

ENSURING VOTING ACCESS ACROSS THE ELECTORATE

BEST PRACTICES AND NEW AREAS FOR RESEARCH

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INTRODUCTION

Democracy requires that all citizens have equal and easy access to the voting process to ensure that everyone's views are represented. "Democracy's dilemma" is the recurrent theme of unequal participation and unequal engagement of groups with misunderstood political needs, or worse, silenced political voices (Lijphart 1997). Unequal participation can result from higher barriers to voting faced by some groups, and electoral systems should be designed and administered to lessen these barriers to promote equal access.

This White Paper will:

- » review existing evidence on barriers to voting faced by several groups in the electorate, distinguishing areas where the evidence provides a high degree of certainty versus significant uncertainty;
- » review best practices and suggest improvements to election systems based on existing evidence; and
- » identify areas where new research can most fruitfully be directed.

We focus on several key groups that face different types of barriers: people with disabilities, senior citizens, Native Americans, rural citizens, and young citizens. While many other groups also face voting barriers—particularly voters of color (Fraga 2018)—the types of barriers faced by the groups considered here can shed light on many common issues that limit access more generally. As we focus on issues of dif-

ferential voting access, we recognize that other white papers raise many of the issues we cover here, most notably racial inequality, or more general problems with voting, such as casting mail ballots, or long wait times at the polls. Some of these issues are particularly relevant to Black voters, as discussed in the other white papers. We focus here on other groups that have received little attention from scholars.

Many people in these groups we consider face considerable barriers when attempting to cast a ballot. Scholars often refer to these barriers as a component of the "calculus of voting," an analytic framework that considers both the benefits and costs when determining whether an individual will turn out to vote in a given election (Li, Pomante, and Schraufnagel 2018). In short, an increase in the cost of voting can lead to some voters abstaining at higher rates than others in an election. We provide a number of recommendations for research that would shed light on the barriers differentially affecting particular groups, including research on the value of partnerships with key organizations and individuals in these groups.

2. PEOPLE WITH DISABILITIES AND SENIOR CITIZENS

2.1 VOTING REGISTRATION AND TURNOUT AMONG PEOPLE WITH DISABILITIES AND SENIOR CITIZENS

We combine our discussion of people with disabilities and senior citizens since they often face similar issues and have considerable overlap. Disability rates increase strongly with age, and even senior citizens who do not identify as having a disability often develop disability-related functional limitations such as difficulty seeing, hearing, or walking. As the U.S. population ages we can expect to see significant increases in the numbers of both senior citizens and people with disabilities.

Estimates of the number of people with disabilities vary depending on the definition and measures used. Based on six questions on impairments and activity limitations in the Census Bureau's American Community Survey (ACS), an estimated 38.3 million people with disabilities were eligible to vote in the November 2020 elections, representing 16.3% of the electorate (Schur and Kruse 2020).¹ These data also indicate that 53.1 million senior citizens age 65 or older were eligible to vote, including 31.4 million age 65-74 and 21.7 million age 75 or older. Among those age 75 or older, close to half (48.6%) were identified as having a disability.

While older citizens tend to have higher voter turnout than younger citizens,² their turnout is mitigated by the disabling conditions that many people face as they

1 The ACS disability measure is based on four questions on impairments (seeing, hearing, cognitive, and mobility) and two questions on activity limitations (dressing or bathing, and going outside alone).

2 Using the Current Population Survey (CPS) Voting and Registration Supplement, the Census Bureau reports voter turnout that was 10 points higher among people age 65 or older compared to those age 18-64 in 2020 (74.5% compared to 64.5%), and almost 20 points higher in 2022 (66.8% compared to 47.7%) (calculated from Table A-1 in [Historical Reported Voting Rates \(census.gov\)](#)). An alternative estimate based on the suggestion of Hur and Achen (2013) indicates slightly wider gaps of 13.5 points in 2020 (77.8% compared to 64.3%) and 22.9 points in 2022 (64.4% compared to 41.5%) (calculated using CPS microdata).

grow older. Among people with disabilities overall, from 2008 to 2022 they were less likely to vote than people without disabilities by between 10.0 and 11.7 percentage points in Presidential elections, and between 4.0 and 9.9 points in midterm elections (U.S. Election Assistance Commission forthcoming).³

Some of the turnout gap between people with and without disabilities can be attributed to other demographic characteristics, such as their lower levels of education. The estimated disability turnout gaps tend to widen when controlling for these other characteristics (Schur et al. 2002; Schur, Ameri, and Adya 2017). Apart from demographic differences, prior research has found that lower disability turnout is partly explained by lower levels of income, lower levels of political recruitment, and lower feelings of political efficacy (Schur and Adya 2013).

There remains, however, an unexplained disability turnout gap. This may partly reflect voting barriers, which not only create difficulties in the physical act of voting but can also have psychological effects by lowering feelings of political efficacy and the desire to participate in politics (Schur, Ameri, and Adya 2017).

2.2 BARRIERS TO VOTING AMONG PEOPLE WITH DISABILITIES AND SENIOR CITIZENS

People with disabilities and senior citizens can face a variety of voting barriers. We first consider overall rates of voting difficulties, and then discuss specific types of difficulties.

Overall voting difficulties. National post-election surveys sponsored by the U.S. Election Assistance Commission show that voting difficulties were experienced by 26% of voters with disabilities in 2012, which dropped substantially to 11% in 2020, and ticked up to 14% in 2022 (U.S. Election Assistance Commission 2021a; 2023a). These figures were significantly higher than among voters without disabilities in each year (7%, 6%, and 4% respectively). About half of the drop in difficulties from 2012 to 2020 among voters with disabilities appears due to improvements in polling place accessibility, while the other half was due to the

3 The estimates based on the Hur and Achen (2013) show disability gaps of -11.7% in 2008, -5.3% in 2010, -10.0% in 2012, -4.0% in 2014, -10.7% in 2016, -9.9% in 2018, -11.3% in 2020, and -4.6% in 2022 (EAC forthcoming). Estimates using the Census Bureau method of calculating turnout, which counts survey non-respondents as not having voted, shows smaller disability turnout gaps.

large shift to voting by mail during the pandemic, as mail voters with disabilities are less than one third as likely as in-person voters with disabilities to report voting difficulties.⁴

The full extent of voting difficulties may be understated by considering only people who managed to vote. Analysis of the Survey of the Performance of American Elections (SPAЕ) conducted following the 2020 elections shows that 2.8% of registered voters with disabilities said they did not vote either because “I tried to vote, but it ended up being too much trouble,” “I tried to vote, but was not allowed to when I tried,” or “the line at the polls was too long,” compared to 1.0% of registered voters without disabilities.⁵ A 2022 survey found that 4.9% of eligible voters with disabilities said they tried but were unable to vote, compared to 2.9% of those without disabilities.⁶ While these 1.8 and 2.0 point differences may seem small, they represent about a half million people with disabilities, and a substantial portion of the disability turnout gaps noted above. Among all eligible voters who did not vote in 2022, one-fourth of people with disabilities (27.5%) said they would expect difficulties voting in person, and one-eighth (13.1%) said they would expect difficulties voting by mail (compared to 7.4% and 6.0% of non-voters without disabilities respectively).

Information. Turning to specific difficulties, people with disabilities and senior citizens may face additional obstacles in accessing voting information—both information on how and where to vote, and on candidates and issues. A great deal of information is now provided over the internet, and there is a “digital divide” in internet access: people with disabilities are more likely than those without disabilities to lack internet access from any location or a mobile device (16% compared to 5%) or printer access (33% compared to 18%) (U.S. Election Assistance Commission 2022). The internet gap is particularly large among senior citizens both with and without disabilities (30% of senior citizens with disabilities, and 18% of those without disabilities, lack internet access, compared to 5% and 2% of citizens age 18-64). Consequently, people with

disabilities are more likely than those without disabilities to use non-internet-based sources for voting information, particularly printed mailings from the election office, television, and talking to family members, friends, neighbors, or colleagues. We do not have good representative data, however, on access to voting information for those in institutions such as nursing homes, assisted living facilities, and jails.

While nearly all people with disabilities said that election office websites were fully accessible, only 73% said this about news and other websites, and 88% about print mailings and newspapers. The most common complaints about accessibility of both websites and print material were that they were difficult to read or made it difficult to find voting information, while websites were also criticized for being difficult to navigate.

The ease of reading information about participating in elections can be a barrier for people with vision disabilities and those with cognitive disabilities that affect their ability to learn by reading. Low document literacy, or the ability to perform tasks such as filling out forms or understanding non-continuous texts like instructions in a variety of formats affect some 43% of literate adults (National Center for Education Statistics 2003). Although not classified as a disability, low literacy has overlap with cognitive disabilities, aging, learning disabilities, and limited English proficiency (Summers et al. 2014; Summers, Quesenbery, and Pointer 2016). Election information could also be made easier to understand through the use of plain language. The website [plainlanguage.gov](https://www.plainlanguage.gov) provides guidelines and resources for federal agencies to “make it easier for the public to read, understand, and use government communications.” Applying these guidelines to voter education, instructions, and other election information would improve access for voters with disability. The accessibility of these other information sources is a promising topic for further research.

Transportation. People with disabilities and senior citizens often face transportation challenges, which can constrain opportunities to register and vote, particularly among those who lack internet access. A 2017 survey found that 25.5 million adults have travel-limiting disabilities, among whom 11.2 million are age 65 or older (Brumbaugh 2018). This is strongly related to age: 6.7% at age 50 have travel-limiting disabilities, rising to 31.9% at age 80 (Brumbaugh 2018: Figure 1). 19.4% of those with travel-limiting disabilities live in zero-vehicle households, and 38.9% take no trips in a day, compared to 5.2% and 14.4% respectively of those without such disabilities. They are also

4 In 2020, voting difficulties were reported by 18.0% of people with disabilities voting at a polling place compared to 5.4% of those voting by mail. The equivalent figures for 2022 were 19.9% and 6.1%.

5 The gap is highly significant at the 99% level. Based on analysis of microdata from the 2020 Survey of the Performance of American Elections (SPAЕ).

6 Based on analysis of survey data reported in U.S. Election Assistance Commission (2023a).

less likely to be drivers (58.5% compared to 91.5%) or to use ride-sharing services (3.6% compared to 11.1%), and more likely to say that travel is a financial burden (55.8% compared to 41.1%).

Transportation difficulties can have a negative impact on voting, as research finds a significantly higher likelihood of voting among those who have a vehicle they can drive (Schur et al. 2002). Difficulty in finding or getting to polling places has been shown to lower voter participation among people in general (Brady and McNulty 2011; Amos, Smith, and Claire 2017; Cantoni 2020). These barriers are greater for people with disabilities: one study found substantially lower voter participation among people with mobility limitations in areas with streets in poor condition (Clarke et al. 2011). These difficulties increase the importance of easy, accessible mail-in voting.

Voter registration. People with disabilities are only slightly less likely than those without disabilities to be registered to vote (a 2.9 point gap in 2020 and 0.5 point gap in 2022)(U.S. Election Assistance Commission 2021b; 2023b). These gaps are smaller than the disability voter turnout gaps, indicating that lower disability voter turnout is due both to lower rates of registration, and to lower turnout among those who are registered.

Voter registration itself can be a barrier, because it relies on paper forms that are not accessible. Although the National Voter Registration Application Form is available as a fillable PDF file,⁷ it must be printed and mailed to the appropriate state (Buchanan et al. 2022: 34).

New channels for voter registration could have an impact on the number of people with disability who are registered to vote:

- » Online voter registration (OVR) has the ability to make the process fully accessible for those who have access to a computer or mobile device. Only 42 states and Washington D.C. have currently implemented OVR systems.
- » Automatic voter registration (AVR) makes voter registration more accessible by combining it with another government agency transaction such as getting a driver’s license or state ID card. Twenty-two states and Washington D.C. have some form of automatic voter registration.⁸ As an “opt-

out” system, AVR puts most of the burden on the agencies. Improving the effectiveness of voter registration through Medicaid transactions and other agencies covered by the National Voter Registration Act (NVRA) of 1993 could have an impact on the number of people with disabilities who are registered to vote or have their registration automatically updated, and therefore are ready to vote (Hess 2023). For example, in testimony in support of AVR at Medicaid, Oregon Secretary of State Shemia Fagen reported that of the approximately 200,000 people in the state eligible to vote, but not registered, some 171,000—85% of the total -- were enrolled in the Oregon Health Plan, where they could be registered through AVR (Fagan 2023).

- » Same-day registration, also offered in 22 states and Washington D.C.,⁹ can be important for voters with disabilities by reducing the number not allowed to vote, or required to vote on an inaccessible paper ballot.

Although there has been research on the success of these channels in increasing overall registration and analysis by language and ethnicity (McGhee and Romero 2021), there is little data on the number of people with disabilities registered or how accessible the processes are. It would be valuable to research the opportunities for increasing voter registration provided by routine interactions with government so that more people are routinely and clearly ready to vote.

Physical access to polling places. Apart from transportation difficulties in getting to an election office or polling place, people with disabilities can face extra barriers getting inside a polling place (particularly for those with mobility or visual impairments) or standing in line (particularly for those with chronic illnesses or health conditions that cause pain when standing or limit their endurance). Among in-person voters with disabilities in 2022, the most common difficulty was standing in line (7.4% compared to 1.6% for voters without disabilities). They were also more likely to report difficulty in getting inside the polling place (2.2% compared to 0.2%), particularly among those with mobility impairments (4.1%) and those needing help in daily activities (4.4%). Among those who said they had difficulty getting inside a polling place, 44% reported that they voted curbside by having an election official bring out a ballot.

⁷ https://www.eac.gov/sites/default/files/eac_assets/1/6/Federal_Voter_Registration_ENG.pdf

⁸ <https://www.ncsl.org/elections-and-campaigns/automatic-voter-registration>

⁹ <https://www.ncsl.org/elections-and-campaigns/same-day-voter-registration>

An encouraging note is that difficulties getting inside the polling place appear to have decreased slightly, from 3.5% in 2012 to 2.2% in 2022 (U.S. Election Assistance Commission 2021a; 2023a).

Being permitted to vote. People with disabilities, particularly those who appear to have a cognitive disability, may be prevented from voting by poll workers. Analysis of the 2020 SPAE dataset shows that 0.7% of all registered voters with disabilities said they did not vote because “I tried to vote, but was not allowed to when I tried” compared to 0.1% of people without disabilities.¹⁰ From a separate survey, 2.1% of all eligible voters with disabilities in 2022 said they tried to vote but were not allowed to and were not offered a provisional ballot, compared to 0.7% of those without disabilities. This figure was highest (3.9%) among those with cognitive impairments.

People with mental, cognitive, or developmental disabilities are often subject to legal restrictions on their right to vote (Agran and Hughes 2013). A substantial literature supports the idea that people with cognitive disabilities, including intellectual and developmental disabilities, can make important decisions such as voting while relying on trusted assistors in executing those decisions (Raad, Karlawish, and Appelbaum 2009; Karlawish et al. 2004; Peterson, Karlawish, and Largent 2021). Such assistance can “facilitate the exercise of autonomy” for individuals with certain neurological or cognitive conditions (Peterson, Karlawish, and Largent 2021).

Accessibility of voting systems and materials. People with disabilities are more likely than those without disabilities to report difficulties in the physical act of voting. In 2022, 5.9% of in-person voters with disabilities reported difficulty reading or seeing the ballot, 4.6% reported difficulty understanding how to vote or use the voting equipment, 2.5% reported difficulty writing on the ballot, and 1.1% reported difficulty operating the voting machine—rates that were more than twice as high as those of voters without disabilities (U.S. Election Assistance Commission 2023a).

Close to one-twelfth (8.5%) of in-person voters with disabilities in 2022 reported using “extra features or

devices that helped you vote, such as a magnifier, large visual display, special keypad, or earphones.” Voting can be hindered when these extra devices or features are not ready, but the large majority of these voters reported that these devices or features were ready when they arrived (89%) and the election officials knew how to set up and use them (97%), while 9% reported delays or problems with their set up.

An additional challenge has been voting systems that meet the requirements for accessibility, but which are not fully usable for people with all disabilities. Version 2.0 of the Voluntary Voting System Guidelines (EAC 2021) addresses many of the issues reported by disability groups and voters with disabilities. It also included expanded requirements for a user-centered design approach and usability testing with voters with disabilities (Quesenbery and Laskowski 2023). Many of the most recent voting systems include expanded accessible features, especially for the visual display, but there are not yet any systems on the market which have been certified to the new requirements, so there is no data on how voters experience them.

Marking a ballot effectively requires not only access in the form of clearly designed materials, and options to adjust the display to perceptual needs for text size or contrast, but also a need to interact with and understand the information on the ballot.

Usability challenges for electronic and paper ballots affect all voters and can be serious enough problems to potentially change the outcome of an election (Norden et al. 2008). Poorly designed ballots can affect voters with disabilities either through issues that affect visual perception or a layout that is confusing for people with cognitive disabilities or low literacy. Poor dexterity can make it difficult to mark an optical-scan style ballot so that it is counted accurately for the voter’s intent. Problems typically include incompletely filled in marking targets or stray marks that make the intent difficult to determine.

Ballot marking devices are hybrid systems that allow voters to mark and review their choices on an electronic screen, then print a paper ballot to be cast. These ballots may be a summary-style list of voter selections (or contests where they did not make a selection). The legibility and layout of these ballots can affect their accessibility. Some voters may wish to use their personal assistive technology to read and verify the ballot before casting. We have only preliminary research on what design features make these ballots more accessible for visual or assistive reading (Baumeister and Quesenbery 2021). This report analyzed a selection

¹⁰ Derived from analysis of 2020 SPAE data. No further information is available on what respondents meant by saying they were “not allowed” to vote. This could indicate legal barriers such as having their eligibility challenged, having a mail ballot rejected, not having proper ID, or being at the wrong polling place.

of ballots for typographical features that can affect reading disabilities including text size and line spacing, visual separators between contests, and reading patterns such as vertical positioning and line length (which affects eye movement). It also used four different programs (2 assistive technology and 2 general purpose apps) to read the ballots through optical character recognition and compared the results for accuracy and how well the ballot layout is optimized for listening.

Beyond these data, we have little qualitative research into the experiences of voters with disabilities (Stanford 2013) or the assistive features they expect to be able to use while voting (Quesenbery and Sutton 2016). The Voluntary Voting System Guidelines 1.0 was written before the widespread use of mobile devices and the new technologies they offer for interacting with the physical world, from navigating to using OCR capabilities to read signs and documents (U.S. Election Assistance Commission 2005).

Voting by mail. Among voters with disabilities, 53% voted by mail during the height of the pandemic in 2020 and 39% did so in 2022; these rates were about 10 percentage points higher than among voters without disabilities (U.S. Election Assistance Commission 2021b; 2023b). This is consistent with data that people with disabilities are more likely to express a preference to vote by mail (U.S. Election Assistance Commission 2023a). Both the actual voting by mail and the preferences for it are highest among those with mobility impairments, but these figures also remain high across other types of disabilities. The increased voting by mail comes totally through the postal service, as they were equally likely as voters without disabilities to use dropboxes in both years (about one-sixth in 2020 and one-tenth in 2022 among both groups).

Among voters with disabilities, people who voted by mail experienced fewer difficulties than those voting in person, but they are still more likely than voters without disabilities to experience voting difficulties. In 2022, 6.1% of mail voters with disabilities reported difficulties in receiving, returning, reading, or understanding the ballot, compared to 0.3% of voters without disabilities (U.S. Election Assistance Commission 2023a). The most common difficulties were in receiving the ballot (2.3% of all mail voters with disabilities) and reading the ballot (1.7%). The difficulties were much more likely among voters with vision impairments (38.0%) and those with cognitive impairments (16.6%).

A promising technology for voting by mail is electronic ballot delivery (also known as accessible vote-by-mail or remote accessible VBM), in which voters receive the ballot electronically and then print it, fill it out, and return by mail or drop box. Although this option is relatively new, by 2022 it was available in 35 states in some form. While this option is not yet well known among the electorate, 3.7% of all citizens with disabilities in 2022, and 9.0% of non-voters with disabilities, said they would prefer to vote with this method if they were to vote in the next election (U.S. Election Assistance Commission 2023a).

The availability of this option is clearly contingent on internet access, which is lower among people with disabilities as described above. In addition, using most AVBM systems requires access to a printer and the ability to handle paper to pack the ballot into an envelope and sign the voter declaration, requiring a computer, not just a mobile device. A few states offer limited forms of electronic ballot return for voters with print disabilities,¹¹ but these are affected by security concerns. Innovation in ways to make voting by mail more effective for voters with disabilities and seniors has been limited by the opposition to any use of the underlying technologies by some computer security activists. A project at NIST brought together security, disability, and election specialists to create principles for remote ballot marking systems, but there have been few similar collaborations. (Laskowski et al. 2017).

Barriers for voting by mail, especially for voters with print-related disabilities, include the need to request a mail ballot in 16 states that require an excuse and four key challenges: the need to know that the option exists, the extra work it requires, reluctance to disclose a disability, or that voters may have significant impairments but not identify as having a disability (Buchanan et al. 2022, p 45).

State policies on voting by mail appear to make a difference in turnout of people with disabilities. In particular, no-excuse systems and permanent absentee ballots lower the costs of voting by mail, and are

11 Print disabilities are defined in NIST Special Publication 1273 (Buchanan, et al, 2022) as “(1) A person who is unable to read or use regular print materials as a result of temporary or permanent visual or physical limitations... this includes those who are blind or have a visual or physical disability that prevents them from reading or handling print materials. (2) A person who cannot effectively read print because of a visual, physical, perceptual, developmental, cognitive, or learning disability.”

linked to higher disability turnout (Schur and Kruse 2014; Miller and Powell 2016; Kuhlmann and Lewis 2022). The states that made it easier to vote by mail between 2018 and 2022 had significant increases in disability turnout in 2022, while disability turnout did not change significantly in other states (U.S. Election Assistance Commission 2023b). While one study found that early in-person voting reforms have only a small effect on the turnout of people with disabilities (Miller and Powell 2016), it would be valuable to further explore this and other policies.

Most states that still require excuses to vote by mail include both age and disability as valid excuses. Only Puerto Rico does not accept disability as an excuse. Nine states do not include age.¹²

We do not have good data on the impact of state policies for use of accessible vote-by-mail systems. States may allow any voter to use the system or may restrict it in some way, for example only to voters with print disabilities. The ease of election administration can also have an impact. When the mechanics of the systems are burdensome, officials may be reluctant to advertise the option widely (Baumeister, Quesenbery, and Lakowski 2023).

We do not have systematic data on the use of these systems or data comparing voting in states that do and do not make electronic ballot delivery available.

We do not have systematic information on whether signature matching, in which voter signatures on mail ballots must match the signature on voter registration records, create particular problems for people with disabilities. It is very possible that signature matching does create such problems, as conditions associated with aging and disability affect manual dexterity and consequently one's signature (Baumeister, Quesenbery, and Lakowski forthcoming).

We also do not have systematic information on difficulties in curing rejected ballots. When mail ballots are rejected, it may be more difficult for people with disabilities to cure the ballot due to the disparities noted above: lower likelihood of having a printer to print out and copy necessary documentation, lower computer access to internet-based solutions, and greater

transportation difficulties in traveling to an election office to cure the ballot. Some states have experimented with cure processes that can be completed electronically on a mobile phone. We do not have data on how well such processes work in increasing the number of successful cures.

Required assistance in voting. A substantial number of people with disabilities and senior citizens require assistance in voting. Close to one in nine (11%) of voters with disabilities reported needing assistance in voting in 2022 whether in person or by mail, compared to 2% and 4% respectively of voters without disabilities (U.S. Election Assistance Commission 2023a). Among in-person voters with disabilities who needed assistance, two-thirds (65%) received assistance from an election official, while one-fifth (19%) received assistance from a family member. Assistance with voting by mail was most commonly needed in returning the ballot (10%) and next in completing the ballot (6%). Among mail voters with disabilities who needed assistance, this was most commonly provided by a family member (45%), friend or neighbor (21%) or non-family housemate (11%).

A concern with providing voting assistance is whether the assister will exert undue influence on the vote choice of the assisted person. This concern can be reduced by having ballots and other voting materials that are designed to support independent and private voting and ensure that voters with disability can verify how an assistant marked their ballot.¹³ As noted above in discussing legal restrictions on the right to vote of people with mental or developmental disabilities, research has found that a trusted assister can enable individuals with certain neurological or cognitive conditions to effectively express their opinions (Peterson, Karlawish, and Largent 2021).

While we have a good handle on the overall rates of voting assistance needed among people with disabilities, and who provides the assistance, we do not have good systematic information on the policies or practices that reduce the need for assistance, or on the types of assistance allowed by state laws.

Treatment by election officials and poll workers. People with disabilities and senior citizens may be subject to differential treatment by election officials and poll

12 <https://www.ncsl.org/elections-and-campaigns/table-2-excuses-to-vote-absentee>. The states that do not include age are Alabama, Arkansas, Connecticut, Delaware, Missouri, New Hampshire, New York, Puerto Rico, and the Virgin Islands.

13 An example cited in (Laskowski et al. 2017) is that an accessible vote-by-mail program can print out the ballot and other materials in an order that reduces the chance that an assistant will see the voter's selections.

workers. This does not appear to be a large problem in general: voters with disabilities were just as likely as those without disabilities in 2022 to say that election officials were “very respectful” toward them (86% and 82% respectively), and that election officials were somewhat or very disrespectful (4% in each group). These figures did not differ significantly by disability type. While these figures do not point to a critical problem, it nonetheless remains important that election officials and poll workers receive training in disability etiquette to make voting easier and ensure everyone is treated with respect (Blahovec, Quesenbery, and Lakowski forthcoming).

2.3 DISABILITY VOTING RIGHTS AND VOTING SYSTEM STANDARDS

The Help America Vote Act of 2002 (HAVA)¹⁴ provided specific rights to voters with disabilities for the first time, requiring research and technical standards for voting systems that would

“...make voting equipment fully accessible for individuals with disabilities, including the blind and visually impaired, the need to ensure that such individuals can vote independently and with privacy, and the need to provide alternative language accessibility for individuals with limited proficiency in the English language (consistent with the requirements of the Voting Rights Act of 1965)” – HAVA Section 271, Section 281, Section 301

Until then, there were few requirements for voting systems and almost no mention of accessibility for voters with disabilities. The Voting System Standards published by the National Association of State Election Directors and Federal Election Commission in 1990¹⁵ required that voting booths be “accessible to voters without physical handicap,” required “human engineering considerations, including provisions for access by handicapped voters,” and because “Most design standards do not include requirements for handicapped persons” encouraged voting system designers to “accommodate their designs to the special requirements of users and operators whose sight, hearing, speech, or mobility may be impaired, in conformity with the spirit of the Voting Accessibility for the El-

derly and Handicapped Act of 1984 (Public Law 98-435)” (Section D.6, page 159).

The federal Voluntary Voting System Guidelines (VVSG) 1.0 in 2005 (U.S. Election Assistance Commission 2005), developed under HAVA introduced the first requirements for both usability and accessibility enabling all voters to vote privately and independently. The current VVSG 2.0 (U.S. Election Assistance Commission 2021c) was adopted in 2021. As of this writing, the first voting systems are just starting the process of certification under the new version.

This means that the current voting systems were developed and certified under requirements written before the widespread use of smart phone and other mobile devices. By 2021 Pew Research reported that, 85% of U.S. adults own a smartphone—a rapid rise from just 35% when they began tracking their use—and 93% use the internet (Pew Research Center 2021b; 2021a). Not surprisingly, the highest use is by younger, more educated, and more affluent voters, so we cannot rely on their availability for people with disabilities, senior citizens, and rural voters where cell service and broadband are more limited.

This, however, does suggest a change in how Americans expect to get information and interact with technical devices – and expectations for information about elections and voting systems. This offers elections offices more ways to publish information about voting and locations and transportation options, to communicate directly with voters, and make marking and casting a ballot easier, more flexible for individual needs, and more accessible.

A NIST Special Publication written in response to Executive Order 14019, Promoting Access to Voting, details barriers and recommendations for voting (Buchanan et al. 2022) and provides a summary of the issues that still remain in making private and independent voting a reality for all voters. This report is an analysis of systemic barriers to voting, including voter registration, voting by mail, in-person voting technology, polling locations, and poll worker training. The analysis was informed by published literature and input from the public, disability voting rights advocates, and other stakeholders. The specific recommendations include ways in which better implementation of current laws, standards and regulations can address gaps. It also looks at policies and best practices that support voters with disabilities and areas in which new research is needed.

14 Help America Vote Act of 2002 (HAVA), Pub. L. No. 107-252, 116 Stat. 1666- 1730. <https://www.govinfo.gov/content/pkg/PLAW-107publ252/pdf/PLAW-107publ252.pdf>

15 https://www.eac.gov/sites/default/files/eac_assets/1/28/FEC_1990_Voting_System_Standards1.pdf

2.4 BEST PRACTICES AND SUGGESTED IMPROVEMENTS BASED ON EXISTING EVIDENCE

Some best practices in election administration suggested by the above evidence are:

1. For ongoing improvement in polling place accessibility, it is valuable to have disability groups involved in polling place location and design.
2. Forms for critical interactions, such as voter registration or requesting a mail-in ballot, and all communications from the election office to voters should be available in accessible formats.
3. For full accessibility of voting equipment and ballots, it is valuable to adopt a universal design approach that decreases the need for specialized equipment and training, and makes the voting experience more uniform across all voters.
4. Efforts should be continued to ensure that ballots and voting instructions are written in plain language easily understood by all voters (following guidelines at [plainlanguage.gov](https://www.plainlanguage.gov)).
5. Recognizing the particular value of voting by mail for many people with disabilities, it is valuable to adopt policies that make it easier to vote by mail, such as all-vote-by-mail, no-excuse, and permanent absentee ballot systems.
6. To decrease voting costs and make the voter experience more uniform across all voters, it is important to provide poll worker training and disability checklists for in-person voting.
7. Recognizing the digital divide in internet access, voting information should not be provided mainly or exclusively on websites but should be available in a wide variety of formats. Digital information should be optimized to be responsive to a variety of mobile devices and assistive technology.
10. Analysis of the impact of specific policies and election administration procedures on seniors and voters with disabilities that reduce independent voting.
11. The number of accessible voting stations needed to serve voters who prefer to use them, and the impact of how jurisdictions offer access to accessible voting systems.
12. Guidance for setting up polling places and training for election officials and poll workers that focuses on how to support voters with disabilities to maximize independence and privacy.
13. Policies and practices on signature matching and curing rejected ballots, particularly given that aging and disability can affect manual dexterity and signatures.
14. Access to voting information, and the voting process, for those in institutions such as nursing homes, assisted living facilities, and jails.

2.5 PRIORITY AREAS FOR MORE RESEARCH ON PEOPLE WITH DISABILITIES AND SENIOR CITIZENS

We have good evidence on many of the issues facing people with disabilities and senior citizens. The priority areas for further research are:

8. New technologies that use an accessible universal design approach to make the voting experience easier and more uniform across all voters.
9. State policies that expand or restrict voting access, including registration requirements, early in-person voting, voting by mail, and time windows for registration, including how those policies are administered.

3. NATIVE AMERICANS

Native American political engagement is affected by their unique civic status, being both American citizens and citizens of Indigenous nations that predated Euro-American settlement (Herrick and Mendez 2019; Wilkins and Stark 2017). After the 1924 passage of the Indian Citizenship Act (ICA), many Native Americans refused to vote on the grounds that it would mean legitimating the U.S. government’s dispossession of their lands (Bruyneel 2004). Although it is now 100 years later, this history continues to affect the electoral participation of American Indian and Alaska Native populations. Native Americans living on reservations often must travel to off-reservation border towns where racial animus is common (United States Commission on Civil Rights 2011) to register and vote.¹⁶ This is one of the reasons why registration and voting rates among Native Americans has been far lower than other groups, but the gap has decreased in the past decade (Herrick and Mendez 2019; Huyser, Sanchez, and Vargas 2017; Peterson 1997). Voting in tribal elections typically is much higher (up to 20 points greater) than in non-tribal elections (Schroedel et al. 2020).

Trust in election administration is a crucial issue for Native Americans. A large survey of tribal members in Nevada and South Dakota found very low levels of political trust in non-tribal government officials, with trust in local government officials especially low, which is troubling since these are the people who administer elections. Respondents also evinced low levels of trust that their votes would be counted, especially when votes are cast by mail where local election officials have great discretion (Schroedel et al. 2020; 2022). While white voters shift to voting by mail when travel distances are great, Native voters rarely vote by mail, even when the distance disparities are great because they have little trust that such votes will be counted (Schroedel and Hart 2015; Schroedel et al. 2020).

16 While doing survey research at a housing project with mostly Native residents in Rapid City, South Dakota, one of the authors of this report encountered heavy police presence—multiple police cars and a helicopter—with officers wanting to know what the four survey takers were doing. The Native man described that as “being indianized.”

3.1 EXISTING EVIDENCE OF DIFFERENTIAL COSTS/ BARRIERS

Thirty years ago, Aldrich (1993) noted that voting is a “marginal activity,” which is affected by costs. Native Americans face many barriers, some unique as noted above, that impact their electoral participation. But electoral participation is not simply a matter of assessing barriers; it also is a question of the financial and human capital resources that people can call upon to overcome barriers (Brady, Verba, and Scholzman 1995; Rosenstone and Hansen 1993; Williams 2004). Native Americans are among the most “resource poor” population in the country (Benzow et al. 2023: 33). They have the highest poverty rate in the country and the lowest level of educational attainment (Ferguson-Bohnee and Tucker 2020: 28).

Much of the evidence detailing barriers has come from voting rights litigation in which Native plaintiffs have been successful in more than 90% of cases (Schroedel and Hart 2015; Tucker, De León, and McCool 2020). While it is not difficult for academics to perform off-reservation research such as online surveying of self-identified American Indians,¹⁷ there is enormous distrust—and often for good reason—of non-Native researchers seeking to do research on tribal lands and tribal settings. Research also has been undertaken by non-academic groups, such as the Native American Voting Coalition and Native American Rights Fund,¹⁸ but we focus on the academic research in our discussion of the following nine types of barriers.

1. Intimidation and harassment of Native voters.
2. The need for poll workers who can provide culturally appropriate assistance to Native voters, many of whom have limited English proficiency.
3. Insufficient information on voting processes due to the digital divide and the lack of information in traditional American Indian/Alaska Native languages.
4. Unequal access to registration.
5. Inability to register and vote due to voter ID laws that require traditional addresses.

17 Less than half of people who self-identify as American Indian/Alaska Native in the census are members of federally recognized tribes. People who have limited or no contact with tribal communities have very different experiences than do those who live on tribal lands and/or within off-reservation areas with large Native populations.

18 See, for example, the Native American Voting Rights Coalition’s 2018 study, *Voting Barriers Encountered by Native Americans*, in Arizona, New Mexico, Nevada and Arizona.

6. The purging of voters from the registration rolls.
7. Unequal access to in-person voting, drop boxes, and early voting sites.
8. Inaccessible polling places due to extreme travel distances, road impediments, lack of public transit/high cost of gasoline and border town harassment.
9. Problems with voting by mail (VBM) systems due to the absence of residential mail delivery on reservations, extreme shortage of post offices on reservations, slow delivery times and high failure to deliver rates for letters posted on reservations, and high mail in ballot rejection rates. Also, there is no way for voters in these systems to get assistance if they have limited English proficiency or if they are speakers of traditional languages.

Although it has decreased since the passage of the Voting Rights Act, there continues to be evidence of racial intimidation and harassment—mostly anecdotal accounts. While doing research in Montana, Nevada, and South Dakota, the authors of this report encountered many stories of racial intimidation and harassment, such as an armed sheriff standing outside of a South Dakota reservation polling location, which led many elderly people to leave rather than vote. Also as noted earlier, many people on reservations express a reluctance to travel to border towns, even if that is required to register and vote (Schroedel 2020: 81-82). Registering by mail is difficult for several reasons, most importantly the lack of post offices, but also state laws requiring that registration documents be notarized is a barrier, due to the lack of notaries on reservations. In a similar vein, the digital divide poses a barrier to online registration. There are anecdotal accounts of election officials and poll workers behaving in culturally insensitive manners, such as being disrespectful of elders, as well as accounts of poll workers not assisting Native voters with limited English proficiency and those who primarily speak traditional languages (Ferguson-Bohnee and Tucker 2020: 26-32; Schroedel 2020: 122-123, 129). There is a need for registration and election information translated into traditional languages and outreach to Native people without access to the internet. These are access issues for voters living on reservations, and especially for voters living in linguistically isolated Alaska Native villages (Ferguson-Bohnee and Tucker 2020: 28-29).

Native voters often encounter challenges in trying to register. In Fall 2020, Tribal leaders in Minnesota organized a massive voter registration drive, but when they tried to turn in the more than 8,000 registration cards, local election workers refused to accept the cards until threatened with a lawsuit (Schroedel et al.

2020). Then in 2022, South Dakota failed to provide registration materials at government offices serving large Native populations until forced to do so by legal action.

The biggest barrier for Native voters on reservations is state laws that require government identification with residential street addresses. There are two reasons why this is a significant barrier for Native voters. First, many reservations do not have streets with names and numbers as is typical in off-reservation locations, so post office boxes and other non-traditional addresses are used on government issued identification (Schroedel 2020: 59-62, 228-230). It also is a barrier that impacts potential voters who either lack stable housing (e.g., couch surfers) or are homeless—conditions that apply to many rural and urban Native populations.

Researchers have documented unequal access to in-person polling places, drop boxes, and early voting sites on reservations in South Dakota, Nevada and Arizona (Schroedel 2020; Schroedel et al. 2020; Rogers, Schroedel, and Dietrich 2023: 16-18). Those inequities are exacerbated by extreme travel distances, inaccessible terrain, poor road quality, and lack of public transit and high cost of gasoline (Ferguson-Bohnee and Tucker 2020; Schroedel 2020; Schroedel et al. 2020: 62-64, 75-76). Given these difficulties, one might think voting by mail would be a good option, but that is not the case. Most reservations have what is considered non-standard mail service, which means that people must travel to post offices to send and receive mail. Research on the Navajo Nation, the largest Indian reservation in the country, found that reservation populations had far worse mail service (fewer post offices, limited hours of operation, and fewer hours of access to post office boxes) than adjacent off-reservation communities, controlling for population density—and letters took far longer to arrive at the offices of election officials (up to 10 days) and some did not arrive—problems that did not exist for letters mailed from off-reservation post offices (Rogers, Schroedel, and Dietrich 2023).

3.2 BEST PRACTICES AND SUGGESTIONS FOR IMPROVEMENTS

There are ways that the administration of elections can be improved for reservation populations; some of the suggestions can be implemented by local election officials, but others would require actions at the state and national levels. The most important action that local election officials could take would be to listen to tribal leaders, acknowledge current shortcomings (a sign of good faith), and then collaborate on efforts to improve

outreach, to equalize access to drop boxes, early voting sites, and Election Day polling places. Also important, they could work with tribal leaders to identify and train Native poll workers, especially speakers of traditional languages. Another trust building measure would be for local election officials to partner with Native leaders in lobbying states and the federal governments to adopt policies aimed at improving electoral access for Native voters. The most important state-level efforts include increased state-provided funding to cover the costs of improved electoral access, allowing government issued identification documents with non-traditional addresses (both for reservation voters and for homeless populations) to be accepted for registration and voting, and to allow mail-in ballots to be counted if postmarked prior to Election Day. The inequities in mail service are a federal issue that would require lobbying Congress and the USPS to increase postal access on reservations and to improve the routing of letters so they arrive within the USPS 1-3 day standard for mail within a six-hour drive, which typically is within the driving distance to reach election offices.

3.3 PROPOSED AVENUES FOR FUTURE RESEARCH AND COLLABORATION

Over the past ten years, there has been a substantial increase in knowledge about the many types of barriers that impinge on American Indian/ Alaska Native voting, but the research is still very thin to non-existent in some of the areas outlined above. Most of the information has come from voting rights litigation, case studies, and personal accounts provided by Native voters. While useful, it is hard to reach general conclusions using these source materials. There is a need for systematic data that would allow us to map the locations of all drop boxes, early voting sites, polling places, and post offices in states with Native lands to make comparisons between reservation and non-reservation populations.¹⁹

There are important gaps which have not been examined at all. There has been no research into reports of Native voters being disproportionately purged from voting rolls—perhaps due to lack of stable housing or non-receipt of letters. Also, there has not been any research into the extent and reasons for the reported lack of Native poll workers.²⁰ Finally, there has been a

complete lack of research into issues affecting urban Native populations, a group that has the highest rate of homelessness in the country.²¹ This is a very significant gap, given that two-thirds of Native Americans live off-reservation. Much of the growth of urban Native populations occurred during the termination and relocation period when the federal government had a policy of breaking up Native populations and dispersing them to different urban locations where they were to get education and jobs; most of which were not provided, leaving individuals isolated and separated from tribal support networks.

19 We did this for three Arizona counties and a geographer, working for Native American Rights Fund, has done a limited amount of GIS mapping in other locations.

20 A South Dakota election official recounted to us that there were no Native Americans willing to serve as poll workers. When given names of volunteers, the election official

said that she only wanted people who she personally knew and that she did not know any qualified Native Americans.

21 To the best of our knowledge, the only attempt to reach out to Native populations in urban areas occurred in 2022 when the voting rights group Four Directions engaged in get out the vote efforts in the Georgia run-off Senate race. This was a very limited effort and did not delve into issues affecting registration and electoral access.

4. RURAL RESIDENTS

Although there is much discussion of the political divide that exists between urban and rural voters, there is far less focus on administering elections in rural areas and the implications that has for the voter experience. Studies of economics (Irwin et al. 2010), public health (Hartley 2004), and sociology (Tickamyer and Duncan 1990), for example, often include some measure of rurality as a predictor of worsening outcomes for the lived experience of citizens in those areas deemed to be rural. Taking a crude definition of rural from the U.S. Census Bureau between 14% and 20% of Americans live in rural areas. Despite this relative minority of citizens, nearly two-thirds of U.S. counties can be classified as rural.²² Given that elections are administered at the local level, this means more than two-thirds of election officials serve predominantly rural jurisdictions. The population of these areas, in general, continues to decline. This not only has implications for tax revenue, but it also amounts to fewer available workers and diminishing returns on access points for government services of any kind. All these trends have significant impacts on election administration in rural areas.

4.1 RURAL ELECTION ADMINISTRATION AND THE VOTING EXPERIENCE IN RURAL AREAS

On the surface, we might be expected to dismiss any concerns about the rural voting experience as, voter turnout is often reported as higher in rural areas than in urban.²³ However, a recent report from the Population Health Institute suggests that rural counties are lagging in several categories including health and infrastructure—both of which were found to influence voter turnout (University of Wisconsin Population Health Institute 2023). This indicates that while turn-

22 There exists significant disagreement across academic disciplines, government agencies, and policy researchers about exactly what makes a jurisdiction rural or not. If we take the Census designation of rural being anything “not urban,” we end up with about 1,976 rural counties. See here for that number: <https://www.ers.usda.gov/webdocs/publications/102576/eib-230.pdf>

23 This was particularly reported after the 2016 election, but it depends on how we measure rurality and the degree to which suburban areas are classified as urban or rural if we treat those as a dichotomy. This was not the case in 2020, which saw higher participation rates in urban areas (Albrecht 2022). This issue also varies widely by state and election.

out is part of the story it is not always indicative of the full experience of all rural voters.

Data on the voter experience in rural areas is scarce. Large-scale surveys are quite challenging in such a context as rural voters are often the hardest citizens to reach and developing a reliable sample presents significant challenges for survey methodologists. Even the best available data typically generalizes at the state level, and thus we know no more about those voters in rural areas than their urban counterparts. It is not controversial to assume that rural voters have distinct challenges when it comes to public transit, infrastructure, technological connectivity, literacy, and most other measures related to quality of life and service delivery. Although state laws dictate that voters have the same experience during an election season, this is far from guaranteed in environments where poll workers and/or election judges are selected from increasingly declining pools and most polling places are significant distances away from home for much of the population.

Although we have little research on this thus far, the continued change in demographics across the country may also present challenges for voters in rural areas. It is less likely that rural jurisdictions have translation and multilingual options available for those residents who may need them. Many rural jurisdictions also have limited equipment and accommodations for aging populations. This includes well-documented issues surrounding ADA compliance in public spaces and other challenges related to infrastructure.

Only a handful of studies in the election science literature have addressed rural election administration at all, and even then, it is typically in passing. The study by Creek and Karnes (2010) represents one of the few studies focusing on the challenges of policy implementation at the rural level. In this case the concern related to the ability of rural administrators and jurisdictions to handle the additional challenges of implementing HAVA requirements without additional support or specific measurement of implementation costs. These concerns were not addressed in the time since HAVA was passed (2002) and their study completed (2010). Kimball and Baybeck (2013) followed up with an examination of jurisdiction size and found that rural jurisdictions have higher costs per voter than their urban counterparts. This is not too surprising since all jurisdictions have many of the same requirements regardless of size.

Rural election administrators also exist in a setting where the jurisdiction may not have a dedicated information technology staff or expert to assist on things

like website and basic computer infrastructure. They also, on average, are more reliant on state or contracted resources to service any electronic voter equipment. Rural jurisdictions also have limited options for communicating with voters and historically spend more on print media buys, for example (U.S. Election Assistance Commission 2013).

4.2 DISCUSSION OF RECENT STUDIES EXAMINING THE RURAL VOTING AND ELECTION ADMINISTRATION EXPERIENCE

There has been very little election science research focused on rural election administration. A recent exception is qualitative research into election administration in the lower Mississippi Delta, which indicates that communication with voters and human capacity are the most significant challenges in those areas (Wimpy and McLean 2023). Many jurisdictions are without any print or broadcast media at all serving their local areas, and some administrators are left to post election information and outreach information on their personal social media pages. This leaves voters in rural areas with disproportionately few options to learn information about upcoming elections. In some cases, jurisdictions are left posting information in or around the courthouse or their respective offices as the only official means of communicating with voters.²⁴

Rural election administration does have bright areas. In most cases these jurisdictions are processing far fewer ballots and election-day issues than those in urban areas. This leaves them relatively well performing in terms of running an election during the election season and/or on election day. Without exception, rural administrators in the lower Mississippi Delta certainly believed that voters in their jurisdictions had much better election day experiences due to lower wait times and fewer overall complications due to over crowdedness. This echoes the findings of Stewart (2013) that suggested similar trends using large-scale data collection.

The pandemic, despite being devastating in some rural areas, seemed to affect rural elections in mostly the same ways that it affected urban areas. In many cases the sparse population and less busy voting locations meant that there was less impact. Most jurisdictions involved in the study of the lower Mississippi Delta in-

dicated that they were well supplied and able to meet the additional challenges of the pandemic with relative ease. In some cases, there were concerns about the ability of reaching those voters who were most at risk, especially in areas where additional access (e.g., vote by mail, early voting) remained limited. Much as is the case for running elections before the pandemic, rural jurisdictions served voters quite well.

This is but one research project about one rural area in the country, and clearly more research is needed. This type of qualitative work is particularly useful for identifying issues that affect rural jurisdictions uniquely. Combined with systematic quantitative research, there are many opportunities for further understanding this area of election administration.

4.3 PROPOSED AVENUES FOR FUTURE RESEARCH AND COLLABORATION

Election administration in rural areas presents a multifaceted set of challenges, ranging from geographical disparities to limited resources and accessibility barriers. These challenges, if left unaddressed, can lead to a lack of access and representation for voters in these areas. Future research should continue to leverage outreach options to election administrators in rural areas to make sure they have access to as many resources as possible. This should involve developing an understanding of the degree whereby rurality really begins to matter for election administration. Research and policy development should also focus on whether “one size fits all” laws and policies will remain tenable as rural areas continue to experience population declines and diminishing resources on which to draw. Finally, and perhaps most important, election science needs to develop a definition of rural that best captures the distinctions of interest for election administration and the voter experience.

²⁴ Most jurisdictions are required to buy print advertisements in the closest newspaper, but it is often the case that the closest paper has very few subscribers in the rural jurisdiction being served.

5 COLLEGE STUDENTS AND YOUNG ADULTS

Younger individuals, including those attending college, are less likely to turn out to vote than their elders (Wolfinger and Rosenstone 1980; Leighley and Nagler 2014; Wattenberg 2015; Juelich and Coll 2020). Despite an array of reforms targeting younger voters, low turnout among young voters persists. In the 2020 general election—an election with historic high turnout (McDonald 2022)—the turnout rate for citizens aged 18-29 was more than 25 percentage points less than citizens over the age of 60, according to the US Census Bureau’s CPS Voting and Registration Supplement.²⁵

5.1 EXISTING EVIDENCE OF DIFFERENTIAL COSTS/ BARRIERS

Younger registrants are particularly vulnerable to some of the costs of voting. Younger registered voters typically have less political knowledge, exhibit lower political efficacy, and possess fewer socio-economic resources, they are less likely to take advantage of election reforms that might enhance their likelihood of turning out to vote (Juelich and Coll 2020).

One of the main factors contributing to the deficit in youth turnout is a lack of electoral experience. Voting begets voting; by definition, younger voters have fewer opportunities to become habituated to voting compared to older voters who regularly turn out to vote. Plutzer (2002: 42) finds that younger voters are less likely to turn out to vote because they “lack many of the resources that can promote participation,” such as homeownership, disposable income, or meaningful community engagement. Studies conducted decades ago have found that younger voters are not only less likely to turn out to vote; those who do are less likely to utilize convenience voting reforms and cast their ballots prior to Election Day (Stein 1998; Southwell and Burchett 2000; Hanmer and Traugott 2004; Neely and Richardson 2001). But the demographics of who uses convenience voting has likely changed over time as more opportunities to cast one’s ballot prior to Election Day have expanded across most of the states. Still, even if new research finds that younger voters are more likely than in the past to vote early (either in person or by mail), by definition they are not yet habitual voters. Younger voters are more likely to incur an “inexperience penalty,” as Cottrell, Herron,

and Smith (2021) refer to it, leading to more rejected ballots, which may translate into less political representation. In the 2012 General Election, for example, after the Florida state legislature reduced the number of early voting days and eliminated the final Sunday before Election Day, Herron and Smith (2014) found that the contraction of in-person early voting reduced turnout of young voters.

One of the biggest barriers facing younger voters who decide to wait until Election Day to cast a ballot is the ability to successfully navigate the changing election administrative landscape when it comes to identifying their assigned precinct locations, obtaining transportation to the polling site, and having proper identification when arriving at the polls. Younger individuals are more mobile than other age groups, and election administrative rules (including registration requirements and ease of registering) often differ across states (and even local jurisdictions).²⁶ This may make the voting experience more costly for those young voters who may have moved away from where they initially registered to vote and try to re-register (but lack state ID or proof of residence), as well as for those who want to vote remotely by mail in the state where they initially registered to vote. Information costs involved in deciding where and when to vote are especially high for first-time voters, who not only are less likely to have local, particularized knowledge about where they should go to vote on Election Day, but are less likely to have transportation to get to the polls and less likely to be mobilized by groups or political parties to get out to vote (Arceneaux and Nickerson 2009).

Since younger individuals are more residentially mobile than other eligible voters and are also less likely to engage with state agencies that offer eligible citizens the ability to register to vote (Dyck and Gimpel 2005; Stein and Vonnahme 2008; Brady and McNulty 2011; Grumbach and Hill 2022), they face particular challenges when deciding where and when and how to vote, such as possessing a valid ID to present to poll workers, keeping their registration address updated, identifying the location of their designated Election Day polling location, and having transportation to the polling location (Dyck and Gimpel 2005; Stein

25 See footnote 2.

26 According to the U.S. Census Bureau, between 2020 and 2021, over 18% of 20-24 year olds moved households compared to only 10% of those 30-44 year olds, 5% of 45-64 year olds, and 3% of 65-74 year olds. See “Table 6. General Mobility, by Age and Tenure: 2020 to 2021,” Geographic Mobility: 2020 to 2021, available: <https://www.census.gov/data/tables/2021/demo/geographic-mobility/cps-2021.html>.

and Vonnahme 2008; Brady and McNulty 2011; Biggers 2021). Younger voters appear to be particularly sensitive to election administration changes, such as when Election Day polling locations are eliminated or relocated by local election officials (Amos, Smith, and Claire 2017).

Younger voters who do turn out in person to vote are less likely to have their ballots counted. In most states, registrants who wait until Election Day to vote must vote at the polling station that is tied to where they are registered to vote. For registered voters who are more transitory, such as younger voters, where they are registered may not be where they currently reside. Not surprisingly, younger registered voters are more likely to cast provisional ballots, and are more likely to not have their provisional ballots accepted by county canvassing boards (Merivaki and Smith 2020). Many provisional ballots are rejected because a voter has shown up at the wrong polling place on Election Day. If a poll worker provides these voters with a provisional ballot—even if they are properly registered in a county, but because they have moved (a common scenario for young voters, especially students, who often move at least once a year, sometimes more)—but they are assigned to a different precinct in that county, their ballot may be rejected by the county canvassing board.

Younger voters who are attending college or university might be expected to have higher levels of turnout than younger voters who are not attending school, in part due to social mobilization forces in play. Studies drawing on survey data (particularly the Survey of the Performance of American Elections) that have examined the “undermobilization” of young registered voters have found that young non-voters—with and without college experience—are more likely to say they did not vote because they did not like the candidates or were too busy (or had a conflict) on Election Day. Non-college educated younger voters also cited inconvenient hours and long lines as reasons why they did not turn out to vote. In contrast, younger students were more likely to say they were out of town as a reason for not voting, as compared to non-college aged youth.²⁷

5.2 Best Practices and Suggestions for Improvements

To be sure, numerous reforms advanced by advocacy groups as well as state election officials have been adopted to address lower turnout rates among younger voters. Some of these reforms have focused on reduc-

ing barriers to voter registration, such as the implementation of portable and pre-registration laws (McDonald 2008; McDonald and Thornburg 2012; Holbein and Hillygus 2016) and the expansion of same day registration (SDR) laws (Hanmer 2009; Shino and Smith 2020; Grumbach and Hill 2022). Wolfinger, Highton, and Mullin (2005) found that the adoption of election reforms—including providing information about polling locations, the mailing of sample ballots, and extended voting hours—reduced the costs of voting for young voters. At the margins, these state-level reforms appear to make a difference with regard to both registration rates and turnout levels of younger voters.

Greater educational attainment and on-campus GOTV mobilization efforts partially explain why younger voters enrolled in institutions of higher education are more likely to turn out compared to their less-educated peers. But structural reasons exist, too. Transportation costs affect younger voters not attending college just as they affect those away at school. Although younger voters not attending school are less likely than those in college to say they did not vote because they did not have transportation to the polls,²⁸ registered voters living on college campuses may also have difficulty travelling to an in-person voting location if it is located off campus. Furthermore, college students often work part-time and take classes during the work week, and as such may have a hard time voting on Election Day if it means leaving campus.

When it comes to election reforms targeting younger voters who are registered to vote on college campuses, several states have expanded the availability of voting on college campuses—not only on Election Day but during early voting periods as well. These efforts to reduce the costs of voting for those on or near college campuses appear to engender voter turnout by providing more convenient voting opportunities. Greater proximity to early voting locations on college campuses alters the calculus of voting, as found by Shino and Smith (2020) in their study of turnout after the adoption of on-campus early in-person (EIP) voting locations on college campuses in Florida. Leveraging a difference-in-difference design across multiple elections in the eight counties that offered EIP voting for the first time on college campuses in the 2018 general election, Shino and Smith (2020: 15) find that on-campus early voting helped to “mitigate the drop-off in turnout of young registrants who have yet to become habituated to cast ballots in midterm elections,” as “many young registrants, who tend to be low-propen-

²⁷ [Why Youth Don't Vote: Differences by Race and Education | CIRCLE \(tufts.edu\)](#)

²⁸ Ibid.

sity voters especially in non-presidential elections, turned out in 2018 because information and transportation barriers were lowered, making the voting process more convenient.”

Theoretically, the broad expansion of no-excuse mail voting in many states, as well as the adoption of all-mail elections, should lower the costs for younger voters. For instance, residential college students often live away from the permanent residences where they are registered to vote. They should be able to request their mail ballot to be sent to their temporary address. However, because students are highly mobile, if they do not update their temporary addresses on their registration, they may not receive their ballot, as mail ballots are generally non-forwardable. In addition, although young voters who reside temporarily away from their permanent residence may request and then mail back mail ballots to their local election officials, they are much more likely than older voters to have their mail ballots rejected for lack of timeliness or deficiencies with the return envelopes (Baringer, Herron, and Smith 2020; Shino, Suttman-Lea, and Smith 2022).

Some scholars argue that the adoption of convenience voting reforms do not necessarily enhance turnout. Berinsky (2005) warns of the “perverse consequences” of early voting, as low-propensity voters—such as young voters—might not be the population that is able to take advantage of the reforms, and Burden et al. (2014: 97) argue that convenience voting reforms “turn a large-scale social activity that once took place on a single election day into a weeks-long process that diffuses public visibility. Overall, the turnout effects of reforms may be negligible—“merely convenienc[ing] those who would have voted anyway” (Neeley and Richardson 2001: 381)—allowing for a substitution effect. Others go even further, arguing that the targeted populations affected by contemporary election rules are so marginal that they “cannot affect any but the very closest elections” (Grimmer and Hersh 2023).

Be this as it may, it is clear that some reforms—SDR, pre- and portable registration, and on-campus early voting to name a few—do allow younger voters to be able to participate in the electoral process, helping to reduce the turnout gap. At the margins, these reforms can help to reduce the differentially lower turnout rates among young voters. Future studies examining youth voting should continue to assess the turnout effects of specific policies, but they should also be mindful of providing a more wholistic assessment of youth turnout. There are few studies that look comprehensively at youth turnout as “a matter of access, opportunities,

and infrastructure.”²⁹ Because it is not possible to conduct field experiments, randomizing young voters into different electoral reforms, it is difficult if not impossible to precisely measure any causal effects of such reforms, necessitating multipronged research design.

The scholarly literature is growing, but it has not yet caught up with many of the policy reports that document the challenges, and successes, of youth voting. Younger voters face particular challenges that arise out of their inexperience as voters. As novices, they are less likely to be able to navigate the complexity of the information that is necessary to process in order to cast a valid ballot, in person or by mail. The diversity of state laws and complexity of considerations about where young voters may claim residence (for example on both health and auto insurance, tuition support, and some other unexpected impacts) make it very hard for institutions with many out-of-state students to provide voter registration information. Young voters face other challenges, particularly keeping their registrations up to date, which affects their ability to vote in person or request and cast a valid mail ballot, due to their high mobility rates.

29 See, Center for Information and Research on Civic Learning and Engagement, March 17, 2022, available at <https://circle.tufts.edu/latest-research/impact-voting-laws-youth-turnout-and-registration> (last accessed April 5, 2022).

6 CONCLUSION

The groups covered in this White Paper face a variety of voting barriers. Some of the common ones include polling places that are hard to reach and navigate, difficulties in voting by mail, and insufficient access to voting information. Some of the difficulties that are specific to particular groups include inaccessible voting systems and not being allowed to vote among some people with disabilities, intimidation and harassment of Native Americans, declining rural populations leading to fewer resources for voting systems, and high mobility among young voters.

Each section summarizes several best practices for improving voting outcomes among these groups. More generally, partnership with key organizations and individuals in these groups can facilitate outreach efforts to make voting information and opportunities more readily available and accessible.

The priority areas for fruitful research include:

1. New technologies that use an accessible universal design approach to make the voting experience easier and more uniform across all voters
2. State policies that expand or restrict voting access, including early in-person voting, voting by mail, and time windows for registration, including how those policies are administered
3. The number of accessible voting stations needed to serve voters who prefer to use them, and the impact of how jurisdictions offer access to accessible voting systems
4. Guidance for setting up polling places and training for election officials and poll workers that focuses on how to support voters with disabilities to maximize independence and privacy
5. Policies and practices on signature matching and curing rejected ballots, particularly given that aging and disability can affect manual dexterity and signatures.
6. How the rise in new technologies such as mobile devices affects expectations about getting information about elections and voting systems
7. Access to voting information, and the voting process, for those in institutions such as nursing homes, assisted living facilities, and jails
8. Systematic data to map the locations of all drop boxes, early voting sites, polling places, and post offices in states with Native lands
9. Purging of Native voters from voting rolls
10. Voting information for Native voters with limited English skills

11. Reported lack of Native poll workers
12. Issues facing urban Native populations
13. Whether “one size fits all” laws and policies will remain tenable as rural areas continue to experience population declines and diminishing resources on which to draw
14. Developing a definition of “rural” that best captures issues for election administration and the voter experience in rural areas
15. Impact of policies and practices such as portable registration, early voting, and residency rules on turnout among young people

The above ideas represent a broad challenge to researchers and policy-makers in identifying and devising solutions for the variety of barriers that lead to inequalities in voting access.

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REFERENCES

- Agran, Martin, and Carolyn Hughes. 2013. “You Can’t Vote-- You’re Mentally Incompetent’: Denying Democracy to People with Severe Disabilities.” *Research and Practice for Persons with Severe Disabilities* 38 (1): 58–62.
- Aldrich, John H. 1993. “Rational Choice and Turnout.” *American Journal of Political Science*, 246–78.
- Amos, Brian, Daniel A. Smith, and Case Ste. Claire. 2017. “Reprecincting and Voting Behavior.” *Political Behavior* 39 (1): 133–56.
- Arceneaux, Kevin, and David W. Nickerson. 2009. “Who Is Mobilized to Vote? A Re-Analysis of 11 Field Experiments.” *American Journal of Political Science* 53: 1–16.
- Baringer, Anna, Michael C Herron, and Daniel A Smith. 2020. “Voting by Mail and Ballot Rejection: Lessons from Florida for Elections in the Age of the Coronavirus.” *Election Law Journal: Rules, Politics, and Policy* 19 (3): 289–320.
- Baumeister, Lynn, and Whitney Quesenbery. 2021. “Legibility of Paper Ballots: What Makes a Printed Summary-Style Ballot Easy to Verify?” NIST white paper. Center for Civic Design.
- Baumeister, Lynn, Whitney Quesenbery, and Sharon J. Lakowski. 2023. “Administering Accessible Vote by Mail Systems: Challenges and Innovations in Elections Offices.” Gaithersburg, MD: National Institute of Standards and Technology.
- . forthcoming. “Voting by Mail: The Impact of Signature Identity Verification for Voters with Disabilities.” National Institute of Standards and Technology.
- Benzow, August, Kenan Fikri, Joanne Kim, and Daniel Newman. 2023. “Advancing Economic Development in Persistent Poverty Communities.” Economic Innovation Group.
- Berinsky, Adam J. 2005. “The Perverse Consequences of Electoral Reform in the United States.” *American Politics Research* 33 (4): 471–91. <https://doi.org/10.1177/1532673X04269419>.
- Biggers, Daniel R. 2021. “Can the Backlash against Voter ID Laws Activate Minority Voters? Experimental Evidence Examining Voter Mobilization through Psychological Reactance.” *Political Behavior* 43 (3): 1161–79.
- Blahovec, S., Whitney Quesenbery, and Sharon Lakowski. forthcoming. “Training Poll Workers for Accessible Voting: Supporting Voters with Disabilities at the Polling Place.” National Institute for Standards and Technology.
- Brady, Henry E., and John E. McNulty. 2011. “Turning out to Vote: The Costs of Finding and Getting to the Polling Place.” *American Political Science Review* 105 (1): 1125–34.
- Brady, Henry E., Sidney Verba, and Kay Lehman Schlozman. 1995. “Beyond SES: A Resource Model of Political Participation.” *American Political Science Review* 89 (2): 271–94. <https://doi.org/10.2307/2082425>.
- Brumbaugh, Stephen. 2018. “Travel Patterns of American Adults with Disabilities.” *Bureau Of Transportation Statistics, Washington DC, WA, USA, US Department of Transportation*.
- Bruyneel, Kevin. 2004. “Challenging American Boundaries: Indigenous People and the ‘Gift’ of U.S. Citizenship.” *Studies in American Political Development* 18 (1): 30–43. <https://doi.org/10.1017/S0898588X04000021>.
- Buchanan, Kerriane E, Kevin C Mangold, Sharon J Laskowski, and Karen K Reczek. 2022. “Promoting Access to Voting :: Recommendations for Addressing Barriers to Private and Independent Voting for People with Disabilities.” NIST SP 1273. Gaithersburg, MD: National Institute of Standards and Technology (U.S.). <https://doi.org/10.6028/NIST.SP.1273>.
- Burden, Barry C, David T Canon, Kenneth R Mayer, and Donald P Moynihan. 2014. “Election Laws, Mobilization, and Turnout: The Unanticipated Consequences of Election Reform.” *American Journal of Political Science* 58 (1): 95–109.
- Cantoni, Enrico. 2020. “A Precinct Too Far: Turnout and Voting Costs.” *American Economic Journal: Applied Economics* 12 (1): 61–85. <https://doi.org/10.1257/app.20180306>.

- Clarke, Philippa J., Jennifer A. Ailshire, Els R. Nieuwenhuisen, and Marijke W de Kleijn-de Vrankrijker. 2011. "Participation among Adults with Disability: The Role of the Urban Environment." *Social Science & Medicine* 72 (10): 1674–84.
- Cottrell, David, Michael C. Herron, and Daniel A. Smith. 2021. "Vote-by-Mail Ballot Rejection and Experience with Mail-in Voting." *American Politics Research* 49 (6): 577–90. <https://doi.org/10.1177/1532673X211022626>.
- Creek, H. M., and K. A. Karnes. 2010. "Federalism and Election Law: Implementation Issues in Rural America." *Publius: The Journal of Federalism* 40 (2): 275–95. <https://doi.org/10.1093/publius/pjp035>.
- Dyck, Joshua J., and James G. Gimpel. 2005. "Distance, Turnout, and the Convenience of Voting*." *Social Science Quarterly* 86 (3): 531–48. <https://doi.org/10.1111/j.0038-4941.2005.00316.x>.
- Fagan, Shemia. 2023. "Testimony by Oregon Secretary of State." <https://olis.oregonlegislature.gov/liz/2023R1/Downloads/PublicTestimonyDocument/47680>.
- Ferguson-Bohnee, Patty, and James T. Tucker. 2020. "Voting During a Pandemic: Vote-By-Mail Challenges for Native Voters." *Arizona Attorney*, 24–36.
- Fraga, Bernard L. 2018. *The Turnout Gap: Race, Ethnicity, and Political Inequality in a Diversifying America*. Cambridge University Press.
- Grimmer, Justin, and Eitan Hersh. 2023. "How Election Rules Affect Who Wins."
- Grumbach, Jacob M, and Charlotte Hill. 2022. "Rock the Registration: Same Day Registration Increases Turnout of Young Voters." *The Journal of Politics* 84 (1): 405–17.
- Hanmer, Michael J. 2009. *Discount Voting: Voter Registration Reforms and Their Effects*. Cambridge University Press.
- Hanmer, Michael J., and Michael W. Traugott. 2004. "The Impact of Voting by Mail on Voter Behavior." *American Politics Research* 32 (4): 375–405. <https://doi.org/10.1177/1532673X04263412>.
- Hartley, David. 2004. "Rural Health Disparities, Population Health, and Rural Culture." *American Journal of Public Health* 94 (10): 1675–78. <https://doi.org/10.2105/AJPH.94.10.1675>.
- Herrick, Rebekah, and Jeanette Morehouse Mendez. 2019. "One Model Does Not Fit All: Group Consciousness and the Political Participation and Attitudes of American Indians ." *Social Science Quarterly*, May, ssqu.12657. <https://doi.org/10.1111/ssqu.12657>.
- Herron, Michael C., and Daniel A. Smith. 2014. "Race, Party, and the Consequences of Restricting Early Voting in Florida in the 2012 General Election." *Political Research Quarterly* 67 (3): 646–65. <https://doi.org/10.1177/1065912914524831>.
- Hess, Douglas R. 2023. "Using Medicaid Automatic Voter Registration to Address Persistent Voter Registration Problems: Helping the National Voter Registration Act Achieve Its Potential." Institute for Responsive Government. 2023. <https://responsivegoverning.org/research/using-medicaid-automatic-voter-registration-to-address-persistent-voter-registration-problems-helping-the-national-voter-registration-act-achieve-its-potential/>.
- Holbein, John B, and D Sunshine Hillygus. 2016. "Making Young Voters: The Impact of Preregistration on Youth Turnout." *American Journal of Political Science* 60 (2): 364–82.
- Huysen, Kimberly R., Gabriel R. Sanchez, and Edward D. Vargas. 2017. "Civic Engagement and Political Participation among American Indians and Alaska Natives in the US." *Politics, Groups, and Identities* 5 (4): 642–59. <https://doi.org/10.1080/21565503.2016.1148058>.
- Irwin, Elena G., Andrew M. Isserman, Maureen Kilkenny, and Mark D. Partridge. 2010. "A Century of Research on Rural Development and Regional Issues." *American Journal of Agricultural Economics* 92 (2): 522–53.
- Juelich, Courtney L., and Joseph A. Coll. 2020. "Rock the Vote or Block the Vote? How the Cost of Voting Affects the Voting Behavior of American Youth: Part of Special Symposium on Election Sciences." *American Politics Research* 48 (6): 719–24. <https://doi.org/10.1177/1532673X20920265>.
- Karlawish, Jason H., Richard J. Bonnie, Paul S. Appelbaum, Constantine Lyketsos, Bryan James, David Knopman, Christopher Patusky, Rosalie A. Kane, and Pamela S. Karlan. 2004. "Addressing the Ethical, Legal, and Social Issues Raised by Voting by Persons With Dementia." *JAMA* 292 (11): 1345. <https://doi.org/10.1001/jama.292.11.1345>.

- Kimball, David C., and Brady Baybeck. 2013. "Are All Jurisdictions Equal? Size Disparity in Election Administration." *Election Law Journal: Rules, Politics, and Policy* 12 (2): 130–45. <https://doi.org/10.1089/elj.2012.0174>.
- Kuhlmann, R., and D. C. Lewis. 2022. "Making the Vote (In) Accessible: Election Administration Laws and Turnout Among People with Disabilities." *Politics, Groups, and Identities*, 1–17.
- Laskowski, Sharon, Shaneé Dawkins, Whitney Quesenbery, Nancy Frishberg, Pam Smith, and Keith Instone. 2017. "Remote Ballot Marking Systems: Designing for Usability, Accessibility, And Security. Principles and Guidelines for Remote Ballot Marking Systems." National Institute of Standards and Technology / Center for Civic Design. <https://civicedesign.org/wpcontent/uploads/2015/09/Principles-for-remote-ballot-marking-systems-17-0331.pdf>.
- Leighley, Jan E., and Jonathan Nagler. 2014. *Who Votes Now? Demographics, Issues, Inequality and Turnout in the United States*. Princeton: Princeton University Press.
- Li, Quan, Michael J Pomante, and Scot Schraufnagel. 2018. "Cost of Voting in the American States." *Election Law Journal: Rules, Politics, and Policy* 17 (3): 234–47.
- Lijphart, A. 1997. "Unequal Participation: Democracy's Unresolved Dilemma." *American Political Science Review*, 1–14.
- McDonald, Michael P. 2008. "Portable Voter Registration." *Political Behavior* 30 (4): 491–501.
- McDonald, Michael P. 2022. *From Pandemic to Insurrection: Voting in the 2020 US Presidential Election*. Walter de Gruyter GmbH & Co KG.
- McDonald, Michael P., and Matthew Thornburg. 2012. "Registering the Youth through Voter Preregistration." *New York University Journal of Legislation and Public Policy* 13: 551–72.
- McGhee, Eric, and Mindy Romero. 2021. "Effects of Automatic Voter Registration in the United States." Los Angeles, CA: University of Southern California, Sol Price School of Public Policy. <https://static1.squarespace.com/static/57b8c7ce15d5dbf599fb46ab/t/5eb9847fb7a1f3362ced2d99/1589216438166/USC+CCEP+Effects+of+AVR+in+the+U.S.+Final.pdf>.
- Merivaki, Thessalia, and Daniel A. Smith. 2020. "A Failsafe for Voters? Cast and Rejected Provisional Ballots in North Carolina." *Political Research Quarterly* 73 (1): 65–78. <https://doi.org/10.1177/1065912919875816>.
- Miller, Peter, and Sierra Powell. 2016. "Overcoming Voting Obstacles: The Use of Convenience Voting by Voters with Disabilities." *American Politics Research* 44 (1): 28–55.
- National Center for Education Statistics. 2003. "National Assessment of Adult Literacy (NAAL): Demographics." National Center for Education Statistics: U.S. Department of Education. 2003. https://nces.ed.gov/naal/kf_demographics.asp.
- Neeley, Grant W., and Lilliard E. Jr Richardson. 2001. "Who Is Early Voting? An Individual Level Examination." *The Social Science Journal* 38 (3): 381–92. [https://doi.org/10.1016/S0362-3319\(01\)00135-5](https://doi.org/10.1016/S0362-3319(01)00135-5).
- Norden, Lawrence, David Kimball, Whitney Quesenbery, and Margaret Chen. 2008. "Better Ballots." Brennan Center for Justice. July 21, 2008. <https://www.brennancenter.org/our-work/research-reports/better-ballots>.
- Peterson, Andrew, Jason Karlawish, and Emily Largent. 2021. "Supported Decision Making With People at the Margins of Autonomy." *The American Journal of Bioethics* 21 (11): 4–18. <https://doi.org/10.1080/15265161.2020.1863507>.
- Peterson, Geoff. 1997. "Native American Turnout in the 1990 and 1992 Elections." *American Indian Quarterly* 21 (2): 321. <https://doi.org/10.2307/1185650>.
- Pew Research Center. 2021a. "Internet/Broadband Fact Sheet." *Pew Research Center: Internet, Science & Tech* (blog). April 7, 2021. <https://www.pewresearch.org/internet/fact-sheet/internet-broadband/>.
- . 2021b. "Mobile Fact Sheet." *Pew Research Center: Internet, Science & Tech* (blog). April 7, 2021. <https://www.pewresearch.org/internet/fact-sheet/mobile/>.
- Plutzer, Eric. 2002. "Becoming a Habitual Voter: Inertia, Resources, and Growth in Young Adulthood." *American Political Science Review* 96 (1): 41–56. <https://doi.org/10.1017/S0003055402004227>.

- Quesenbery, Whitney, and Sharon J Laskowski. 2023. "Handbook for VVSG 2.0 Usability and Accessibility Test Strategies: A Report on Guidance and Resources for How to Test Voting Systems." Gaithersburg, MD: National Institute of Standards and Technology. <https://doi.org/10.6028/NIST.VTS.400-5>.
- Quesenbery, Whitney, and J Sutton. 2016. "Assistive Technology in the Polling Place: Current and Emerging Technology." White paper. Center for Civic Design/NIST.
- Raad, Raymond, Jason Karlawish, and Paul S. Appelbaum. 2009. "The Capacity to Vote of Persons With Serious Mental Illness." *Psychiatric Services* 60 (5): 624–28. <https://doi.org/10.1176/ps.2009.60.5.624>.
- Rogers, Melissa, Jean Schroedel, and Joseph Dietrich. 2023. "Inequalities in Vote by Mail for Native Americans in the US West: The Historical Political Economy of Postal Service in Northeastern Arizona." *Journal of Historical Political Economy* 2 (4): 553–81.
- Rosenstone, Steven J., and John Mark Hansen. 1993. *Mobilization, Participation, and Democracy in America*. New York: MacMillan Publishing Company.
- Schroedel, Jean, Aaron Berg, Joseph Dietrich, and Javier M. Rodriguez. 2020. "Political Trust and Native American Electoral Participation: An Analysis of Survey Data from Nevada and South Dakota." *Social Science Quarterly* 101 (5): 1885–1904. <https://doi.org/10.1111/ssqu.12840>.
- Schroedel, Jean, and Ryan Hart. 2015. "Vote Dilution and Suppression in Indian Country." *Studies in American Political Development* 29 (1): 40–67. <https://doi.org/10.1017/S0898588X1400011X>.
- Schroedel, Jean Reith. 2020. *Voting in Indian Country: The View from the Trenches*. Haney Foundation Series. Philadelphia: University of Pennsylvania Press.
- Schroedel, Jean, Melissa Rogers, Joseph Dietrich, Savannah Johnston, and Aaron Berg. 2022. "Assessing the Efficacy of Early Voting Access on Indian Reservations: Evidence from a Natural Experiment in Nevada." *Politics, Groups, and Identities* 10 (1): 81–99. <https://doi.org/10.1080/21565503.2020.1756359>.
- Schur, Lisa, and Meera Adya. 2013. "Sideline or Mainstreamed? Political Participation and Attitudes of People with Disabilities in the U Nited S Tates." *Social Science Quarterly* 94 (3): 811–39.
- Schur, Lisa, Mason Ameri, and Meera Adya. 2017. "Disability, Voter Turnout, and Polling Place Accessibility." *Social Science Quarterly* 98 (5): 1374–90.
- Schur, Lisa, and Douglas Kruse. 2014. "Disability and Election Policies and Practices." In *The Measure of American Elections*, 188–222. Cambridge University Press. <https://doi.org/10.1017/CBO9781107589117.008>.
- . 2020. "Projecting the Number of Eligible Voters with Disabilities in the November 2020 Elections." Program for Disability Research: Rutgers University. [https://smlr.rutgers.edu/sites/default/files/Documents/Centers/Program Disability Research/Disability electorate projections 2020.pdf](https://smlr.rutgers.edu/sites/default/files/Documents/Centers/Program%20Disability%20Research/Disability%20electorate%20projections%202020.pdf).
- Schur, Lisa, Todd Shields, Douglas Kruse, and Kay Schriener. 2002. "Enabling Democracy: Disability and Voter Turnout." *Political Research Quarterly* 55 (1): 167–90. <https://doi.org/10.2307/3088070>.
- Shino, Enrijeta, and Daniel A. Smith. 2020. "Mobilizing the Youth Vote? Early Voting on College Campuses." *Election Law Journal: Rules, Politics, and Policy* 19 (4): 524–41. <https://doi.org/10.1089/elj.2019.0596>.
- Shino, Enrijeta, Mara Suttman-Lea, and Daniel A. Smith. 2022. "Determinants of Rejected Mail Ballots in Georgia's 2018 General Election." *Political Research Quarterly* 75 (1): 231–43. <https://doi.org/10.1177/1065912921993537>.
- Southwell, Priscilla, and Justin Burchett. 2000. "Does Changing the Rules Change the Players? The Effect of All-Mail Elections on the Composition of the Electorate." *Social Science Quarterly* 81 (3): 837–45.
- Stein, Robert M. 1998. "Introduction: Early Voting." *The Public Opinion Quarterly* 62 (1): 57–69.
- Stein, Robert M., and Greg Vonnahme. 2008. "Engaging the Unengaged Voter: Vote Centers and Voter Turnout." *The Journal of Politics* 70 (2): 487–97. <https://doi.org/10.1017/S0022381608080456>.
- Stewart, Charles. 2013. "Waiting to Vote in 2012." *The Journal of Law and Politics* 28 (4): 439–63.
- Summers, Kathryn, Dana Chisnell, Drew Davies, Noel Alton, and Megan McKneever. 2014. "Making Voting Accessible: Designing Digital Ballot Marking for People with Low Literacy and Mild Cognitive Disabilities." *USENIX Journal of Election Technology and Systems (JETS)* 2 (2): 11–33.

- Summers, Kathryn, Whitney Quesenbery, and Amy Pointer. 2016. "Making Voting by Mail Usable, Accessible and Inclusive." In *Advances in Design for Inclusion*, edited by Giuseppe Di Bucchianico and Pete Kercher, 53–64. Advances in Intelligent Systems and Computing. Cham: Springer International Publishing. https://doi.org/10.1007/978-3-319-41962-6_5.
- Tickamyer, Ann R., and Cynthia M. Duncan. 1990. "Poverty and Opportunity Structure in Rural America." *Annual Review of Sociology* 16 (1): 67–86. <https://doi.org/10.1146/annurev.so.16.080190.000435>.
- Tucker, James T., Jacqueline De León, and Dan McCool. 2020. "Obstacles at Every Turn: Barriers to Political Participation Faced by Native American Voters." NARF Comprehensive Field Hearing Report 2020. Boulder, CO: Native American Rights Fund. https://vote.narf.org/wp-content/uploads/2020/06/obstacles_at_every_turn.pdf.
- United States Commission on Civil Rights. 2011. "Discrimination Against Native Americans in Border Towns: A Briefing Before the United States Commission on Civil Rights Held in Washington, D.C." Briefing Report. The U.S. Commission on Civil Rights. https://www.usccr.gov/files/pubs/docs/Border-Towns_03-22-11.pdf.
- University of Wisconsin Population Health Institute. 2023. "County Health Rankings National Findings Report 2023." www.countyhealthrankings.org.
- U.S. Election Assistance Commission. 2005. "Voluntary Voting System Guidelines Version 1.0." https://www.eac.gov/sites/default/files/eac_assets/1/28/VVSG.1.0_Volume_1.PDF.
- . 2013. "U.S. Election Assistance Commission Urban-Rural Study." https://www.eac.gov/sites/default/files/eac_assets/1/28/EAC%20Urban_Rural%20Study%20Final%20Report%205_17_13.pdf.
- . 2022. "Disability, the Voting Process, and the Digital Divide." 2022. <https://www.eac.gov/election-officials/disability-voting-process-and-digital-divide>.
- . 2021a. "Disability and Voting Accessibility in the 2020 Elections: Final Report on Survey Results." U.S. Election Assistance Commission. https://www.eac.gov/sites/default/files/voters/Disability_and_voting_accessibility_in_the_2020_elections_final_report_on_survey_results.pdf.
- . 2023a. "Disability and Voting Accessibility in the 2022 Elections." U.S. Election Assistance Commission. https://www.eac.gov/sites/default/files/2023-07/EAC_2023_Rutgers_Report_FINAL.pdf.
- . 2023b. "Disability and Voting Accessibility in the 2022 Elections: Supplemental Analysis of Census Voter Turnout Data." U.S. Election Assistance Commission. https://www.eac.gov/sites/default/files/2023-07/EAC_2023_Rutgers_Report_Supplement_FINAL.pdf.
- . 2021b. "Fact Sheet on Disability and Voter Turnout in the 2020 Elections." U.S. Election Assistance Commission. https://www.eac.gov/sites/default/files/document_library/files/Fact_sheet_on_disability_and_voter_turnout_in_2020_0.pdf.
- . 2021c. "Voluntary Voting System Guidelines VVSG 2.0." https://www.eac.gov/sites/default/files/TestingCertification/Voluntary_Voting_System_Guidelines_Version_2_0.pdf.
- . forthcoming. "Voting Experiences Since HAVA: Perspectives of People with Disabilities."
- Wattenberg, Martin P. 2015. *Is Voting for Young People?* Routledge.
- Wilkins, David E, and Heidi Kiiwetinepinesiiik Stark. 2017. *American Indian Politics and the American Political System*. Rowman & Littlefield.
- Williams, Linda Faye. 2004. "The Issue of Our Time: Economic Inequality and Political Power in America." *Perspectives on Politics* 2 (04): 683–89. <https://doi.org/10.1017/S1537592704040447>.
- Wimpy, Cameron, and William P. McLean. 2023. "Exploring Rural Election Administration With Special Attention to the Mississippi River Delta." MIT Election Data and Science Lab Technical Report.
- Wolfinger, Raymond E, Benjamin Highton, and Megan Mullin. 2005. "How Postregistration Laws Affect the Turnout of Citizens Registered to Vote." *State Politics & Policy Quarterly* 5 (1): 1–23.
- Wolfinger, Raymond E, and Steven J Rosenstone. 1980. *Who Votes?* Yale University Press.