83.4%	12.0%
Lowest Quartile	25.3%	64.7%	10.0%	24.8%	66.8%	8.4%
Second Quartile	17.5%	73.4%	9.1%	18.9%	74.9%	6.2%
Third Quartile	11.4%	80.6%	7.9%	13.8%	78.4%	7.8%
Highest Quartile	7.4%	84.7%	7.9%	11.7%	81.9%	6.5%
Male	15.8%	69.4%	14.8%	21.1%	66.7%	12.2%
White	14.0%	72.5%	13.5%	19.2%	68.6%	12.2%
Black	11.3%	69.9%	18.8%	15.7%	68.4%	16.0%
Other Race	21.3%	59.1%	19.6%	29.5%	59.1%	11.4%

Table C3b: Registration Demographics Non-Respondents Dropped, 2008

	2008 Data with Non-Respondents Deleted				
	No Disability			Disabled	
	Not Registered	Registered		Not Registered	Registered
18 to 30	25.9%	74.1%		37.5%	62.5%
31 to 45	17.2%	82.8%		31.8%	68.2%
46 to 64	12.0%	88.0%		22.4%	77.6%
65 and older	9.5%	90.5%		16.5%	83.5%
HS Diploma	27.2%	72.8%		29.5%	70.5%
Some College	13.4%	86.6%		12.3%	87.7%
College Degree	6.7%	93.3%		8.8%	91.2%
Post Grad Degree	4.0%	96.0%		5.3%	94.7%
Lowest Quartile	28.1%	71.9%		27.1%	72.9%
Second Quartile	19.2%	80.8%		20.2%	79.8%
Third Quartile	12.4%	87.6%		14.9%	85.1%
Highest Quartile	8.0%	92.0%		12.5%	87.5%
Male	18.5%	81.5%		24.1%	75.9%
White	16.2%	83.8%		21.8%	78.2%
Black	13.9%	86.1%		18.6%	81.4%
Other Race	26.5%	73.5%		33.3%	66.7%

Table C3c: Differences between Non-Response Category by Disability Status, Registration 2008

		No Disability	Disability	Difference between Groups (Negative = Disabled had fewer non-responses)
		No Response	No Response	
Age	18 to 30	16.6%	14.3%	-2.3%
	31 to 45	14.4%	15.6%	1.2%
	46 to 64	13.7%	13.1%	-0.6%
	65 and older	12.6%	11.3%	-1.3%
Education	HS Diploma	17.1%	13.2%	-3.9%
	Some College	13.3%	11.9%	-1.4%
	College Degree	12.9%	12.1%	-0.8%
	Post Grad Degree	10.5%	12.0%	1.5%
Income Level	Lowest Quartile	10.0%	8.4%	-1.6%
	Second Quartile	9.1%	6.2%	-2.9%
	Third Quartile	7.9%	7.8%	-0.1%
	Highest Quartile	7.9%	6.5%	-1.4%
Gender	Male	14.8%	12.2%	-2.6%
Race	White	13.5%	12.2%	-1.3%
	Black	18.8%	16.0%	-2.8%
	Other Race	19.6%	11.4%	-8.2%

Table C3d: Differences between Registration Reports, when Non-Responses are Dropped, 2008

		Data Set with All Respondents – Dataset with Non-Respondents Deleted			
		No Disability		Disabled	
		Not Registered	Registered	Not Registered	Registered
Age	18 to 30	-4.3%	-12.3%	-5.4%	-9.0%
	31 to 45	-2.5%	-11.9%	-4.9%	-10.6%
	46 to 64	-1.7%	-12.0%	-2.9%	-10.2%
	65 and older	-1.2%	-11.5%	-1.8%	-9.5%
Education	HS Diploma	-4.7%	-12.4%	-3.9%	-9.2%
	Some College	-1.8%	-11.5%	-1.5%	-10.4%
	College Degree	-0.9%	-12.0%	-1.0%	-11.1%
	Post Grad Degree	-0.4%	-10.0%	-0.7%	-11.3%
Income Level	Lowest Quartile	-2.8%	-7.2%	-2.3%	-6.1%
	Second Quartile	-1.7%	-7.4%	-1.3%	-4.9%
	Third Quartile	-1.0%	-7.0%	-1.1%	-6.7%
	Highest Quartile	-0.6%	-7.3%	-0.8%	-5.6%
Gender	Male	-2.7%	-12.1%	-3.0%	-9.2%
Race	White	-2.2%	-11.3%	-2.6%	-9.6%
	Black	-2.6%	-16.2%	-2.9%	-13.0%
	Other Race	-5.2%	-14.4%	-3.8%	-7.6%

Table C4a: Registration Demographics All Respondents, 2010

		2010 All Respondents					
		No Disability			Disability		
		Not Registered	Registered	No Response	Not Registered	Registered	No Response
Age	18 to 30	29.5%	50.0%	20.4%	43.9%	39.3%	16.8%
	31 to 45	18.0%	65.5%	16.5%	27.5%	53.2%	19.3%
	46 to 64	12.3%	71.8%	15.9%	22.7%	63.5%	13.7%
	65 plus	9.1%	76.5%	14.5%	16.2%	71.3%	12.4%
Education	HS Grad/Less	26.4%	54.1%	19.4%	28.3%	57.4%	14.3%
	Some College	15.7%	68.0%	16.2%	14.4%	71.2%	14.3%
	College Degree	9.5%	75.1%	15.4%	7.4%	79.6%	13.0%
	Post-Graduate	6.1%	81.1%	12.8%	8.6%	79.8%	11.6%
Income Level	Lowest Quartile	26.6%	55.2%	18.2%	26.7%	59.0%	14.3%
	Second Quartile	19.9%	62.3%	17.8%	19.8%	66.5%	13.7%
	Third Quartile	13.8%	69.9%	16.4%	14.3%	70.9%	14.8%
	Fourth Quartile	9.9%	74.9%	15.2%	13.3%	74.2%	12.5%
Gender	Male	18.9%	63.7%	17.4%	22.6%	62.8%	14.6%
Race	White	17.3%	66.6%	16.1%	21.7%	64.8%	13.5%
	Black	16.2%	62.8%	20.9%	19.8%	63.0%	17.2%
	Other	26.6%	52.2%	21.2%	30.0%	55.5%	14.6%

Table C4b: Registration Demographics Non-Respondents Dropped, 2010

		2010 Data with Non-Respondents Deleted					
		No Disability			Disabled		
		Not Registered	Registered		Not Registered	Registered	
Age	18 to 30	37.1%	62.9%		52.8%	47.2%	
	31 to 45	21.5%	78.5%		34.1%	65.9%	
	46 to 64	14.6%	85.4%		26.3%	73.7%	
	65 plus	10.6%	89.4%		18.6%	81.4%	
Education	HS Grad/ Less	32.8%	67.2%		33.0%	67.0%	
	Some College	18.8%	81.2%		16.9%	83.1%	
	College Degree	11.3%	88.7%		8.5%	91.5%	
	Post-Graduate	7.1%	92.9%		9.7%	90.3%	
Income Level	Lowest Quartile	32.5%	67.5%		31.2%	68.8%	
	Second Quartile	24.3%	75.7%		23.0%	77.0%	
	Third Quartile	16.5%	83.5%		16.8%	83.2%	
	Fourth Quartile	11.7%	88.3%		15.3%	84.7%	
Gender	Male	22.9%	77.1%		26.5%	73.5%	
Race	White	20.6%	79.4%		25.0%	75.0%	
	Black	20.5%	79.5%		23.9%	76.1%	
	Other	33.7%	66.3%		35.1%	64.9%	

Table C4c: Differences between Non-Response Category by Disability Status, Registration 2010

		No Disability	Disability	
		No Response	No Response	Difference between Groups (Negative = Disabled had fewer non-responses)
Age	18 to 30	20.4%	16.8%	-3.6%
	31 to 45	16.5%	19.3%	2.8%
	46 to 64	15.9%	13.7%	-2.2%
	65 plus	14.5%	12.4%	-2.1%
Education	HS Grad/ Less	19.4%	14.3%	-5.1%
	Some College	16.2%	14.3%	-1.9%
	College Degree	15.4%	13.0%	-2.4%
	Post-Graduate	12.8%	11.6%	-1.2%
Income Level	Lowest Quartile	18.2%	14.3%	-3.9%
	Second Quartile	17.8%	13.7%	-4.1%
	Third Quartile	16.4%	14.8%	-1.6%
	Fourth Quartile	15.2%	12.5%	-2.7%
Gender	Male	17.4%	14.6%	-2.8%
Race	White	16.1%	13.5%	-2.6%
	Black	20.9%	17.2%	-3.7%
	Other	21.2%	14.6%	-6.6%

Table C4d: Differences between Registration Reports, when Non-Reponses are Dropped, 2010

		Data Set with All Respondents - Dataset with Non-Respondents Deleted			
		No Disability		Disabled	
		Not Registered	Registered	Not Registered	Registered
Age	18 to 30	-7.6%	-12.9%	-8.9%	-7.9%
	31 to 45	-3.5%	-13.0%	-6.6%	-12.7%
	46 to 64	-2.3%	-13.6%	-3.6%	-10.2%
	65 plus	-1.5%	-12.9%	-2.4%	-10.1%
Education	HS Grad/ Less	-6.4%	-13.1%	-4.7%	-9.6%
	Some College	-3.1%	-13.2%	-2.5%	-11.9%
	College Degree	-1.8%	-13.6%	-1.1%	-11.9%
	Post-Graduate	-1.0%	-11.8%	-1.1%	-10.5%
Income Level	Lowest Quartile	-5.9%	-12.3%	-4.5%	-9.8%
	Second Quartile	-4.4%	-13.4%	-3.2%	-10.5%
	Third Quartile	-2.7%	-13.6%	-2.5%	-12.3%
	Fourth Quartile	-1.8%	-13.4%	-2.0%	-10.5%
Gender	Male	-4.0%	-13.4%	-3.9%	-10.7%
Race	White	-3.3%	-12.8%	-3.3%	-10.2%
	Black	-4.3%	-16.7%	-4.1%	-13.1%
	Other	-7.1%	-14.1%	-5.1%	-9.4%

Table C5: Registration Rates by Disability Status, 2008

2008 All Respondents			
	Not Registered	Registered	No Response
Hearing Difficulty	16.3%	72.7%	11.0%
Vision Difficulty	20.2%	67.3%	12.5%
Cognitive Difficulty	26.7%	58.8%	14.4%
Ambulatory Difficulty	18.2%	68.6%	13.2%
Self-Care Difficulty	23.1%	60.3%	16.6%
Independent Living Difficulty	24.7%	59.8%	15.5%
No Disability	14.1%	71.4%	14.5%
Person with Disability	19.2%	68.1%	12.7%
2008 Data with Non-Respondents Deleted			
	Not Registered	Registered	
Hearing Difficulty	18.3%	81.7%	
Vision Difficulty	23.1%	76.9%	
Cognitive Difficulty	31.2%	68.8%	
Ambulatory Difficulty	21.0%	79.0%	
Self-Care Difficulty	27.7%	72.3%	
Independent Living Difficulty	29.2%	70.8%	
No Disability	16.5%	83.5%	
Person with Disability	22.0%	78.0%	
Data Set with All Respondents – Dataset with Non-Respondents Deleted			
	Not Registered	Registered	
Hearing Difficulty	-2.0%	-9.0%	
Vision Difficulty	-2.9%	-9.6%	
Cognitive Difficulty	-4.5%	-9.9%	
Ambulatory Difficulty	-2.8%	-10.5%	
Self-Care Difficulty	-4.6%	-12.0%	
Independent Living Difficulty	-4.5%	-11.0%	
No Disability	-2.4%	-12.1%	
Person with Disability	-2.8%	-9.9%	

Table C6: Registration Rates by Disability Status, 2010

2010 All Respondents			
	Not Registered	Registered	No Response
Hearing Difficulty	17.1%	70.2%	12.7%
Vision Difficulty	24.2%	63.0%	12.9%
Cognitive Difficulty	30.8%	53.3%	15.9%
Ambulatory Difficulty	20.5%	66.0%	13.5%
Self-Care Difficulty	26.6%	57.4%	16.0%
Independent Living Difficulty	27.2%	57.4%	15.3%
No Disability	17.7%	65.3%	17.0%
Person with Disability	21.9%	64.1%	14.0%
2010 Data with Non-Respondents Deleted			
	Not Registered	Registered	
Hearing Difficulty	19.6%	80.4%	
Vision Difficulty	27.7%	72.3%	
Cognitive Difficulty	36.6%	63.4%	
Ambulatory Difficulty	23.7%	76.3%	
Self-Care Difficulty	31.7%	68.3%	
Independent Living Difficulty	32.2%	67.8%	
No Disability	21.4%	78.6%	
Person with Disability	25.4%	74.6%	
Data Set with All Respondents – Dataset with Non-Respondents Deleted			
	Not Registered	Registered	
Hearing Difficulty	-2.5%	-10.2%	
Vision Difficulty	-3.6%	-9.3%	
Cognitive Difficulty	-5.8%	-10.1%	
Ambulatory Difficulty	-3.2%	-10.3%	
Self-Care Difficulty	-5.1%	-10.9%	
Independent Living Difficulty	-4.9%	-10.4%	
No Disability	-3.6%	-13.4%	
Person with Disability	-3.6%	-10.5%	

Table C7: Registration Rates by Type of Disability, 2008

All Respondents		
	Registered	Difference Between Registration Rate of Those Reporting No Disability and Each Disability
Hearing Difficulty	72.7%	1.3%
No Disability	71.4%	0.0%
Ambulatory Difficulty	68.6%	-2.8%
Person with Disability	68.1%	-3.3%
Vision Difficulty	67.3%	-4.1%
Self-Care Difficulty	60.3%	-11.1%
Independent Living Difficulty	59.8%	-11.6%
Cognitive Difficulty	58.8%	-12.6%
2008 Data with Non-Respondents Deleted		
No Disability	83.5%	0.0%
Hearing Difficulty	81.7%	-1.8%
Ambulatory Difficulty	79.0%	-4.5%
Person with Disability	78.0%	-5.5%
Vision Difficulty	76.9%	-6.6%
Self-Care Difficulty	72.3%	-11.2%
Independent Living Difficulty	70.8%	-12.7%
Cognitive Difficulty	68.8%	-14.7%

Table C8: Registration Rates by Type of Disability, 2010

2010 All Respondents		
	Registered	Difference Between Registration Rate of Those Reporting No Disability and Each Disability
Hearing Difficulty	70.2%	4.9%
Ambulatory Difficulty	66.0%	0.7%
No Disability	65.3%	0.0%
Person with Disability	64.1%	-1.2%
Vision Difficulty	63.0%	-2.3%
Independent Living Difficulty	57.4%	-7.9%
Self-Care Difficulty	57.4%	-7.9%
Cognitive Difficulty	53.3%	-12.0%
2010 Data with Non-Respondents Deleted		
Hearing Difficulty	80.4%	1.7%
No Disability	78.6%	0.0%
Ambulatory Difficulty	76.3%	-2.3%
Person with Disability	74.6%	-4.1%
Vision Difficulty	72.3%	-6.4%
Self-Care Difficulty	68.3%	-10.3%
Independent Living Difficulty	67.8%	-10.8%
Cognitive Difficulty	63.4%	-15.3%

Table C9a: Voting Demographics All Respondents, 2008

		2008 All Respondents					
		No Disability			Disability		
		Voted	Did Not Vote	No Response	Voted	Did Not Vote	No Response
Age	18 to 30	52.0%	32.0%	16.0%	41.6%	44.9%	13.5%
	31 to 45	67.0%	23.0%	14.0%	46.2%	38.9%	14.9%
	46 to 64	71.0%	16.0%	13.0%	58.3%	29.5%	12.2%
	65 and older	74.0%	14.0%	12.0%	62.3%	27.4%	10.3%
Education	HS Diploma/Less	51.0%	32.0%	16.0%	48.3%	39.8%	11.9%
	Some College	68.0%	19.0%	13.0%	68.6%	19.8%	11.6%
	College Graduate	77.0%	10.0%	13.0%	74.9%	13.2%	11.9%
	Post-Graduate Degree	83.0%	6.0%	11.0%	77.4%	11.2%	11.5%
Income	Lowest Quartile	55.0%	36.0%	9.0%	52.9%	39.6%	7.5%
	Second Quartile	65.0%	27.0%	9.0%	64.9%	29.8%	5.3%
	Third Quartile	75.0%	18.0%	8.0%	70.6%	22.1%	7.2%
	Fourth Quartile	80.0%	12.0%	8.0%	75.4%	18.2%	6.4%
Gender	Male	62.0%	24.0%	14.0%	57.5%	31.3%	11.3%
	Female	66.9%	19.2%	13.8%	57.2%	30.6%	12.2%
Race	White	65.0%	22.0%	13.0%	57.1%	31.5%	11.3%
	Black	65.0%	16.0%	19.0%	61.0%	23.3%	15.5%
	Other Race	51.0%	30.0%	19.0%	49.0%	41.4%	9.4%

Table C9b: Voting Demographics Non-Respondents Deleted, 2008

		2008 Data with Non-Respondents Deleted			
		No Disability		With Disability	
		Voted	Did not Vote	Voted	Did not Vote
Age	18 to 30	62.0%	38.0%	48.1%	51.9%
	31 to 45	73.8%	26.2%	54.2%	45.8%
	46 to 64	81.7%	18.3%	66.4%	33.6%
	65 and older	84.6%	15.4%	69.5%	30.5%
Education	HS Diploma/Less	61.3%	38.7%	54.8%	45.2%
	Some College	78.2%	21.8%	77.6%	22.4%
	College Graduate	88.5%	11.5%	85.0%	15.0%
	Post-Graduate Degree	92.9%	7.1%	87.4%	12.6%
Income	Lowest Quartile	60.2%	39.8%	57.2%	42.8%
	Second Quartile	70.8%	29.2%	68.5%	31.5%
	Third Quartile	80.6%	19.4%	76.1%	23.9%
	Fourth Quartile	86.5%	13.5%	80.6%	19.4%
Gender	Male	72.3%	27.7%	64.7%	35.3%
	Female	77.7%	22.3%	65.2%	34.8%
Race	White	75.2%	24.8%	64.5%	35.5%
	Black	80.1%	19.9%	72.5%	27.5%
	Other Race	62.8%	37.2%	54.4%	45.6%

Table C9c: Differences between Registration Reports, when Non-Reponses are Dropped, 2008

		No Disability		With Disability	
		Voted	Did not Vote	Voted	Did not Vote
Age	18 to 30	-10.0%	-6.1%	-6.5%	-7.0%
	31 to 45	-10.2%	-3.6%	-8.1%	-6.8%
	46 to 64	-10.9%	-2.4%	-8.1%	-4.1%
	65 and older	-10.5%	-1.9%	-7.2%	-3.2%
Education	HS Diploma/Less	-21.9%	5.4%	-15.6%	5.0%
	Some College	-23.2%	7.1%	-23.2%	10.5%
	College Graduate	-17.7%	5.1%	-15.2%	3.7%
	Post-Graduate Degree	-15.7%	2.9%	-12.5%	0.6%
Income	Lowest Quartile	-5.6%	-3.7%	-4.3%	-3.2%
	Second Quartile	-6.0%	-2.5%	-3.6%	-1.7%
	Third Quartile	-6.1%	-1.5%	-5.5%	-1.7%
	Fourth Quartile	-6.9%	-1.1%	-5.2%	-1.2%
Gender	Male	-10.3%	-4.0%	-7.3%	-4.0%
	Female	-10.7%	-3.1%	-8.0%	-4.3%
Race	White	-9.8%	-3.2%	-7.3%	-4.0%
	Black	-14.9%	-3.7%	-11.2%	-4.3%
	Other Race	-12.2%	-7.2%	-5.1%	-4.3%

Table C10a: Voting Demographics All Voters, 2010

		2010 All Cases					
		No Disability			With Disability		
		Voted	Did Not Vote	No Response	Voted	Did Not Vote	No Response
Age	18 to 30	25.0%	56.0%	19.0%	13.6%	70.3%	16.2%
	31 to 45	42.1%	41.9%	16.0%	27.9%	53.9%	18.2%
	46 to 64	56.6%	27.9%	15.6%	42.9%	44.0%	13.1%
	65 and older	65.0%	20.5%	14.4%	51.3%	37.5%	11.1%
Education	HS Diploma/Less	34.6%	47.3%	18.1%	35.1%	52.0%	12.9%
	Some College	46.0%	38.1%	15.9%	49.3%	36.7%	14.0%
	College Graduate	57.4%	27.2%	15.5%	62.3%	25.7%	12.0%
	Post-Graduate Degree	67.1%	19.9%	13.0%	66.7%	21.3%	12.0%
Income	Lowest Quartile	33.8%	49.2%	17.0%	35.3%	51.9%	12.7%
	Second Quartile	42.7%	40.5%	16.9%	46.7%	40.5%	12.8%
	Third Quartile	51.1%	32.8%	16.1%	52.9%	32.5%	14.6%
	Fourth Quartile	57.2%	27.4%	15.4%	55.5%	31.4%	13.1%
Gender	Male	44.9%	38.3%	16.8%	44.0%	42.1%	13.9%
	Female						
Race	White	47.2%	37.3%	15.5%	43.3%	44.2%	12.5%
	Black	43.6%	35.9%	20.5%	42.7%	40.9%	16.4%
	Other Race	33.4%	46.0%	20.6%	35.7%	50.4%	13.8%

Table C10b: Voting Demographics with Non-Responses Deleted, 2010

		2010 With Non-Response Deleted					
Age	18 to 30	30.9%	69.1%		16.2%	83.8%	
	31 to 45	50.2%	49.8%		34.1%	65.9%	
	46 to 64	67.0%	33.0%		49.4%	50.6%	
	65 and older	76.0%	24.0%		57.7%	42.3%	
Education	HS Diploma/Less	42.2%	57.8%		57.3%	42.7%	
	Some College	54.7%	45.3%		70.8%	29.2%	
	College Graduate	67.9%	32.1%		75.8%	24.2%	
	Post-Graduate Degree	77.2%	22.8%		40.5%	59.5%	
Income	Lowest Quartile	40.7%	59.3%		53.6%	46.4%	
	Second Quartile	51.3%	48.7%		61.9%	38.1%	
	Third Quartile	60.9%	39.1%		63.9%	36.1%	
	Fourth Quartile	67.6%	32.4%		47.7%	52.3%	
Gender	Male	54.0%	46.0%		51.1%	48.9%	
	Female	55.8%	44.2%		47.7%	52.3%	
Race	White	55.8%	44.2%		49.5%	50.5%	
	Black	54.9%	45.1%		51.1%	48.9%	
	Other Race	42.1%	57.9%		41.5%	58.5%	

Table C10c: Differences between Registration Reports, when Non-Responses are Dropped, 2010

		No Disability		With Disability	
		Voted	Did Not Vote	Voted	Did Not Vote
Age	18 to 30	-5.9%	-13.1%	-2.6%	-13.5%
	31 to 45	-8.1%	-7.9%	-6.2%	-12.0%
	46 to 64	-10.4%	-5.1%	-6.5%	-6.6%
	65 and older	-11.0%	-3.5%	-6.4%	-4.8%
Education	HS Diploma/Less	-7.6%	-10.5%	-22.2%	9.3%
	Some College	-8.7%	-7.2%	-21.5%	7.5%
	College Graduate	-10.5%	-4.9%	-13.5%	1.5%
	Post-Graduate Degree	-10.1%	-2.9%	26.2%	-38.2%
Income	Lowest Quartile	-6.9%	-10.1%	-18.3%	5.5%
	Second Quartile	-8.6%	-8.2%	-15.2%	2.4%
	Third Quartile	-9.8%	-6.3%	-11.0%	-3.6%
	Fourth Quartile	-10.4%	-5.0%	7.8%	-20.9%
Gender	Male	-9.1%	-7.7%	-7.1%	-6.8%
	Female	-55.8%	-44.2%	-47.7%	-52.3%
Race	White	-8.6%	-6.9%	-6.2%	-6.3%
	Black	-11.3%	-9.2%	-8.4%	-8.0%
	Other Race	-8.7%	-11.9%	-5.8%	-8.1%

C11: Voting Rate by Disability, 2008

2008 All Responses			
	Voted	Did Not Vote	No Response
Ambulatory Difficulty	56.8%	31.1%	12.2%
Cognitive Difficulty	46.1%	40.7%	13.1%
Hearing Difficulty	63.1%	26.9%	10.0%
Independent Living Difficulty	45.7%	40.2%	14.2%
No Disability	64.5%	21.4%	14.1%
Self-Care Difficulty	46.4%	38.4%	15.2%
Vision Difficulty	56.8%	31.9%	11.4%
With Disability	57.3%	30.9%	11.8%
Non-Responses Dropped			
	Voted	Did Not Vote	
Ambulatory Difficulty	64.6%	35.4%	
Cognitive Difficulty	53.1%	46.9%	
Hearing Difficulty	70.1%	29.9%	
Independent Living Difficulty	53.2%	46.8%	
No Disability	75.1%	24.9%	
Self-Care Difficulty	54.7%	45.3%	
Vision Difficulty	64.0%	36.0%	
With disability	65.0%	35.0%	
Difference, All Cases - Missing Cases Dropped			
	Voted	Did Not Vote	
Ambulatory Difficulty	-7.8%	-4.3%	
Cognitive Difficulty	-7.0%	-6.2%	
Hearing Difficulty	-7.0%	-3.0%	
Independent Living Difficulty	-7.5%	-6.6%	
No Disability	-10.6%	-3.5%	
Self-Care Difficulty	-8.3%	-6.9%	
Vision Difficulty	-7.2%	-4.1%	
With disability	-7.7%	-4.1%	

C12: Voting Rate by Disability. 2010

2010 All Respondent			
	Voted	Did not Vote	No Response
Ambulatory Difficulty	43.5%	43.9%	12.6%
Cognitive Difficulty	29.6%	55.8%	14.7%
Hearing Difficulty	50.0%	38.4%	11.6%
Independent Living Difficulty	32.9%	53.2%	13.9%
No Disability	45.9%	37.7%	16.4%
Self-Care Difficulty	32.4%	52.8%	14.8%
Vision Difficulty	39.5%	48.7%	11.9%
With Disability	42.8%	44.1%	13.0%
2010 Non-Respondents Dropped			
	Voted	Did not Vote	
Ambulatory Difficulty	49.8%	50.2%	
Cognitive Difficulty	34.6%	65.4%	
Hearing Difficulty	56.6%	43.4%	
Independent Living Difficulty	38.2%	61.8%	
No Disability	54.9%	45.1%	
Self-Care Difficulty	38.0%	62.0%	
Vision Difficulty	44.8%	55.2%	
With Disability	49.2%	50.8%	
Difference, All Cases - Missing Cases Dropped			
	Voted	Did not Vote	
Ambulatory Difficulty	-6.3%	-6.3%	
Cognitive Difficulty	-5.0%	-9.6%	
Hearing Difficulty	-6.6%	-5.0%	
Independent Living Difficulty	-5.3%	-8.6%	
No Disability	-9.0%	-7.4%	
Self-Care Difficulty	-5.6%	-9.2%	
Vision Difficulty	-5.3%	-6.5%	
With Disability	-6.4%	-6.7%	

Appendix D.

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