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Guest Editor's Introduction

This special issue of the *Journal of Election Administration, Research, and Practice* contains seven white papers originally published as part of the Mapping Election Administration and Election Science project led by the MIT Election Data and Science Lab (MEDSL)[1] with support from the Election Trust Initiative.[2] This project began during a summit at MIT in late September 2023 where the current state of the field's research was assessed, and priorities were discussed about building robust partnerships of researchers and practitioners who would work together to encourage evidence-based improvements to election administration. These white papers surveyed what is known about research-based best practices in seven areas of election administration:

- Accessibility in voting
- Auditing and validating election results
- Voting in person
- Voting by mail
- Voting registration accuracy and security
- Communicating with voters to build trust in the system
- Poll worker and election official recruitment, training, and retention

Knowledge accumulated over the past two decades, revealing varying levels of research depth and engagement across the researcher-practitioner divide, are presented in these papers. Abridged versions of the white papers are printed in this issue; however, the complete versions are available for viewing on the MEDSL website.[3] Also included in this issue of *JEARP* are election practitioner responses to the white papers as election administrators across the country provided their thoughts on where researchers should be focusing their future efforts on these vital topics to the election field.

The aftermath of the 2000 election saw academic researchers flood into the field of election administration. Some of this research has had a positive influence on how elections are conducted, though not as much as many have hoped. Of course, the political environment in which election policy is developed is one barrier to the adoption of research-based best practices, but a bigger barrier is the misalignment of the interests of academic researchers and election officials. Academic researchers, motivated by curiosity and national news, often lack direct engagement with election officials. Election officials, under pressures to perform perfectly with limited resources, may find little to be gained by collaborating with researchers.

Election administration is not the only important area of public policy where a misalignment of interests, perspectives, and time horizons form a barrier to improving public service using the best scientific evidence. Health care, education, community development, criminal justice, and law enforcement are other areas where similar dynamics occur. These areas have benefitted from a new way of aligning the interests of researchers and practitioners, called research-practitioner partnerships (RPPs).[4] Election administration should benefit, too.

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[1] https://electionlab.mit.edu/

[2] https://www.electioninitiative.org/

[3] https://electionlab.mit.edu/research/projects/mapping-election-science

[4] Cynthia E. Coburn, William R. Penuel, and Kimberly E. Geil, "Practice partnerships: A strategy for leveraging research for educational improvement in school districts," William T. Grant Foundation (2013), https://eric.ed.gov/?id=ED568396.

Unlike traditional demand-driven academic research or one-off consulting, RPPs are long-term partnerships designed to solve problems of practice while contributing to generalized scientific knowledge. RPPs are designed to be collaborative from the beginning. When they succeed, it is because of a shared commitment to mutual respect.

As what has been learned over the past two decades in the field of election administration is digested, there is an opportunity to explore a bold new approach that aligns the needs and experiences of academics, voters, and election officials. The goal is to make evidence-based improvements in election administration more commonplace and effective.

Charles Stewart III[5]
Guest Editor

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Ensuring Voting Access Across the Electorate

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ABSTRACT
This paper summarizes evidence on barriers that can limit access to voting faced by several key groups: people with disabilities, senior citizens, Native Americans, rural citizens, and young citizens. The barriers faced by these groups shed light on many common issues that limit access more generally. Common barriers include polling places that are hard to reach and navigate, difficulties in voting by mail, and insufficient access to voting information. Difficulties 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. We review best practices, suggest improvements to election systems, and identify fruitful areas for new research. Partnerships with key organizations and individuals can facilitate efforts to make voting information and opportunities more readily available and accessible.

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 and representation can result from

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higher barriers to voting faced by some groups, and electoral systems should be designed and administered to reduce these barriers.

This paper focuses on several key groups that face different types of voting 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 experiences of these groups can shed light on many common issues that limit access more generally. For these groups we a) review existing evidence on voting barriers, b) summarize best practices to reduce or remove these barriers, and c) identify promising new research that can be done in partnership with practitioners in the election field.

People with Disabilities and Senior Citizens

The Help America Vote Act of 2002 (HAVA)[11] granted specific rights to voters with disabilities for the first time, requiring that voting systems provide an opportunity to vote independently and privately. We combine our discussion of people with disabilities and senior citizens since they often face similar issues and have considerable overlap given the high rate of disability among senior citizens.

People with disabilities overall were 10.0 to 11.7 percentage points less likely to vote in presidential elections over the 2008-2022 period, and the gaps remain after controlling for other personal characteristics. There is recent progress, however, as relative turnout of people with disabilities increased in 2020 and 2022 compared to four years earlier (U.S. Election Assistance Commission 2024).

Some of the disability gap is tied to voting difficulties. In national post-election surveys sponsored by the U.S. Election Assistance Commission, the number of voters with disabilities who experienced difficulty voting dropped from 26 percent in 2012 to 14 percent in 2022, but this is still considerably higher than the 4-7 percent reported by other voters (U.S. Election Assistance Commission 2021, 2023).

Some of the most important barriers facing voters with disabilities and senior citizens are:

- *Obstacles in accessing voting information*, in particular the lower internet access among people with disabilities and senior citizens, inaccessible formats, and hard-to-read information (U.S. Election Assistance Commission 2022).
- *Transportation and physical access to polling places,* including difficulties in getting to a polling place, getting inside the polling place, standing in line, and (particularly for people with intellectual disabilities) being permitted to vote.
- *Accessibility of voting systems and materials,* including physical difficulties in voting, the need for extra features or devices to be set up and working when the voter arrives, and confusing ballot layouts or instructions.
- *Receiving, completing, and returning mail ballots* – voting by mail is more common among people with disabilities in general but can pose problems, especially for people with visual impairments.

[11] 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

Many of these difficulties can be addressed by the following practices or actions:

- 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.
- New channels for voter registration such as automatic, same-day, and online registration can especially help people with disabilities who are registered to vote.
- All forms and communications from the election office should be available in accessible formats.
- For ongoing improvement in polling place accessibility, disability groups should be involved in decisions on polling place location, design, and evaluation.
- To decrease voting costs and make the voter experience more uniform and accessible, poll workers should be given training and disability checklists for in-person voting.
- For full accessibility of voting equipment and ballots, a universal design approach can decrease the need for specialized equipment and training, and make the voting experience more uniform across all voters.
- 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).
- Policies to make it easier to vote by mail are helpful to many people with disabilities, such as all-vote-by-mail, no-excuse, and permanent absentee ballot systems, along with systems allowing voters to track their mail ballots.

Further research in partnership with practitioners would be valuable on the following topics:

- New technologies that follow accessible, universal design principles to make the voting experience easier and more uniform across all voters.
- Analysis of the impact of specific policies and election administration procedures on seniors and voters with disabilities that reduce independent voting.
- The number of accessible polling places needed to serve voters and the impact of how jurisdictions offer access to accessible voting systems.
- 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.
- Policies and practices on signature matching and curing rejected ballots, particularly given that aging and disability can affect manual dexterity and signatures.
- Access to voting information and the voting process for those in institutions such as nursing homes, assisted living facilities, and jails.
- State policies that expand or restrict voting access, including registration requirements, early in-person voting, and voting by mail, including how those policies are administered.

Native Americans

Native American political engagement is affected by their history and unique civic status (Herrick and Mendez 2019; Wilkins and Stark 2017). Many encounter racial animus in off-reservation border towns (United States Commission on Civil Rights 2011) where they go to register and vote. Native

registration and voting rates are low (Herrick and Mendez 2019; Huyser, Sanchez, and Vargas 2017; Peterson 1997). Political trust in local government officials is very low, as is trust that votes in non-tribal elections are counted, especially when votes are cast by mail (Schroedel et al. 2020; 2022).

Native Americans, who are a "resource poor" population (Ferguson-Bohnee and Tucker 2020: 28; Benzow et al. 2023: 33), face many barriers that impact electoral participation. Much of the evidence detailing barriers has come from voting rights litigation (Schroedel and Hart 2015; Tucker, De León, and McCool 2020), as well as from groups, such as the Native American Voting Rights Coalition and the Native American Rights Fund.[12] Academic researchers have identified nine barriers:

1. Intimidation and harassment of Native voters.
2. Shortage of poll workers able to provide culturally appropriate assistance and assist voters with limited English proficiency.
3. Insufficient information due to the digital divide and failure to provide information in American Indian/Alaska Native languages.
4. Unequal registration access.
5. Voter ID laws that require traditional addresses.
6. Purging of voters.
7. Unequal access to polling places, drop boxes, and early voting sites.
8. Extreme travel distances, road impediments, lack of public transit/high cost of gasoline and border town harassment.
9. Problems with voting by mail on reservations, including no residential mail delivery, few post offices, slow delivery times and delivery failures, and ballot rejection rates. Also, voters cannot get assistance in filling out ballots.

Local election officials could build trust by working with tribal leaders to address problems. State governments could assist by providing funding for improved electoral access, accept ID with non-traditional addresses, and allow mail-in ballots to be counted if postmarked by election day. Inequities in mail service are a federal issue.

There is a need for systematic mapping of county level data on locations of drop boxes, early voting sites, polling places, and post offices on and off tribal lands in addition to research on the purging of voter rolls, the lack of Native poll workers, and issues affecting urban Native populations. It is important that research be carried out in collaboration with the affected populations.

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 percent and 20 percent of Americans live in rural areas. Despite this relative minority of citizens, nearly two thirds

[12] *See* Native American Voting Rights Coalition (2018), *Voting Barriers Encountered by Native Americans, in Arizona, New Mexico, Nevada and Arizona.*

of U.S. counties can be classified as rural.[13] 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 has implications for tax revenue, but it also yields fewer workers and diminishing returns on access points for government services. These trends have significant impacts on election administration in rural areas.

Data on the voter experience in rural areas is scarce. Surveys are challenging as rural voters are often the hardest citizens to reach. Even the best available data typically generalize 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, this is far from guaranteed in environments where poll workers and/or election judges are harder to find, and most polling places are significant distances away from home. It is also less likely that rural jurisdictions have translation and multilingual options available. Many rural jurisdictions have limited accommodations for aging populations, including well-documented issues surrounding Americans with Disabilities Act compliance. Rural jurisdictions also have limited options for communicating with voters and historically spend more on print media buys (U.S. Election Assistance Commission 2013).

College Students and Young Adults

The older a registered voter, the more likely the person is to turn out to vote (Leighley and Nagler 2014; Wattenberg 2015; Juelich and Coll 2020). Even in the 2020 general election, with its historically high turnout (McDonald 2022), there was a 25-percentage point gap between the voter turnout rates of 18-29-year-olds compared to those over 60, according to the U.S. Census Bureau.

Theoretically, the adoption of election reforms should enhance young voter turnout. No-excuse, or all-mail voting, should particularly assist young college students, who often live away from permanent residences. However, because students are highly mobile, if they do not update the mailing addresses on their registration records, they may not receive requested vote-by-mail ballots, which are generally non-forwardable. Moreover, younger voters are disproportionately likely to have their mail ballots rejected for lack of timeliness or deficiencies with return envelopes (Baringer, Herron, and Smith 2020; Shino, Suttmann-Lea, and Smith 2022). Since young voters are sensitive to changes in polling locations (Amos, Smith, and Claire 2017), the presence of on-campus, early in-person voting can facilitate college student voting (Shino and Smith 2020), and Herron and Smith (2014) observe that reduced early voting days in Florida adversely affected young voter turnout.

Younger individuals are more mobile than other age groups, and election administrative rules, including registration requirements and ease of registering, vary across states. With this in mind, many reforms aimed at young voters have focused on reducing barriers to portable and pre-registration laws (McDonald 2008; McDonald and Thornburg 2012; Holbein and Hillygus 2016) and same day voter registration (Hanmer 2009; Shino and Smith 2020; Grumbach and Hill 2022). Wolfinger, Highton, and Mullin (2005) find that providing sample ballots and information about polling locations and offering extended voting hours reduced the costs of voting for young voters.

Young voters are less likely to utilize convenience voting reforms (Stein 1998; Southwell and Burchett 2000; Hanmer and Traugott 2004; Neeley and Richardson 2001), and one hypothesis for

[13] There exists significant disagreement across academic disciplines, government agencies, and policy researchers for defining "rural." 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

this is that young individuals have less political knowledge, lower political efficacy, and fewer socio-economic resources than their older counterparts (Plutzer 2002; Juelich and Coll 2020). Even with expanded opportunities, young voters casting vote-by-mail ballots suffer from an "inexperience penalty" (Cottrell, Herron, and Smith 2021), resulting in a disproportionate number of rejected ballots and thus reduced political representation.

Young voters' mobility and varying election rules across states complicate tasks like determining where to vote and how to get there and what forms of identification are necessary (Arceneaux and Nickerson 2009; Dyck and Gimpel 2005; Stein and Vonnahme 2008; Brady and McNulty 2011; Biggers 2021). Moreover, younger voters are disproportionately likely to cast provisional ballots (Merivaki and Smith 2020). Beyond election administration matters, surveys reveal that young non-voters, regardless of college experience, often cite dissatisfaction with candidates or scheduling conflicts as reasons for not voting.

Conclusion

The groups covered in this 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 being prohibited from voting 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.

This paper outlines several best practices for improving voting outcomes among these groups. Many of these practices may also increase the ease of voting among the overall electorate. Beyond the practices backed by current evidence, this paper describes a number of topics that are ripe for partnerships between researchers and election practitioners. Such research partnerships can facilitate outreach efforts to make voting information and opportunities more readily available and accessible. These ideas represent a broad challenge to researchers and policymakers in identifying, devising, and implementing solutions for the variety of barriers that lead to difficulties and inequalities in voting access.

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Response to "Ensuring Voting Access Across the Electorate"

Amanda Gonzalez, *Jefferson County, Colorado*[1]

The paper "Ensuring Voting Access Across the Electorate" provides a thoughtful introduction to the myriad barriers different groups face when voting or generally participating in elections. By highlighting obstacles for people with disabilities, senior citizens, Native Americans, rural residents, and young voters, the authors establish a broad schema for understanding and addressing these challenges. As election administrators, we owe it to our voters to ensure inclusivity and equity, and this paper serves as a useful springboard for such efforts.

One of the strengths of the American election system — its decentralized, state-based administration — also poses a challenge for universal recommendations. For example, while the authors highlight voter registration as a potential barrier "because it relies on paper forms that are not accessible," this generalization does not hold true across the country. For example, in Colorado, only a minority of voters register using paper forms due to robust online and automated voter registration systems. Acknowledging regional differences and innovations in election administration would strengthen the paper's practical applicability.

The paper's approach to merging groups also misses important nuances. For example, combining seniors with people with disabilities overlooks the unique experiences and needs of these populations. While it is true that aging can bring changes to vision, hearing, or mobility, these physical changes do not always parallel the various barriers faced by people with disabilities across their lifetimes. Grouping them together risks oversimplifying the challenges and implications for election access. Moreover, none of the populations covered in the paper are monoliths. For example, young voters include college students, young professionals, and those navigating economic instability, each with distinct barriers to voting. These complexities are understandably difficult to explore in limited space, but their absence underscores the challenge of fully addressing inclusivity in such a broad framework.

The section on Native Americans illustrates this tension. While it addresses critical barriers — such as exclusionary voter ID laws and limited access to polling locations — it does not explicitly clarify that it focuses on those living on reservations. This distinction is significant, as the majority of Native Americans in the United States live outside reservations and may face different barriers such as navigating urban voting systems. The lack of specificity here could lead to misconceptions or overly narrow applications of the recommendations.

Despite these critiques, the paper succeeds as a starting point for practitioners who are beginning to explore inclusive practices. Its framework for identifying and addressing barriers is a useful conceptual tool, and its emphasis on equity aligns with the ongoing need to ensure all voters can participate fully in our democracy. Future work should strive to incorporate more regional nuance, acknowledge the diversity within voter groups, and provide actionable recommendations tailored to specific contexts.

As election administrators, we must remain committed to identifying solutions that reflect the diversity and complexity of our electorate. Papers like this one, while not exhaustive, provide important contributions to that ongoing effort.

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[1] Amanda Gonzalez is clerk and recorder for Jefferson County, Colorado.

Response to "Ensuring Voting Access Across the Electorate"

Jenni Scutchfield, *Kentucky Secretary of State's Office*[1]

In this paper the authors highlight an important and often-overlooked aspect of election administration – access. Too often, election administrators view access from the 30,000-foot level. What Schur, et al. highlight is that election access issues are not one-size-fits-all but rather pose unique challenges to various groups of voters.

This paper examines access issues of four specific groups: elderly and disabled, Native Americans, rural residents, and college students. Relying on statistics and academic findings, the article highlights specific obstacles to voting experienced by each group.

As an election administrator with eight years of experience, I find this work to be very informative. Most election administrators are aware of such issues in an experiential sense. In many regards, practitioners react to legal requirements more than the actual experiences of these voters. However, Schur et al. provide practitioners with a data-driven understanding of what different groups face in accessing the polls. Those obstacles are different. Highlighting this may provide greater clarity to administrators to help us focus on solutions that will not only meet the letter of the law but also be more effective with access interventions.

However, I found the article wanting in a few regards. In many states, elections are actually administered at the local level. In much the same way as access cannot be generalized, improving access cannot be uniformly applied. More importantly, election administrators must deal with limited resources in terms of money, time, and personnel. Matching the availability of resources to access interventions may result in tradeoffs and certainly will look different in different jurisdictions.

Further, while I found the groups identified in the article to be interesting and worth consideration, there are likely more groups not identified here. Hourly workers, for example, likely face different access challenges than salaried workers. Other groups could include low-income individuals, non-English speakers, homeless individuals, people of color, formerly incarcerated individuals, transgender voters, and nonbinary voters. While election officials continually work to improve access to voting, we cannot do it alone.

Nonetheless, this work is an important contribution to the understanding of the nuanced difficulty of election access that many voters face.

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Election Auditing: Mapping Election Administration and Election Science

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ABSTRACT
Election audits are important because they provide evidence for a well-run and legitimate election. We define election auditing and provide examples across different sectors of election administration. We discuss potential research questions and opportunities for scholars and election administrators to partner to create more systematic knowledge around election practices. There is little research on election auditing except as it relates to tabulation audits. Thus, many important research questions remain understudied, and best practices have not been widely established. We discuss research on tabulation audits, and we consider the importance of the key question around sampling for tabulation audits. We also consider issues related to voter privacy, consistency across election data, process audits, communication of audit data with different stakeholders, and audit reporting and storing.

Keywords: election administration, election audits, tabulation audits, postelection audits, election transparency

Election auditing is the process of independently reviewing a process or system to ensure compliance with election laws, policies, and standards. Election audits help ensure the election outcome is reliable and valid by providing evidence that the election is conducted properly, that only eligible voters participated, and that the outcomes are accurate. The foundation of a functioning democracy rests on the trust citizens place in the electoral process. Therefore, audits and auditing should be considered a cornerstone in the complex system of election administration.

While post-election auditing is the most widely implemented audit, election auditing encompasses a much larger theater. Beyond tabulation audits, where research is still in its infancy, research to develop and improve methods to audit other areas of election administration, such as voter registration systems, mail voting systems, poll book systems, and process audits, including logic and accuracy testing, ballot management audits, and in person and mail voting processes, are even more in their infancy.

Audits theoretically promote transparency, security and stakeholder and voter confidence in the election administration process and consequently the legitimacy in the outcomes of elections. At the least, election audits *should* provide evidence to election officials and perhaps stakeholders that

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the election was "trustworthy," meaning that it is worthy of confidence based upon an impartial observer's assessment (Stewart 2022).

If audits are to ensure trustworthy elections, they must be based on rigorously defended standards and reported clearly. Surprisingly, despite the great attention to post-election tabulation audits among the reform community over the past two decades, overall, the research literature into audits is still thin. Standards are still in their infancy and being developed. Implementation has been slow and little of it is documented. Additionally, despite claims made that auditing would increase trust among voters in the accuracy of election results, only a few studies have been done to verify its validity, or to understand which features of audits might be more important to the public. This backdrop highlights the need for collaborations between election administrators and academics to discover best practices that increase trustworthiness and minimize administrative burdens.

Our essay highlights areas where collaboration is essential along with some of the primary questions around auditing. We begin with tabulation audits since much of the research that does exist has been there, and we consider the importance of sample size across different types of audits. We also consider issues related to voter privacy, consistency across election data, process audits, communication of audit data with different stakeholders, and audit reporting and storing.[5]

Post-Election Tabulation Audits

Post-election tabulation audits are the best-known type of election audit. However, tabulation audits take different basic forms including traditional tabulation audits, risk-limiting audits, and machine assisted audits. Within each form, they are conducted using different standards that vary across the states.

Traditional, or fixed-percentage, tabulation audits generally use a predetermined percentage or number of ballots or paper records across ballot types (mail ballot, early, and election day), precincts, or tabulators where a sample of ballots are hand counted and compared to the reported results from those systems (Norden et al. 2010).[6] There is a great deal of variation and nuance across the states in terms of sample sizes. As far as we can tell, these differences are not based on a rigorous set of standards. Instead, it appears that policy diffusion in this area has followed from what other states do and what seems "reasonable" to be accomplished in a state. Therefore, research into the optimal auditing regime for fixed-percentage audits would be valuable.

A risk-limiting audit (RLA) is a post-election tabulation auditing procedure that provides statistical assurance that voting hardware and software produced the correct winners.[7] RLAs involve reviewing portions of the audit trail – voter-verified paper records – to identify and correct any erroneous electoral outcomes. Risk-Limiting Audits (RLAs) assess a random sample of all ballots cast. The number of reviewed ballots increases incrementally until a predetermined "risk limit" – the highest statistical probability that the audit will not correct an incorrect outcome – is met or election administrators conduct a full recount. The number of ballots that must be hand-counted is a function of risk limit, vote margin, RLA method and (weakly) contest size. Lower risk limits entail examining more ballots, as do closer elections (Lindeman and Stark 2012; Stark 2018). RLAs, by design, escalate to a full hand count to review the election if the risk limit is not met, ensuring the accuracy of the machine count.

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[5] We cover additional topics and much more detail in our complete essay available at Alvarez et al. (2023).

[6] Some states allow for other electronic audits within this framework including retabulating on their own voting systems. These types of audits are problematic because they use the same voting system for the retabulation, which may not reveal programming errors or issues in the adjudication of marginal marks.

[7] For a good overview of risk-limiting audits see Morrell (2019a,b,c,d), Lindeman and Stark (2012), and NCSL (2022).

The last type are transitive audits or double tabulation audits. According to the EAC (2022:13), transitive audits are retabulation audits that digitally rescan ballots on a different voting system or tabulator, and the results of the two systems are compared. The ballots are first tabulated on the official tabulator used to record final votes and then run through a second tabulator from a different manufacturer with different hardware and software to confirm the vote totals. The EAC suggests that if both systems report the same election outcomes it provides evidence the outcome is correct, even if it finds some discrepancies across systems. In this case, the post-election audit relies on the independence of the tabulation system's software and hardware to demonstrate the veracity of the outcomes, not human confirmation.

Research on the implementation, performance, and impact of tabulation audits is scant. Regarding implementation, because of the variation in methodology, we need to take some very basic steps to describe the processes election jurisdictions use to conduct and report data from post-election audits. Moreover, despite the theoretically public nature of tabulation audits, recent research suggests that only twenty percent of states and jurisdictions make data from the audits available in usable form for the public or researchers to examine (Jaffe et al. 2023). If data are not available for review, or easy for voters to interpret, it cannot impact public confidence. Therefore, research on how to report and increase public information around audits is critical. Finally, we need to understand how tabulation audit information impacts voters.

Ballot Images, Cast Vote Records, and Ballot Privacy

Ballot images and the cast vote record (CVR) data can provide great value for independent and third-party auditing and are types of data that are generated as a by-product of the election. From these data types, researchers can reconstruct many important quantities associated with election outcomes. However, releasing ballot images and CVRs also has potential downside especially around ballot privacy, which is a fundamental value in a democracy and is a feature of election integrity. If ballot images are going to be released, we need to come up with cheap and easy methodologies to remove ballot marks that could be voter identifying and allow for voter coercion (Atkeson et al 2023). In addition, more research needs to be done on questions about ballot privacy. Currently states rely on arbitrary rules that do not protect ballot privacy. Better rules need to be developed that are evidence based.

Determining Sufficient Sample Sizes in Election Audits

Determining an appropriate sample size has been a longstanding issue as it relates to election audits. Traditional tabulation audits primarily use a predetermined number of ballots to compare against result reports from the voting system. But these tend to be arbitrary, appear to be related what election administrators think is doable, and what other state states are doing. Therefore, studies need to ask and answer important questions about sample size for these and other types of audits we discuss. These questions become even more challenging when we begin to think about other types of pre- and post-election process audits beyond tabulation audits such as voter registration files or provisional ballot applications. How can election administrators determine a sample size that is appropriate for the type of audit being conducted?

Voter Registration Files, Absentee Registration Files, and Election Day Files

Voter registration databases are another area where we have seen a small amount of research. Registration information can also be used to confirm the integrity of an election, thus serving as an

important component of election security. As in other areas, some important descriptive work is necessary to identify what auditable documents are available for review and for research? Voter registration systems also need to be audited for their accuracy. We also know virtually nothing about the relationship between different election files and the systems used to keep track of in-person and mail voters. These systems should be audited for consistency and accuracy and how they can inform the election integrity process including increasing trust and confidence.

Process Audits

The election process generates an abundance of system level data throughout the election (Alvarez et al. 2012). Process audits review election procedures and allow election administrators or third parties (e.g., academics, auditing firms, canvass boards) to examine equipment and procedures to ensure the rules, policies, and laws are applied correctly and efficiently. These include logic and accuracy testing, ballot management, in-person voting, and mail voting. Process audits can help to ensure trustworthy elections and, therefore, are essential and need more research. In general, we have little systematic knowledge about these processes or the administrative documents they produce.[8] Therefore, research into them and what can be done to improve them would be particularly useful to election officials. Central questions include:

- What processes are audited?
- How are these audits conducted?
- What data, both paper and/or digital, are generated from these types of audits that could be provided to researchers?
- What are the consistencies and differences do we see across states around these audits?
- How can or do these audits influence confidence in stakeholders?

Audiences

The study of election administration is a multidisciplinary and interdisciplinary field. Given this backdrop, it is important to understand that there are multiple audiences to consider especially when research is focused on broader process and compliance audits. Therefore, election administrators and researchers need to consider who are the consumers of the information an election audit produces, what types of information different groups of people might need, and how best to disseminate that information to them. Further, it is useful to understand who might help to validate the results of the audit? In other words, who are the trusted officials or figures that can vouch for the accuracy and integrity of the process?

Audit Reporting and Curation and Data Requirements

To fulfill the expectations of audits, audit results need to be reported clearly and made widely available. Greater transparency of audit results and data will require a multi-pronged approach. Research on best practices for reporting across jurisdictions within a state, producing greater intrastate uniformity is a start, but the goal should also be some sort of interstate uniformity at least in terms of key variables or key data available for review. Second, to the degree that audit results are

[8] The Elections Group outlines some of those administrative documents that are produced and needed for various process audits in the Part Two series of guides. https://www.electionsgroup.com/exploring-audits-series

a local-government function, local election officials need the capacity to report those results. Beyond the more established post-election tabulation audits, data release and availability for other areas of concern may implicate voter privacy and security. In these cases, data sharing agreements may need to be developed for third-party auditing. One related research problem regards the development of appropriate means for retention and long-term storage of both auditing reports as well as the materials and data that are behind them.

Conclusion

Our essay is meant to map out (1) the state of the field, (2) important empirical claims about election auditing where there is consensus about best practices, and (3) where future research in the field should be directed. The fact is that we know little about election auditing except as it relates to tabulation audits and even then, from a research standpoint there are still many questions to answer, much of the research is still in its infancy with developing standards, and best practices have not been widely established. Election audits are important because they provide evidence for a well-run and legitimate election. Yet, voters, stakeholders, researchers, and even election officials may not have looked at many of these processes to determine how they help ensure a trustworthy election.[9]

Therefore, when we consider the entire election ecosystem, there are many opportunities for election administrators and academics to work together to create broader transparency around election audits, define how they contribute to the evidence for a trustworthy election, and how this information can successfully be transferred to the public, candidates, and other stakeholders.

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Response to "Election Auditing: Mapping Election Administration and Election Science"

Katie Smith, *Minneapolis, Minnesota*[1]

The topic of election auditing is especially relevant given the current political climate and public focus on election administration. The 2020 election and subsequent distrust thrust onto the profession spotlighted administrative elements of elections that were historically behind the scenes. In the years that followed, interest in logic and accuracy testing and post-election tabulation equipment review have become familiar concepts within public understanding of how elections are run. I appreciate that the article explores and expands upon the definition of "audit" into processes beyond these more commonly understood equipment performance audits. The call for additional research to understand the public perception of audits as well as the call for standardization of auditing methods and reporting are valuable in administration. Additional detail on public perception will be useful data in election communications. Standardizing auditing methods will be useful in defining and establishing best practices.

The article's treatment of voter registration files does not fully account for states with election day registration (EDR), where voter registration is continuously updated rather than being static. This unique characteristic poses challenges for auditing and may require different approaches compared to states with pre-election registration cut-off dates. Understanding how to audit dynamic voter rolls in these states would add depth to the research.

Conceptually, the definition of audit applies to a number of elections procedures wherein administrators of elections are performing daily ballot accounting audits, postal-verification audits of voter registration, ballot layout and design audits, polling site set-up audits, etc. It would be interesting and relevant to have a comprehensive list and discussion of these procedures that are rooted in daily process. I appreciate that this article delves into some of these subsets and the inherent description of an audit itself. Knowing that some states have post-election audits administered by their state agency, an understanding of what is being reviewed internally within jurisdictions when it comes to process and procedure would contribute to best practices when it comes to these smaller task-based audit processes.

Finally, election administration is delegated, depending on the state, to a specified jurisdiction of government. The fact that administration is housed in a governmental department often subjects election administrators to jurisdictional audits of process, procedure, fiscal responsibility, key performance indication, etc. An understanding of motivators in these audits could help administrators when there are competing best practices between the professional standards and the jurisdictional processes. Also, vice versa, a clear understanding of professional standards in election audits could be used to establish clearer and better-defined auditing procedures of the governmental department versus a standard audit of performance based on jurisdictional goals and processes.

The article offers a valuable framework for understanding election auditing, and there is room for further exploration of the complexities involved. Expanding the definition of audits to encompass more than just tabulation reviews is a significant step toward a more comprehensive understanding of election administration. Examining task-based audits and considering the interaction between professional standards and jurisdictional processes would help establish more

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robust and standardized auditing practices. This article lays an important foundation, and future research can deepen our understanding of audit processes and their contribution to transparent election systems.

Response to "Election Auditing: Mapping Election Administration and Election Science"

Bailey Kelley, *Iowa Secretary of State's Office*[1]

Election administrators always look for ways to improve and innovate processes, including audits. After all, in Iowa, the role of commissioner of elections is performed by the county *auditor*. Auditing not only is a crucial part of how election officials demonstrate to the public how safe, secure, and accurate our elections are, but also helps us sleep at night knowing that our work was done correctly. The suggestions in this article speak to both sides of that coin – understanding *why* and *how* we know the election came out correctly and how best to communicate findings to the public to bolster confidence in the democratic process.

At the state commissioner of elections' office, it is our responsibility to provide guidance to local jurisdictions on best practices and make requests of state legislators to pass new laws. More robust quantitative and qualitative studies and experiments would support both of those goals. Yet, the current landscape means we rely primarily on learning about current practices in other states or borrowing methods from other areas of government, business, and academia. I especially appreciate the authors' suggestions to the research community to investigate different kinds of audits at different points in the election process and to ask multiple questions about them. Iowa undertakes many processes that classify as audits in this article, but that is not necessarily how we think of them.

At the same time, there are dozens, if not hundreds, of research projects that would be required to answer all the questions posed in this article. For example, how does the method selected for logic and accuracy testing inform the method of tabulation auditing? Do different methods of tabulation audits work better based on the size of the jurisdiction? What are the various models for legislating and implementing various audit systems in both "top-down" and "bottom-up" states? If it is true that the existence of various auditing procedures has no effect on voter confidence, what are the benefits beyond our own peace of mind? Or, what kind of public campaigns would more effectively communicate the goals and ultimate results of these audits?

Once defined case studies, experiments, and analyses begin to answer similar targeted questions, election administrators will need help interpreting results; determining how to put their takeaways of this new knowledge into practice; and "selling" these practices to other election officials, state legislators, and – most importantly – voters. I believe organizations and nonprofits that already bridge the gap between election officials and academics would be the perfect factory for taking the raw materials of academic research and distilling it into white papers, infographics, and toolkits. These consumables would allow the election officials to determine what best fits their priorities and goals, implement new or best audit practices, and communicate achievements to the public. Election administrators highly value the collaborations they have with both academic researchers and nonprofit organizations but rarely have the capacity to turn those insights into actionable steps without the help of approachable and applicable information.

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Ballots and Booths: Best Practices for In-Person Voting

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ABSTRACT
In-person voting is the most common method of voting in the United States. The national prominence of in-person voting has led much of the research in election administration to focus on this mode. In this paper, we synthesize the extant research on in-person voting, focusing on best practices for polling location siting and layout, wait times, voter check-in processes, and ballot design. Our discussion includes the significance of distance between the voters' residences and polling locations, importance of efficient polling place layout, use of electronic poll books, and necessity of ballot design that considers voter cognitive limitations, aiming to reduce voting errors and increase satisfaction. The research demonstrates persistent disparities in voting experiences across racial and ethnic groups, suggesting the need for accessible, equitably distributed voting locations, and increased resources in precincts with majority non-white populations or a history of long wait times.

Keywords: in-person voting, elections, polling place, ballots, vote centers

In-person voting is the most common voting method in the United States, and voters generally have a positive experience at the ballot box. However, poor voting experiences, especially long wait times and confusing voting equipment or instructions, are associated with lower levels of voter satisfaction

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and lower trust in election fairness (Stein et al. 2008; Hall, Monson, and Patterson 2008; Stein and Vonnahme 2014; Alvarez, Cao, and Li 2021), and can decrease the likelihood that voters cast ballots in subsequent elections (Pettigrew 2021). The national prominence of in-person voting has led much of the research in election administration to focus on this mode, and the research has identified some best practices related to the location and operation of polling places, the voter check-in process, and ballot completion. In this paper, we review the research relevant to in-person voting and recommend additional best practices for election administration based on the extant research and identify areas for future research.

Polling Locations

In-person precinct voting requires individuals to travel to an assigned location to cast their ballot. Election officials should work to minimize the distance voters have to travel in order to vote. The distance from a person's residence to their assigned polling location has been shown to have a significant effect on the likelihood that an eligible voter will cast a ballot (Dyck and Gimpel 2005; Gimpel, Dyck, and Shaw 2004; Haspel and Knotts 2005; Tomkins et al. 2023; Bitzer, Dukes, and Cooper 2023). The strongest evidence to date that distance matters to turnout for in-person voting is Cantoni's (2020) rigorous test of the distance hypothesis, which finds that a quarter-mile increase in distance to the polling place reduces the number of ballots cast by between 2 to 5 percent, which translates to a one to three percentage point decrease in turnout. Cantoni finds this negative impact is concentrated disproportionately in areas with a high number of voters of color, especially in lower-turnout non-federal elections.

Local election officials should establish a maximum distance for voters to travel when possible. Cantoni's (2020) findings indicate that limiting travel to one mile mitigates negative turnout effects of distance from polling locations, especially in non-white areas. However, this may not be feasible in smaller jurisdictions, rural areas, jurisdictions that utilize vote centers, or due to budget constraints. To assist with finding locations, Abbasi et al. (2023, 1038) have developed an algorithm "that can reduce these disparities by suggesting new polling locations from a given list of identified public locations at a state level." The algorithm can be adjusted for different distances to accommodate costs and available venues for polling locations. Additionally, the University of Southern California's Center for Inclusive Democracy (2024) has created a Voting Location and Outreach Tool that is available for counties and municipalities in 14 states. Using a facility allocation model, this online tool can help election officials identify equitably sited polling places and vote center locations that best serve the needs of all voters within a jurisdiction.

Prior voting behavior should be considered when determining the size and location of polling places, especially if changes in polling locations are being considered. Research shows that changing the locations of polling places can reduce election day turnout, especially if the distance required to travel increases (Amos, Smith, and Ste. Claire 2017; Clinton et al. 2020; Romero et al. 2021). The negative effects are even larger for those who are non-white, especially Hispanic (Amos, Smith, and Ste. Claire 2017) and Black (Romero et al. 2021) voters, though these negative effects may be offset by offering early in-person voting (Clinton et al. 2020). Having information on the voters' social and demographic traits may also help determine if polling locations should be placed on major arteries that are accessible by public transportation, and what types of accessibility issues may arise inside and outside of the polling location.

Using prior information for precincts can help determine how much space is needed inside the voting location to accommodate the expected number of voters as well as how much parking may be needed. This could be especially important if election day vote centers (EDVCs) are being

used. When done well, EDVCs result in higher voter turnout (Stein and Vonnahme 2008); however, when done poorly, the result is lower voter turnout, longer lines waiting to vote, and voter dissatisfaction (Montjoy 2008; Chen, Sadeghpour, and Lamb 2021; Yang 2024). While implementing EDVCs can reduce the number of rejected provisional ballots, recent research shows that successful implementation requires coordination with many elements of the election ecosystem (Manion et al. 2023).

Polling places should be configured and laid out efficiently to increase the usability of the complete voting system and create positive perceptions of the voting experience for voters. McCool-Guglielmo et al. (2022) find that the layout method and path directionality have a significant effect on average voter travel distance within the polling place. Evaluations of election performance could be impacted by considering layout and designing more efficient in-person voting setups. The placement and configuration of voting booths within the polling location are crucial to these perceptions. Space between voting machines, dividers or screens around the voting booths, and laying out booths so that voters do not face one another all significantly increase levels of "anticipated voting systems usability" (Acemyan and Kortum 2016). These findings buttress other research that shows that trust in voting systems is significantly enhanced by their usability (Acemyan and Kortum 2012). There are very few studies about how the physical layout of the polling place varies across jurisdictions, and more research is needed to implement analytical methods, allowing improvements in the design of the internal layout and flow of polling locations (Stewart and Ansolabehere, 2015).

Wait Times and Checking in to Vote

An essential question in the field of election administration is how long is too long to wait to vote. Long lines, wait times, and technical difficulties deter people from voting (Bernardo and Macht 2022; Stein et al. 2020; Pettigrew 2017; Pettigrew 2021). The Presidential Commission on Election Administration (2014) recommends keeping wait times under 30 minutes to reduce negative experiences and prevent voters from leaving (reneging or balking). When considering the volume that polling places should prepare for, studies of polling places have established that aggregated arrival patterns across a jurisdiction are bimodal, with peaks in arrivals in the morning and the afternoon (Edelstein 2006; Yang et al. 2014), although other studies have found subtle differences in these peaks based on location (Bernardo, King, and Macht 2022; Yang et al. 2014; Olabisi and Chukwunoso 2012).

Most importantly, all voters do not experience the same wait time. Black and Latino voters wait longer in line than white voters (Stewart and Ansolabehere 2015; Klain et al. 2020; Pettigrew 2017), and voters in densely populated areas wait longer than those in sparsely populated areas (Pettigrew 2017). In-person voters in jurisdictions that include a high number of vote-by-mail voters experience shorter wait times (Bryant, Manion, and Kimball 2024). Negative voting experiences have far-reaching impacts that carry over to lower turnout in subsequent elections, disproportionately for underrepresented and infrequent voters. To decrease wait times in precincts with a majority of non-white populations and in those with a history of long wait times, it is recommended that additional resources are allocated and optimized for effective voter flow in those jurisdictions as needed (Klain et al. 2020; Pettigrew 2017). Voting equipment and voting methods can also impact wait lines. A recent study finds longer wait times for paper-based voting process than alternative processes when controlling for the quantity of voting equipment (Wadowski et al. 2024). The study further demonstrates that wait times compound as turnout increases if resource allocation is not adjusted; however, increasing the number of available voting stations in the paper-based voting process by

one reduces wait times by 26.38 percent, reinforcing the importance of resource allocation for reducing wait times, and thus impacting voter confidence and turnout.

One approach that is touted to reduce waiting times is using electronic poll books (EPBs), which are used to check in voters in 40 states (EAC 2020:1; EAC 2023), instead of paper poll books. EPBs are best facilitated when utilizing the magnetic strip on a driver's license (Stein et al. 2020; Hostetter 2022). Many jurisdictions have installed card readers in their EPBs so that driver's license information can be more quickly entered and processed. The use of EPBs reduces wait times, provided that there are a sufficient number of terminals at each polling place (Bernardo, King, and Macht 2023; Yang 2024), but this effect may be limited to polling locations at which whites but not non-white voters cast ballots (Stein et al. 2020; Hostetter 2022). This finding may be explained by the strict voter ID some states require to vote, as voters of color are less likely to have access to acceptable photographic identification (Henninger et al. 2021), and those voting without ID are disproportionately Latino and Black (Fraga and Miller 2021).

The use of photographic voter identification requirements has disparate effects on the time to check in polling places that serve majority white communities and those that serve communities of color. In majority white polling places, scanning a voter's driver's license speeds up the check-in process. In polling locations in communities of color, strict voter ID requirements modestly increase the time to check in (Stein et al. 2020). This may be due to a larger number of Black and Latino voters who do not have a scannable driver's license. Furthermore, even a few voters without scannable voter IDs can slow down check-in times. One anecdotally reported solution is to have check-in stations for people without a scannable voter ID and/or provide voters with information about the need for a scannable voter ID before and after they arrive at a polling location.

Another important aspect of voter ID laws is their implementation at polling places. There is evidence that poll workers exercise their own discretion in requiring IDs. Poll workers in low-income precincts are more likely to ask for ID, and poll workers are more likely to ask voters of color for ID than white voters (Ansolabehere 2009; Barreto et al. 2009; Atkeson et al. 2010). Thus, it is crucial to recruit capable poll workers and invest in quality, hands-on training that includes ID requirements to minimize problems at polling places and ensure requirements are equally enforced.

Recording of Voter Choices

In-person voting is conducted on a wide variety of voting technologies ranging from pencil-and-paper ballots to direct recording electronic devices (DREs), and ballot marking devices (BMDs). Voters have historically struggled with complicated and unfamiliar ballots. It is vital to design voting technologies that recognize the cognitive limitations of voters (Kortum and Byrne 2016). The infamous butterfly ballot that plagued the Florida 2000 presidential election is an extreme example of how the design of voting technologies can interfere with voters accurately recording their preferences.

DREs have begun to be phased out, typically in favor of BMDs, a hybrid system with a touch screen where the voter makes selections and then a printed ballot with those selections is scanned by a tabulator. Although BMD systems ultimately produce a paper ballot, which can be verified by the voter and used in a recount or audit as an independent check on the results, there is some doubt about the ability or willingness of voters to verify that the paper ballot accurately reflects the choices they made on the screen. Some studies suggest a low success rate (Bernhard et al. 2020) while others indicate a higher success rate (Kortum, Byrne, and Whitmore 2021). The main challenge lies not in the voters casting their ballots but rather in their capacity to detect and address issues with their ballot after it has been printed (Appel, DeMillo, and Stark 2020). Because millions

of dollars are currently being spent on the acquisition of BMD systems, the issue of error detection by users of these devices is critical and deserves more rigorous study by researchers with expertise in cognitive ergonomics.

One means of addressing the detection of ballot errors is to reduce ballot errors that arise from improper ballot design. Studies that investigate ballot characteristics consider the complexity of *ballot language* (Milita 2017; Niemi and Herrnson 2003; Laskowski and Redish 2006; Reilly and Richey 2011); *graphic design principles*, e.g., the use of bolding, shading, positioning of questions and candidates (Kimball and Kropf 2005); and *ballot format,* e.g., bubble ballots, connect the arrow ballots, punch-card ballots, digital ballots (Herrnson, Hanmer, and Niemi 2012; Bullock and Hood 2002; Everett, Byrne, and Greene 2006; Alvarez, Beckett, and Stewart 2011; Ansolabehere and Stewart 2005). Recommended ballot design features, including writing instructions in short and simple sentences, listing candidates for the same office in a single column, limiting extraneous text near ballot choices, and applying graphic design principles, reduce the frequency of overvotes and other voting errors and increase voter satisfaction (Everett, Byrne, and Greene 2006; Reilly and Richey 2011; Herrnson, Hanmer, and Niemi 2012; Norden et al. 2012; Acemyan et al. 2015; Acemyan and Kortum 2017; Bernardo, Pearson-Merkowitz, and Macht 2021). Recommended ballot features also tend to substantially reduce voting errors for racialized minority groups (Tomz and Van Houweling 2003; Herrnson et al. 2008; Herrnson, Hanmer, and Niemi 2012; Kropf and Kimball 2012). The Center for Civic Design (2018) has created a guide for designing usable ballots[7] and a Usability Testing Kit[8] that local election officials can use for evaluating their ballot design.

Americans are asked to vote on more offices and ballot measures than just about any other country, which increases the cost of voting and gathering information about the ballot choices – a feature linked to low voter turnout (Lijphart 1997). In the face of a lengthy and complicated ballot, voters may reduce their time reading carefully and ensuring they select their choices correctly, particularly on contests they know little about (Selb 2007; Seib 2016). Thus, a more complex ballot, both in length and question type, tends to increase voting errors (Bernardo, Pearson-Merkowitz, and Macht 2021). While more complex ballots increase the voter's ability to participate in democratic governance, the increase in voting errors can lead to long wait times, voter disenfranchisement, and low voter confidence (Ansolabehere and Shaw 2016; Everett, Byrne, and Greene 2006). Finally, while in-person voters usually can correct errors if they insert their ballot into a scanner, a centrally counted ballot with marking errors has little to no opportunity to be corrected (Alvarez, Katz, and Pomares 2011; Kropf and Kimball 2012). There are important ways in which voting equipment and polling place operations influence the ability of voters to cast a ballot without errors.

Conclusion

This paper highlights the multifaceted challenges of in-person voting and focuses on the best practices identified over decades of research, emphasizing the need for efficient and equitable practices. Decisions about the number and location of polling locations should consider how changes in polling location, public transportation, available parking, and voters' social and demographic traits affect voters' access to polling locations. Local election officials should establish a maximum distance for voters to travel, keeping the distance at one mile or less when possible (Cantoni 2020), and should strive to keep wait times under 30 minutes to reduce negative

[7] https://civicdesign.org/fieldguides/

[8] https://www.electiontools.org/tool/usability-testing-kit/#getting-started

experiences and prevent voters from leaving (Presidential Commission on Election Administration 2014).

Interventions to mitigate long lines include decreasing the length of ballots, increasing the functionality of EPBs to check in voters, applying queuing theory, and optimizing the layout of polling places (Stewart and Ansolabehere 2015; Pettigrew 2017; McCool-Guglielmo et al. 2022). Recommended ballot design features to reduce voting errors and increase voter satisfaction include instructions written in short and simple sentences, the use of shading and boldfacing, and limiting extraneous text near ballot choices (Center for Civic Design 2018; Norden et al. 2012; Acemyan et al. 2015; Bernardo, Pearson-Merkowitz, and Macht 2021). When making these decisions, it is important to remember that research demonstrates persistent differences in the in-person voting experience by racial and ethnic groups. Jurisdictions should prioritize accessible and equitably distributed voting locations and increase resources, as needed, to precincts with majority non-white populations and/or a history of long wait times (Klain et al. 2020; Pettigrew 2017). The findings suggest that implementation of best practices and conducting additional research are essential for optimizing in-person voting and ensuring fair and accessible voting for all.

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Response to "Ballots and Booths: Best Practices for In-Person Voting"

Howard M. Knapp, *South Carolina State Election Commission*[1]

As the executive director of the South Carolina State Election Commission and chief election official for the state, I appreciate this insightful article's detailed examination of in-person voting. Below, I offer my perspective on its strengths and areas for further exploration.

Strengths and Practical Applicability

1. Focus on Access and Equity: The article's emphasis on improving accessibility and addressing disparities in polling place quality resonates with our priorities in South Carolina. The acknowledgment of disparities faced by nonwhite and low-income voters is critical. South Carolina's adherence to American with Disabilities Act standards, curbside voting, and detailed training for poll workers, as outlined in the Poll Manager's Handbook, aligns with the need to ensure equal access.
2. Recommendations for Polling Layout and Design: The emphasis on efficient polling place layouts is directly applicable. South Carolina's guidelines for placing ballot-marking devices (BMDs), which ensure voter privacy and optimize traffic flow, already address many of the concerns highlighted in the article. Suggestions like using location siting tools for better polling site selection are areas we are eager to explore further.
3. Emphasis on Wait Times: Maintaining voter wait times under 30 minutes is an achievable goal and aligns with our policies, such as deploying additional BMDs during elections that can reasonably be expected to garner higher turnout. The recommendation to adopt queuing theory and predictive models could enhance resource allocation and ensure smoother operations during elections.
4. Poll Worker Training: The call for enhanced training to standardize the implementation of voter ID laws is pertinent. South Carolina's comprehensive training programs for poll managers, including how to handle voter ID requirements, already reflect this need. However, additional research to identify best practices in training could benefit all jurisdictions.

Areas for Improvement and Further Research

1. Data Collection and Utilization: While the article emphasizes the need for better data collection, it could delve deeper into practical methods for jurisdictions with limited resources. South Carolina's use of electronic poll books (EPBs) has improved efficiency, but challenges remain in integrating real-time data to adjust resources dynamically.
2. Research on Election Day Vote Centers: Although South Carolina uses precinct-based voting, per state law, the exploration of election day vote centers could provide valuable insights into voter behavior and turnout, especially in urban areas. Studies on their potential impact on wait times, turnout, and poll worker efficiency would be beneficial. When state laws were temporarily adjusted in the 2020 general election to answer concerns raised by COVID-19, the state had what

[1] Howard M. Knapp is executive director of the South Carolina State Election Commission and serves as the chief election official for South Carolina.

were essentially election day vote centers in a few urban locations. From what I recall, they worked, and voters were pleased.

3. Universal Polling Place Standards: The lack of universal guidelines for polling place layouts is a gap that merits attention. While South Carolina has developed state-specific protocols, national standards could promote consistency and facilitate interstate collaboration during federal elections. This is particularly important as we enter a time where fewer and fewer schools, libraries, and churches – typically the most-used locations for polling places – are volunteering their properties to be polling places on election day.
4. Voter Confidence and Paper Ballots: The article's finding that paper ballots boost voter confidence aligns with South Carolina's use of ballot-marking devices, which produce a verifiable paper trail. Further research into how this impacts voter perceptions across diverse demographics could be valuable. This was of import after the 2024 election when we had a protest of a state senate race after significant irregularities were found in the mandatory recount of the contest. Only through having physical ballots, along with cast vote records for those ballots, was my agency able to determine the cause of the discrepancies.

Cherry-Picking Concerns

Some conclusions, particularly those citing disparities in ID law implementation, appear heavily reliant on limited datasets or studies. More comprehensive and geographically diverse research could enhance the validity of these findings and their applicability across varying jurisdictions.

Recommendations for Future Research

1. Impact of Real-Time Data Analytics: Research on how election officials can leverage real-time data to make decisions on election day, such as reallocating resources to high-traffic polling sites, could transform in-person voting operations.
2. Behavioral Insights: Understanding voter psychology, especially what drives reneging or balking in line, can help develop targeted solutions to improve the voter experience.
3. Standardized Training Modules: The development of universally recognized poll worker training modules, tailored to address voter ID law implementation and equity, could enhance election integrity nationwide. This is something we are developing in South Carolina as one of the only state election offices with a statewide training division.

Plausibility of Recommendations

The article's recommendations are largely feasible and align with existing practices in South Carolina. However, their implementation may vary significantly depending on resources, jurisdiction size, and local policies. For instance, establishing polling places within one mile of every voter could be challenging in rural or resource-constrained areas.

Conclusion

The article provides a solid foundation for improving in-person voting. While many of its recommendations are directly applicable to South Carolina's election framework, expanding the scope of research and ensuring inclusivity in data collection will strengthen its relevance to all election jurisdictions.

Response to "Ballots and Booths: Best Practices for In-Person Voting"

Alex Stanton, *Johnson County, Iowa*[1]

I was excited to read "Ballots and Booths: Best Practices for In-Person Voting," as this is an area of interest for all elections offices, especially my own in Johnson County. As I read the article, I saw some things I feel are good but also some universal suggestions that might be harder to execute based on legal limitations, funding of the offices, etc. Moreover, I think there are current research subjects that could really give this article some more teeth and dive deeper into the areas in which I know most offices are interested.

As election administrators, we are busy, overworked, and understaffed. When it comes to recommendations for how we can improve the experience for voters, we like to have solid suggestions based on evidence. I think this paper does a great job of that when it comes to polling place distance, ballot layout and configuration, and voter identification. Evidence is clear, and the impact it has on voters – particularly those of color and with disabilities, who are already less likely to turn out– is demonstrated. I appreciated those points and am excited to look into areas we have not already examined. The polling place distance, ballot layout, electronic pollbooks, and identification research is clear, and any jurisdiction can look into these issues right away.

Where I believe the paper falters from an election administrator perspective is when discussion gets into uncertainty about administrators' efficacy, particularly when it comes to vote centers and best layouts for polling places. As you recognize in the report, it is really difficult, if not impossible for most jurisdictions, to collect data in the field. Factors like voter confusion and budget limitations constrain our abilities to test new strategies for polling places or vote centers. While some places have to be guinea pigs if any data are to be collected, many offices cannot do anything with the data until we get more consensus on these issues.

Finally, I think this article could benefit from one or two more general election cycles of research before the breakdown between election day voting and early voting can be determined. The 2020 election cycle was obviously an anomaly because of COVID-19, but 2024 also saw a general softening of Republican skepticism of early voting and a bigger increase in early voting than we had in 2016, 2018, and 2022. Is this a trend that will continue? Does the general uptick in election day voting return in future elections? It might be useful to wait and see what happens, if for no other reason than to provide more insight about early in-person voting versus election day voting. I am just not sure if we have found a definite pattern yet.

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Vote-by-Mail in the United States

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ABSTRACT
Voting by mail (VBM) has become increasingly prominent in the United States, particularly following the 2020 election, which intensified partisan debates over its security, accessibility, and impact on voter confidence. This study provides a comprehensive review of the literature on the expansion, administration, and effects of VBM. Drawing on existing research, we examine the historical growth of mail balloting, its implementation across states, and its implications for voter participation and election security. The literature indicates that VBM enhances accessibility, particularly for elderly and disabled voters, and can modestly increase turnout, especially when ballots are mailed automatically to all eligible voters. However, concerns persist regarding ballot rejection rates and partisan divides in trust toward VBM. Our study highlights the need for further research on administrative policies, equity in ballot processing, and the broader consequences of mail voting on electoral participation and public confidence in elections.

Voting-by-mail (VBM) has tripled in use since 2000. Mail ballots were 50 percent of ballots in 2020 and 33 percent of ballots in 2022. The tenor of public discussion over VBM prior to 2020 was moving toward widespread acceptance or more generous mail voting policies. Debates that erupted following the 2020 election make it unclear whether partisan divides in usage rates and in public trust about VBM are an ongoing issue.

In this article, we document the growth of mail balloting and detail the unique administrative arrangements associated with this method of voting. VBM has become the primary method of voting in many parts of the country and an important method for maintaining access for many vulnerable populations who face difficulties getting to polling places. There is limited research studying how VBM administrative decisions promote participation, balance security and access, increase confidence, and reduce costs. We discuss opportunities for administrative innovation and research partnerships. Readers interested in more extensive treatment of these topics are encouraged to read the Gronke et al. 2023 white paper.

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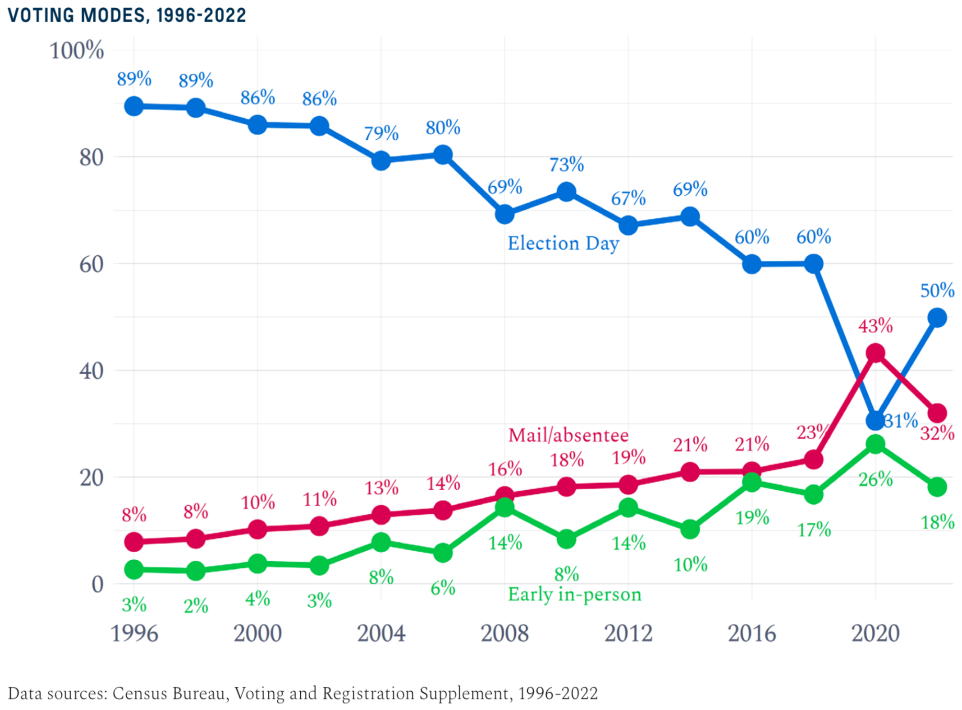
[5] The authors want to acknowledge the support of EVIC's senior program advisor Michelle M. Shafer who provided vital support and feedback on this paper.

What is Mail Voting, and How Did We Get Here?

"Vote-by-mail" and "absentee voting" are umbrella terms that encompass at least four distinct, legal, regulatory, and administrative regimes: excuse required absentee, no excuse required absentee, universal voting-by-mail, and voting under the Uniformed and Overseas Citizens Absentee Voting Act (UOCAVA) (Ballotpedia n.d.; National Conference of State Legislatures (NCSL) 2022).[6] Our primary focus here is no excuse and universal VBM.

Figure 1: Voting by Mail and Other Voting Modes, 1996-2022.



Data sources: Census Bureau, Voting and Registration Supplement, 1996-2022

Source: Stewart (2023)

As of July 2022, 27 states and Washington, D.C., offer no excuse absentee voting, which means any voter can request and cast a VBM ballot, without an excuse (NCSL 2022). In eight states, every registered voter is sent ballot materials,[7] and differing proportions return the ballot by mail, use a drop box, or drop the ballot at a staffed drop-off location (options vary by state).[8] The remaining 15 states require a voter to provide an excuse to qualify for a VBM ballot.

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[6] In the pandemic election of 2020, some states innovated by sending no excuse absentee ballot applications to all eligible citizens on the rolls. This may merit the VBM designation but was unique enough that we do not list it here.

[7] California, Colorado, Hawaii, Nevada, Oregon, Utah, Vermont, and Washington

[8] NCSL describes these eight states as "all-mail" or "vote by mail," but we are not certain that this is the right term because over half of ballots in most of these states are not returned by mail, and in some states, there remains significant levels of in-person voting. For example, both California and Colorado (and potentially other states) have "vote centers" that provide in-person election services. In their respective voter files from November 2022, 9 percent of California ballots are coded as VCR (vote center), 2.5 percent are coded as "POLL," and 4.5 percent of Colorado ballots are coded as cast using one of two "IN PERSON" methods.

Non-precinct place voting has grown dramatically in the United States. As shown in Figure 1, election day voting totaled less than one third of all ballots cast in 2020 and one half of all ballots cast in 2022. The usage of VBM has steadily grown by 2-3 percentage points in each presidential election year since 1996. The spike in usage in the pandemic election of 2020 seems to have resulted in a jump of approximately 6 percentage points beyond what would have been predicted otherwise.[9]

Like any voting system, VBM has benefits and costs. In this article, we briefly describe these benefits and costs, focusing on the areas of turnout and participation; reliability and security; representation among disadvantaged groups; budgetary costs; and public opinion about election integrity. We close with a list of policy recommendations drawn from this research.[10]

Usage of Vote by Mail

VBM became much more widely available in the past quarter century. Over two decades, from 2002 to 2022, the number of states offering some no excuse option grew from 16 to 35 and the percentage of VBM ballots grew from 11 percent to 32 percent. Given this dramatic change, it would be surprising if the profile of the "typical" by-mail voter did not also change, as VBM became integrated into election administration, political campaigns, vote mobilization efforts, and the minds of voters.

The conventional scientific wisdom two decades ago about "restriction easing" methods of voting was summarized by Adam Berinsky: "... reforms designed to make voting 'easier' magnify the existing socioeconomic biases in the composition of the electorate" (Berinsky 2005, p. 479). VBM voters tended to be older, whiter, better educated, and higher income. The reasons provided were that VBM imposed higher costs and attracted voters who were firmer in their political commitments (Berinsky, Burns, and Traugott 2001; Gronke, Galanes-Rosenbaum, and Miller 2008; Karp and Banducci 2000; Southwell and Burchett 2000).

How well has the conventional wisdom aged? The answer is not very well. By 2020, "excuse required" mail voting comprised no more than 10 percent of all mail ballots (a much larger percentage among voters over 65 and the and the other 90 percent of by-mail ballots are the "no excuse" variety (Stewart 2020). As the usage of VBM has expanded across the country and among different demographics, the VBM voter has become less distinctive between demographic categories, even while the demographics of voting remains distinctive across modes of voting.

For example, column one of Table 1 shows only minimal differences in the rate of VBM between the least and most educated or between age categories (other than the oldest voters). If VBM voters were older, better educated, and had higher incomes two decades ago, that is no longer the case.

Looking across the columns, in contrast, there are substantial demographic differences across methods of voting. These similarities and differences are a fruitful area for further research.

An enormous partisan gap is also clear in column one of Table 1, with Democrats most likely and Republicans least likely to use VBM. This gap was even wider in 2020: 60 percent of Democrats used mail voting compared to 32 percent of Republicans (Stewart III 2021, pg. 9). It will also be important to track partisan differences to see if they persist, and how the gap may translate into different levels of trust in our election system, especially in states that rely heavily on VBM.

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[9] A simple regression predicting the percentage of ballots returned using VBM as a function of the election year and whether or not it is a presidential election, using the 1996-2018 data, produces a forecast VBM rate of 26 percent in 2022, compared to the actual rate of 32 percent.

[10] More details on the research findings and policy recommendations can be found in a white paper which formed the basis of this article. See Gronke et al., 2023.

Table 1. Select Demographics of U.S. Voting-by-Mail vs. Other Methods in 2022

	VBM	Election Day	Early In Person
Education: > 12 years of education	37%	41%	23%
Education: < HS or fewer years	37%	43%	21%
Age 18-29	37%	43%	21%
Age 30-44	31%	51%	19%
Age 45-64	35%	43%	21%
Age 65+	43%	32%	25%
< $50,000	40%	39%	21%
> $100,000	33%	44%	23%
Democrat	45%	33%	23%
Republican	27%	52%	20%
Independent	36%	41%	23%
All Voters	37%	41%	22%

Source: 2022 Survey on the Performance of American Elections

State Differences in Usage of Vote by Mail

Election laws, ages, race/ethnicity, and party affiliation are not randomly distributed across states, and this means that voting is to some degree a product of these state level differences. In short, Table 1 is not only about voter choices, but also what choices are provided to them. For example, national data show high VBM usage among Asian Americans (Absher et al. 2023), but the large concentrations of Asian Americans in California – a universal mail balloting state – substantially influences the national estimate. Similarly, there are large concentrations of Blacks in states such as Mississippi and Alabama, which have highly restrictive absentee balloting laws and consequently, very low rates of VBM across all categories. Meanwhile, in states with universally accessible early in-person voting, candidates, political parties, and other institutions make a concerted effort to spur voters to use that method. In Florida, these church-based "souls to the polls" activities have resulted in higher proportions of African Americans and Latinos using early in-person voting than Whites (Herron and Smith 2012).

The point of this discussion is to highlight the fact that individual states have distinct demographic, racial, and ethnic profiles; institutional arrangements; and patterns of political competition. These all can lead to distinctive patterns of voting. Comparisons across states require careful attention to these differences. State-specific comparisons over time provide more accurate estimates, and much of the research in this paper is of that variety.

The Participation Effects of Mail Voting Policies

One of the most common arguments in favor of expanding access to mail voting is that it will increase participation by making voting easier (Gronke et al. 2008). In 2020, the health risk associated with voting in person was added as a cost that mail voting would reduce (Persily and Stewart 2021). On the other hand, there are a number of reasons that mail voting may not increase participation. Expanding mail voting may also reduce in-person voting options and make it harder for voters who move frequently or need assistance (McGhee, Paluch, and Romero n.d.). Some people may not vote if they do not experience the social benefits of in-person voting (Gerber, Huber, and Hill 2013).

Overall, research shows that expanded access to mail voting modestly increases participation. Turnout increases more in states with universal ballot delivery. Innovative research that compares matched groups of voters a bit older and younger than 65 shows that no excuse absentee voting does not noticeably affect the overall rate of participation (Yoder et al. 2021; Meredith and Endter 2016).[11] Research that compares turnout within single states and jurisdictions over time, before and after universal ballot delivery was introduced, shows a turnout increase of two to three percentage points (Gerber, Huber, and Hill 2013; Showalter 2018; Barber and Holbein, 2020; McGee, Paluch, and Romero, n.d.; Thompson et al. 2020; Alvarez and Li 2021).

A gap remains in the research record of the impact of universal vote by mail on voting in state and local elections, where theory suggests that the effects would be larger (though, see Gronke and Miller 2012). Election officials can help by making these state and local turnout results more accessible.

Reliability and Security of Voting-by-Mail

Another set of concerns about VBM is related to reliability and security because ballots leave the hands of election officials. As Stewart III (2010) describes, the route upon which mail ballots travel between voters and election officials has many potential navigational offshoots from the time of ballot request to ballot tabulation. The process is highly decentralized. Ballot reliability concerns include ballot rejection rates that may vary by race, ethnicity, and age and exacerbate inequality.

Research shows that mail ballot rejection rates are related to institutional as well as individual factors including: 1) missing return deadlines, 2) verification issues (missing or mismatched signature, witness signature, address, or date of birth), 3) envelope design, 4) ballot secrecy (Baringer, Herron, and Smith 2020; Shino, Suttmann-Lea, and Smith 2022; Smith and Baringer 2018; Hopkins et al. 2020), as well as lack of information about the whole VBM process (Suttmann-Lea and Merivaki 2023). Research shows consistently that the number of and reasons for VBM ballot rejection vary by race, ethnicity, and age (Romero 2014; Romero et al. 2021), raising equity concerns.

An issue with this research is the absence of statewide protocols for documenting the processing of rejected ballots or standardized reporting of the information collected by ballot

[11] Use of absentee voting was higher among the voters 65 and older, but use of in-person options was lower, for a zero effect overall.

tracking systems, which makes it challenging for both researchers and practitioners alike to obtain and systematically evaluate the reliability and security of VBM.

The Representational Impact of Voting by Mail

Mail voting policies have only a modest effect on overall participation. We might be tempted to assume, therefore, that everyone is a little bit more likely to participate under VBM. But a small average effect is also consistent with policies that dramatically alter the participation of a small group without affecting anyone else. If the effects of VBM is limited to a small group of people, this could be important for who is elected and whose voice is heard.

Researchers have reached conflicting conclusions about groups that are most affected by expanding VBM. Recent work finds that VBM increases the participation of low-propensity voters most (Gerber, Huber, and Hill 2013), but others find that more politically knowledgeable voters are more likely to cast a mail ballot (Shino and Smith 2022). There are conflicting results about how VBM changes turnout across race and income, and how these may interact with racial polarization in partisanship. One common and encouraging finding is that neither party benefits from policies that increase VBM (Barber and Holbein 2020; McGhee, Paluch, and Romero 2021; Thompson et al. 2020; Yoder et al. 2021).

There are clear findings that ballot rejection and curing have a representational impact. Younger voters, first-time voters, and voters of color are much more likely to cast VBM ballots that are rejected (Baringer, Herron, and Smith 2020; Cottrell, Herron, and Smith 2021; Shino, Suttmann-Lea, and Smith 2022; Smith 2022; Smith and Baringer 2018). Shino, Suttmann-Lea, and Smith (2022) and Baringer, Herron, and Smith (2020) find substantial variations in rejection rates across Georgia and Florida counties. This indicates a lack of uniformity in ballot design, civic education efforts, and evaluation standards employed by these states, an important area for attention by practitioners and policymakers.

A distinctive feature of this research is that much of it uses information from Florida, Georgia, North Carolina, and Washington. North Carolina and Washington have readily accessible data files with the detailed information needed to understand equity and access to VBM and the impact of curing.[12] In the case of Florida, Georgia, and North Carolina, they have been subject to a number of lawsuits that gave scholars access to detailed ballot processing information.

Moving forward, the field would benefit if research was driven not just by the interests of litigators but also by the interests of election administrators. We need more collaborations in more locations. One example is provided by retired Orange County Registrar of Voters Neal Kelley. Kelley partnered with researchers at the California Institute of Technology, led by R. Michael Alvarez, providing a secure way to look "behind the curtain" at nearly every step of the election process. This partnership resulted in actionable improvements for the county (reported at https://monitoringtheelection.us/), a second partnership with the state of Oregon (Gronke et al. n.d.), and peer-reviewed research and an academic volume (Alvarez et al. 2020; Kim, Seo-Young Silvia, Schneider, and Alvarez 2020).

[12] In the case of North Carolina, the state has made detailed voter file information, including absentee ballot request and return files, available for no cost on the internet. In the case of Washington, this is the only state we know of that creates a statewide "match back" file tracking the ballot curing steps for any challenged ballot.

Public Support and Budgetary Costs

In terms of voter support, VBM is convenient, but it is not embraced by all voters (Alvarez et al. 2011; Clinton et al. 2022). VBM is the least supported reform by voters compared to a series of other reforms (Alvarez et al. 2011). However, support for VBM is higher in states that have already implemented it (Alvarez et al. 2011; Southwell 2004; Stewart III 2021; Stewart 2023). For example, looking at VBM support rates in Colorado, Oregon, and Washington, Republicans showed lower support for mail voting compared to Democrats from 2008 to 2016. In the 2020 election, Republican support dropped to 15 percent, compared to 41 percent in 2016, in these three states, while Democratic support soared to 90 percent compared to 81 percent in 2016 (Persily and Stewart 2021; Stewart III 2021), and support for VBM in 2022 among Republicans in these three states increased to 27 percent, while Democrat support for VBM slightly dropped to 89 percent (Stewart III 2023). This all highlights two things: first, support for VBM (like many election reforms) increases as voters become more familiar with the method, and second, support for VBM, and democracy more generally, is highly responsive to statements from political leaders and other elite messengers.

Finally, with respect to budgets, there have been few scientific studies of the costs of by-mail voting. Oregon and Colorado reported substantial cost savings from full VBM, when the baseline comparison was a "mixed" regime (election day voting combined with high rates of no excuse voting) (Barouh 2020; Lamb 2021). One 2020 report provided estimates of moving to widespread use of no excuse absentee balloting, deploying drop boxes, and upgrading other technology, but it is not clear how these costs would be offset by other savings (Norden et al. 2020).

VBM should reduce spending by cutting down on equipment, staff, and location rental costs. However, the late return of paper ballots poses a hurdle for the administration of VBM elections. The bulk of ballots received in the final days needs signature verification and counting, leading to additional personnel costs for election officials (Menger and Stein 2019). Additionally, this rush can undermine the accuracy and timely reporting of all ballots on election day, which can undermine voter confidence in the election process (Atkeson and Saunders 2007; Sances and Stewart 2015).

Policy and Research Lessons

Throughout this article, and in our white paper, we have discussed a wide range of research, highlighted results that are important to practitioners, and noted research and policy recommendations. To quickly summarize the practical implications of this research:

- Universal mail ballot delivery programs, if implemented well, can modestly increase participation overall, significantly increase participation for particular groups, and save money.
- Signature verification and other methods to affirm eligibility are critical security features but should not differentially impact subgroups in a state or jurisdiction.
- Ballot curing helps voters and increases turnout.
- Transparent and accessible data can be used to engage and educate portions of the public who have lower levels of voter confidence and who are skeptical about VBM.
- We need more collaborations between researchers and election administrators beyond the "usual suspects."
- National comparisons of different modes of voting should be avoided or considered in the context of state differences.

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Response to "Vote-by-Mail in the United States"

Julia Saenz, *Santa Clara County, California*[1]

This white paper provides a thoughtful exploration of the potential benefits and challenges of vote-by-mail (VBM) systems in the United States. While the findings are useful, there are areas where additional insights from the perspective of election officials could deepen its applicability.

The article effectively underscores the potential of universal mail ballot delivery programs to enhance voter participation, particularly among underrepresented groups. It also highlights the importance of transparency, ballot tracking, and the implementation of VBM cure laws to address issues of voter confidence and accessibility. These findings are critical in addressing both logistical and perceptual barriers to VBM adoption.

Additionally, the importance of placing drop boxes and using geo spatial analysis to optimize their locations is particularly valuable. This is a practical recommendation election officials can implement with relative ease to increase convenience and access for voters.

From the perspective of an election official, a few areas could use further exploration:

- Operational Capacity: The report could dig deeper into the resource needs for scaling up VBM systems, including staffing, training, and technological upgrades. Election officials often face tight budgets, and a clearer cost-benefit analysis would be helpful.
- Voter Education: While the article mentions voter education, election officials could consider this a critical challenge. More concrete strategies for educating voters about VBM procedures, deadlines, and curing rejected ballots could be outlined.
- Contingency Planning: The report could address how VBM systems can adapt to emergencies, such as natural disasters or cyberattacks, which are significant concerns for election officials.

Overall, the recommendations are well-intentioned and largely feasible, but their implementation depends on political will and resource allocation. For example:

- Expanding ballot tracking systems and transparency measures are practical steps many jurisdictions have already undertaken, but smaller jurisdictions with limited budgets may struggle without additional federal or state funding.
- Extending deadlines for late-delivered ballots is a contentious recommendation. While it may boost voter participation, there may be opposition from both election officials and lawmakers.
- Scaling back in-person voting options to make universal VBM systems cost-effective could unintentionally disenfranchise voters who prefer or require in-person voting, such as those with disabilities or limited access to mail services. Balancing these needs will be crucial.

This paper offers a solid foundation for understanding and improving VBM systems in the United States. For its recommendations to be truly actionable, more attention must be given to the constraints and perspectives of election officials - especially in terms of budget, voter education, and contingency planning. With these considerations, the recommendations can become more likely to gain traction in the real world.

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Response to "Vote-by-Mail in the United States"

Shelby Miller, *Denver, Colorado*[1]

"Vote-by-Mail in the United States" provides both a high-level introduction to vote-by-mail (VBM) methodology and a detailed examination of mechanisms that could shape its continued adoption and evolution. The authors explore VBM not as a monolithic concept but as a diverse, jurisdiction-specific practice. By incorporating historical context, participation trends, security challenges, and public response, the paper underscores the complexity and multifaceted nature of VBM.

If the ultimate goal of election administration is an equitable, efficient, and responsive system that enjoys public trust, this research suggests that vote-by-mail is not a standalone solution. Rather, it is a foundational component that works in tandem with other state-level best practices to encourage a wider cultural shift toward civic participation.

VBM has been a part of the electoral ecosystem for decades, providing significant value in terms of accessibility, modest increases in overall participation, and adaptability necessary to meet evolving challenges. VBM accommodates a broad spectrum of voters, as there is no typical VBM voter. However, in an increasingly scrutinized and politicized field, the effectiveness of vote-by-mail depends on thoughtful implementation and a robust understanding of its strengths and limitations.

One challenge is the variability of VBM models across states, which complicates research and comparative analysis. Differences in administrative practices limit our ability to draw universal conclusions. For instance, the availability of ballot tracking, in-person voting options, and the budgetary costs associated with VBM remain areas that warrant further exploration. Further, the evolving dynamics of public perception and partisanship continue to shape how VBM is received, making it a moving target for researchers and policymakers alike.

The diversity of VBM methodologies may also be its greatest strength. State-and-county-level decisions can be tailored to meet the unique needs of communities, offering opportunities to refine and adapt policies. This localized approach enables election administrators to enhance voter engagement and ensure election integrity. While national comparisons of VBM usage provide context, state-specific analyses are often more valuable in identifying trends, addressing challenges, and crafting policies that reflect local priorities.

The authors conclude with several thoughtful policy recommendations. Expanding voting options appears to be a promising path toward more inclusive participation. For example, optimizing ballot return drop boxes, streamlining processes for curing rejected ballots, and increasing transparency and voter education are actionable steps that could shift voting behavior. Ultimately, this research underscores that VBM is not a one-size-fits-all solution but a crucial component of the broader electoral framework. As election administrators continue to adapt to evolving challenges, studies like this offer valuable insights into how VBM can help shape a more accessible, secure, and trusted electoral system — one that reflects the diverse needs of voters across communities.

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The State of Voter Registration Research

Seo-young Silvia Kim, *Seoul National University*[1]
Marc Meredith, *University of Pennsylvania*[2]
Michael Morse, *University of Pennsylvania*[3]
Stephen Pettigrew, *University of Pennsylvania*[4, 5]

ABSTRACT
Inaccurate voter registration lists increase barriers to participation, burden election officials, and fuel concerns about election integrity. While the scholarly literature on voter registration is outdated and insufficient, it still provides useful evidence about how to increase the number of citizens who are registered to vote at their current residence. Based on this literature, policies that shift the burden of initiating or updating voter registration from individuals to the government will likely be most effective. Most importantly, election officials should pursue ways to increase the number of individuals who initiate or update their voter registrations during transactions at their state's motor vehicles agency. Other promising policies include automatically transferring voter registrations based on National Change of Address data, Election Day registration, and allowing 16- and 17-year-olds to pre-register to vote.

Keywords: voter registration, voter list maintenance, National Voter Registration Act

Election officials are very familiar with voter registration lists. These lists are the "backbone of election administration" (Ansolabehere and Hersh 2010). They show who is eligible to vote, record who has voted in the past, assign registrants to both administrative precincts and political and taxing jurisdictions, and facilitate campaign outreach (Ansolabehere and Hersh 2010; Shaw et al. 2015). But election officials know too well that voter registration lists are often inaccurate and incomplete. The best evidence on the topic suggests that in 2012 about 30 percent of Americans were either not registered to vote or registered to vote at their former address (Jackman and Spahn 2021).

This brief article builds on the white paper that we wrote on voter registration for the MIT Election Data and Science Lab during the summer of 2023. Our goal for the white paper was to assess the state of evidence and propose a research agenda for the future study of voter registration. Here, our goal is different. Using the white paper as a background, we hope to highlight particular areas that election officials should focus their attention on and particularly promising research-backed recommendations for reform.

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[5] We greatly appreciate the excellent research assistance that Jon Griffiths, Liz Stark, and Katie Steele have provided on this project. We also thank John Dziurlaj, Katy Owens Hubler, and Jared Marcotte at The Turnout and Ryan Chew, Michele Forney, Noah Praetz, and Trevor Timmons at The Elections Group for insightful feedback on the broader white paper from which this is drawn.

We divide this summary into two parts. First, we review the federal framework for voter registration, particularly agency-based registration and list maintenance. Second, we address other state voter registration policies, including Election Day registration. Ultimately, the white paper emphasized the importance of state reforms which shift part of the registration burden from citizens to the government. Our goal is to particularly highlight reforms that could *both* improve voter access and improve the accuracy of voter registration lists.

Federal Framework for Voter Registration

Two federal laws significantly shape how state and local election officials manage voter registration. The National Voter Registration Act (NVRA) of 1993 focused primarily on coordinating local voter registration, while the Help America Vote Act (HAVA) of 2002 partially centralized registration at the state level. We focus here on the two most important provisions of the NVRA for voter registration—agency-based registration and voter list maintenance.

Agency-Based Registration

The NVRA's best-known provision, commonly referred to as "motor-voter," mandates that customers be offered an opportunity to register to vote when engaging with their state's equivalent of the Department of Motor Vehicles (DMV) (52 U.S.C. § 20504(c)). The mandatory registration opportunity has transformed DMVs into the most important source of voter registrations in the United States. For example, in the latest available data from 2021 and 2022, about 55 percent of voter registration activity – both new registrations and registration updates – originated from a transaction with a state motor vehicle agency (U.S. Election Assistance Commission 2023).

Our white paper focused on two developments with agency-based registration: the general concern with the implementation of motor-voter and the promise of particular state innovations. Given our brief treatment, we focus on motor-vehicle departments, but it is worth noting that public assistance agencies are the site of both greater difficulties with the implementation of the NVRA and important potential innovations (Hess 2023).

Despite the promise of motor-voter, the Presidential Commission on Election Administration (2014, p.17) characterized motor vehicle agencies as "the weakest link" in election administration. Since then, policy advocacy organizations have continued to identify further implementation problems (see, e.g., Naifeh 2015, 2021; Danetz 2021). However, there has been little to no research to date on why those recommendations have not been consistently adopted. Our survey of the literature made it clear that motor-voter implementation should be a priority for election officials, for the simple reason that improved implementation will reduce the burden on election officials to conduct list maintenance, discussed below.

While the implementation concerns are real, it is also true that the share of voter registration activity that stemmed from DMVs in 2021-2022 was up about 10 and 15 percentage points from the share in 2017-2018 and 2019-2020, respectively (U.S. Election Assistance Commission 2023). Some of this increased registration activity at DMVs reflects the growth of automatic voter registration (AVR). While AVR policies differ over states, the general policy makes voter registration the default unless the customer opts out. However, there is an important distinction between states which permit voters to opt out on the front end versus the back end. In states with front-end AVR, customers can opt out during the transaction with the agency. In contrast, in states with back-end AVR, generally, customers opt out by responding to a mailer sent to them after their transaction with the state agency.

Because AVR is new, research on its effects is still in its infancy. In our assessment, Grimmer and Rodden's (2022) study of a sequence of policy changes in Colorado is the most comprehensive analysis to date of the benefits of adopting AVR. Colorado first introduced front-end AVR at their Department of Motor Vehicles (DMV) and eventually put into place back-end AVR for customers with an existing registration or unregistered customers who documented their citizenship status as part of their DMV transaction. Grimmer and Rodden find that the share of unregistered customers who registered during a DMV transaction increased by about 30 percentage points after Colorado put these reforms into place. They also quantify how many customers would not have had their registration address updated absent Colorado's new policies, finding more than 17,000 additional monthly address updates between July and December 2018 because of the shift from front-end to back-end AVR. This research aptly demonstrates how state-initiated voter registration activity is not simply about offering citizens an opportunity to register, but also about ensuring that citizens who are unregistered or have out-of-date registrations take advantage of the opportunity.

List Maintenance

The NVRA imposes a federal obligation on election officials to conduct list maintenance. Specifically, the NVRA requires that local election officials "conduct a general program that makes a reasonable effort" to identify "ineligible voters . . . by reason of . . . death . . . or a change in residence" (52 U.S.C. § 20507(a)(4)). Importantly, agency-based registration and list maintenance are intimately related – more agency-based registration translates to fewer out-of-date registrations for list maintenance to fix.

The list maintenance obligations of the NVRA can leave election officials in a difficult position. Much of the deadwood on voter registration lists represents a breakdown either in NVRA compliance or voter communication (The Pew Center on the States 2012). Registrants sometimes believe election officials have access to more information than they do. For example, some eligible voters incorrectly assume that when they register to vote in a new jurisdiction, this information will get passed along to the jurisdiction where they previously registered (The Pew Center on the States 2010). And registrants often do not respond to the confirmation notices that the NVRA mandates that election officials send in attempts to ascertain registrants' current addresses when their registrations are moved from active to inactive status. We think that more attention should be paid to identifying strategies that increase response rates to confirmation notices, given that only about 13 percent of the 26 million confirmation notices that were sent between the 2020 and 2022 general elections garnered any response from the registrant (U.S. Election Assistance Commission 2023).

In the absence of direct voter communication, one list maintenance strategy involves election officials *matching* voter registration records to other administrative data to identify registrants who have died or moved. In general, the NVRA encourages, but does not require, election officials to use the United States Postal Service's National Change of Address (NCOA) Program to identify voters who moved (52 U.S.C. § 20507(c)(1)). Thirty-three states and the District of Columbia participated for at least some portion of 2012 to 2022 in a cross-state organization known as the Electronic Registration Information Center to improve list maintenance by coordinating important data sources (Morse 2023). Another list maintenance strategy involves election officials *monitoring* registrant activity to identify registrants who have died or moved. In the white paper, we found there is little research evaluating how well these various list maintenance strategies perform at identifying registrants who have died or moved (although, see Huber et al. 2021).

Given the limited information produced by the confirmation notices process, we think election officials should consider increasing their use of registration transfers. One benefit of the

NCOA data is that election officials can learn both the old address *and* the new address of someone who reports a move, which creates the possibility that election officials could transfer any registration for that individual at the old address to the new address. Kim (2023) examines California's policy of doing just this to automatically update voter registrations after in-state moves, which she calls "automatic re-registration." She identifies individuals who submitted an NCOA request before a cut-off date and compares those who had their registration automatically transferred to those who did not. Ultimately, Kim estimates that California's policy increased voter turnout by 5.8 percentage points among registrants on the NCOA list.

Beyond the Federal Framework

Election officials also play an important role in the policymaking process, at least in the sense of informing legislative priorities. To that end, states have adopted many policies to make voter registration more accessible beyond the federal framework of agency-based registration and list maintenance. These state policies include allowing citizens to register within 30 days of an election, allowing citizens to register at the polls either on Election Day (i.e., Election Day registration or EDR) or during early voting (i.e., same day registration or SDR), allowing 16- and 17-year-old customers to preregister during transactions at their state's motor vehicles agency, allowing people to register online, and allowing third-party organizations to help people initiate registration. While there has been research on the participatory effects of many of these state voter policies, it often is either dated or methodologically insufficient. However, the research that does exist consistently shows modest participatory benefits for younger citizens when states allow EDR and preregistration at their state's motor vehicle agencies.

EDR is one of the most commonly studied voter registration reforms. Summarizing the findings of 33 studies that examine how EDR relates to turnout, the U.S. Government Accountability Office (2016) reports that 21 of the 33 conclude that turnout is higher in states with EDR than in states without EDR. In the white paper, we reviewed wide-reaching issues with studies conducted on how EDR affects turnout (see, e.g., Keele and Minozzi 2013; Stewart 2017) In general, studies using more credible research designs generally find a modest increase in turnout after EDR is implemented in a state. For example, Leighley and Nagler (2013) estimate that EDR led to a 4 to 6 percentage point increase in turnout in Minnesota, Maine, and Wisconsin, which enacted EDR in the 1970s. However, Leighley and Nagler also find that EDR caused lower increases in turnout in those states that adopted EDR in the 1990s and 2000s than it caused among early adopters. They find that EDR only increased turnout by 0.1 percent for states that enacted the policy in the 1990s and by 1.5 percent for states which did so in the 2000s.

Given that we often see a positive relationship between both EDR and SDR and turnout, researchers have gone on to examine which groups are most likely to turn out due to EDR and SDR. Recent literature suggests that the effects of SDR and EDR are conditional on age, with young people and recent movers experiencing the strongest positive effects (see, e.g., Knack and White 2000; Holbein and Hillygus 2020; Grumbach and Hill 2022). For example, Grumbach and Hill estimate that SDR increases turnout among 18- to 24-year-olds in presidential elections by between 3 to 7 percentage points. They also find that SDR significantly increases turnout among 25- to 34-year-olds, while not finding a significant increase in turnout from SDR among any other age group.

Research also shows that the availability of preregistration has positive effects on youth turnout (McDonald and Thornburg 2010; Holbein and Hillygus 2016, 2017; Fowler 2017). Of these studies, Fowler (2017) presents the most convincing evidence. Fowler's primary focus is comparing turnout among eligible voters under the age of twenty-six based on whether they could have

preregistered at age 16 in their current state of residence. He finds that the availability of such preregistration, on average, increases both registration and turnout among 18- to 26-year-olds by about 2 percentage points, respectively.

Conclusion

Our hope is that our brief review makes clear that substantially more contemporary research on voter registration is needed. Especially in an era of declining electoral trust and limited budgets, it is essential that we have voter registration systems that are accessible, accurate, and cost-effective. Yet, decisions about voter registration systems are often made in the absence of rigorous evidence about the consequences of these decisions. The evidence that does exist is mostly on the impact of statewide registration policies, which are largely determined by state legislatures. Thus, local election officials looking for guidance about how they should be prioritizing their voter registration efforts have little guidance that they can turn to. To this end, we hope more research follows the lead of Merivaki and Suttmann-Lea (2023) and helps us better understand the role that local election officials play in voter registration.

We conclude by highlighting how partnerships between local election officials and researchers could facilitate a new research agenda and, in turn, more guidance. One barrier to research is data decentralization. Critical information about voter registration is spread out among thousands of local and state election officials as well as motor vehicle and public assistance employees. Thus, it is essential to form new partnerships between researchers and election officials to collect more expansive and granular data on voter registration. In doing so, associations like the National Association of State Election Directors, as well as the Electronic Registration Information Center, could be helpful intermediaries.

In particular, partnerships between researchers and election officials are also needed to help researchers evaluate list maintenance, given the sensitive information involved. Some of the best research on voter registration done in the last 10 years has resulted from individual states or counties generating a creative solution to offer researchers access to confidential information without jeopardizing privacy. Kim (2023), for example, relied on information provided by Orange County, California, about when registrants appeared in the NCOA database, without distributing the full underlying database. Additionally, election officials can anonymize data or generate MOUs to help facilitate research like Grimmer and Rodden (2022), while ensuring that confidential information is not released.

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Response to "The State of Voter Registration Research"

Scott Brown, *Clayton County, Georgia*[1]

This white paper provides a compelling framework for improving voter registration systems, addressing critical challenges such as the accuracy of voter rolls, the effectiveness of agency-based registration, and the maintenance of voter lists. These are issues election officials navigate daily, and the paper rightly emphasizes their importance to the integrity of election administration. However, from the perspective of a local election office, there are additional considerations that could enhance the practical value of this research agenda.

The focus on foundational measures of voter registration notes quality is a crucial starting point. Understanding the extent of outdated or incomplete registrations is vital to improving list accuracy. However, research in this area must move beyond quantifying the problem to offering actionable solutions. For instance, local election administrators would benefit from studies that not only identify the prevalence of inaccuracies but also test and recommend practical methods to reduce them. For example, identifying effective strategies to address "deadwood" registrations – outdated entries for voters who have moved or died – would have immediate value for practitioners.

The paper's emphasis on agency-based registration and its potential to shift the registration burden from citizens to the government is well-founded. Policies such as automatic voter registration (AVR) and National Change of Address (NCOA) updates have shown promise in improving both access and accuracy. However, the paper could delve deeper into the operational realities of implementing such policies. For example, how do differences in state voting methods – such as vote-by-mail versus precinct-based election day voting – affect the outcomes of these policies? Research that contextualizes the impact of agency-based registration within these frameworks would help election officials tailor solutions to their jurisdictions.

List maintenance is another area where the white paper highlights important opportunities for improvement. The paper correctly points out that election officials must balance maintaining accurate rolls with protecting voter access. However, it could explore the unintended consequences of certain list maintenance methods. For example, third-party voter registration drives, while expanding access, often introduce inaccuracies due to incomplete or inconsistent information provided by registrants. Further research into strategies to improve the accuracy of third-party submissions would address a common challenge for election offices.

Additionally, the recommendation to document the financial support required for voter registration infrastructure is a critical and often overlooked component of election administration. Many local election offices operate under constrained budgets, limiting their ability to adopt new technologies or implement best practices. Research that quantifies these financial needs and demonstrates the cost-effectiveness of investments in voter registration infrastructure could help secure the resources necessary to improve list accuracy and accessibility.

Finally, the paper's call for collaboration among academics, election officials, government agencies, and civic organizations is essential. Too often research remains isolated in academic circles, failing to inform the work of local election administrators. Partnerships that bridge this gap could ensure that research findings are not only theoretically sound but also practically applicable.

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[1] Scott Brown is the registrar manager for the Board of Elections and Registration in Clayton County, Georgia.

In conclusion, the white paper provides an excellent foundation for advancing voter registration research. However, to maximize its impact, future studies should prioritize actionable insights, address the practical challenges faced by election offices, and focus on the diverse realities of election administration across the country. By doing so, this research agenda can empower election officials to enhance the integrity and accessibility of voter registration systems.

Response to "The State of Voter Registration Research"

Ben Schler, *Denver, Colorado*[1]

The authors hit the nail on the head in recognizing that foundational research on voter registration is "outdated and insufficient" – much like voter registration policy itself. The paper's call for additional research in this area, and its recommendations for where researchers should focus their efforts are both timely and useful for election officials and policymakers.

The paper's three central recommendations for future voter registration research indicate the authors' understanding of the legal and practical challenges of voter registration administration. Notably, the paper discusses the National Voter Registration Act (NVRA), one of just a few limited federal laws hovering tentatively over a decentralized election system, to illustrate these challenges.

In its discussion of the NVRA, the paper highlights a new but promising trend toward automatic voter registration (AVR) in some states. More research on this topic would, among other things, help election officials identify best practices in implementation. Noting the limited availability of AVR research, the authors pinpoint a key area for future focus – front-end versus back-end AVR. They then discuss an analysis of AVR implementation in Colorado where election officials began with front-end AVR and transitioned to back-end AVR. The Colorado example could prove useful for researchers who might see front-end AVR as a steppingstone to back-end AVR which requires more technology infrastructure and more interagency cooperation.

The paper's discussion of Colorado's AVR experience evinces another potential area for research – state-level infrastructure and readiness for policy innovation. Colorado's successful AVR implementation resulted due to many reasons, key among them was the move to AVR at the same time the state was developing a new motor vehicle and driver's license computer system. That timing allowed agencies to partner and develop system requirements to ensure data could transfer between agencies. Research documenting state systems and readiness could help policy advocacy organizations, who often drive state efforts to innovate, consider where to best focus their efforts.

The authors mention that research should help inform the next generation of voter registration infrastructure. But it need not be limited to statewide voter registration systems. The next generation of infrastructure should allow systems across agencies to integrate, share data, and keep voters' information current with limited effort from the voter.

This paper is useful not only as a guide for future voter registration researchers but also as a primer for anyone looking to understand current challenges and promising developments in voter registration. Perhaps recognizing the current political reality in election policy, the authors do well to focus on the benefits of more voter registration research through the lenses of access, accuracy, and cost.

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[1] Ben Schler is the policy and compliance officer for the Office of Clerk and Recorder in Denver, Colorado.

Communicating with Voters to Build Trust in the U.S. Election System

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ABSTRACT
The American public's faith in the legitimacy of elections declined following repeated and unsubstantiated claims of widespread fraud in the wake of the 2020 election. We review the existing evidence on voter trust and report three key findings. First, building trust in elections is fundamentally difficult due to intractable features of the political system, including the lack of information among voters, the decentralized nature of the electoral system, and the tendency of partisan elites to exploit rare but inevitable mishaps in election administration. As a result, officials who seek to build trust should set realistic expectations. Second, few credible studies demonstrate how to effectively create trust, suggesting the need for caution; some well-intentioned measures might be counterproductive. Third, many practices used to secure elections are not widely known among the public; researchers should collaborate with officials to design rigorous tests of their effects.

The stability of democracy depends in part on public belief in the legitimacy of the elections that determine who holds power. Those beliefs have been undermined in recent years in the U.S., enabling an unprecedented effort to overturn the 2020 presidential election which culminated in a violent insurrection. Though power was eventually transferred to a new administration, the effects of the attack on the election system continue to linger. Despite the lack of any evidence of widespread fraud, recent surveys found, for instance, that only 38 percent of Republicans accepted Joe Biden as the rightful winner of the 2020 election and that 58 percent say it is appropriate to describe the events of January 6, 2021, as a legitimate protest (Bright Line Watch 2023; 2024).

In this paper, which presents a condensed version of our recent literature review (Bergeron-Boutin, Clayton, Kousser, Nyhan, and Prather 2023), we examine the empirical evidence on voter trust in elections and seek to chart a path forward. We draw three broad conclusions.

First, many factors that influence confidence in elections are outside the direct control of election administrators – among them, messages from political elites that sow distrust and the

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[6] We are grateful for funding from the MIT Election Data and Science Lab. All errors are ours alone.

tendency of individuals who support losing candidates to question the integrity of elections. We review the broad contours of the challenges that election officials confront and set realistic expectations about the effect of any given intervention.

Second, we note that there is little credible evidence on the effects of reforms on voter trust. Various measures that have been taken to instill confidence, such as ballot tracking and live feeds of ballot counting, have not been tested using randomized experiments. As a result, most of the existing evidence regarding their effects is correlational. We suggest that collaborations between academics and election officials to test the effectiveness of reforms using randomized evaluations would be valuable. Crucially, given the dearth of empirical evidence, it is critical to *do no harm* – some efforts to promote public trust may be counterproductive.

Third, many measures that are already being taken to secure elections are not yet well-known by the public. Publicizing those is a useful first step with relatively low cost. Initial evidence from survey experiments testing the impact of video messages from election officials that publicize election protections show that viewing these messages increases voter trust. Rigorously testing these and other efforts to publicize the safeguards in place on elections provide a promising path forward.

Baseline Conditions

We begin with a review of how voters form attitudes about elections. Many of the processes we describe are aspects of human cognition that are resistant to change. Accordingly, this section is meant not to provide recommendations, but rather to help build an intuition about the foundations of voter trust.

First, voters know little about election administration. Their personal experience with election administration is typically limited to casting their own ballot, a ritual that an overwhelming majority of Americans report is positive (Stewart 2023). The few reports of negative personal experiences cannot explain the scale of the distrust. What people do not experience firsthand, they learn about from the news media, political elites, and experts. Therefore, in reflecting about reforms and communication strategies, election officials should consider whether most voters would hear the relevant information (exposure), who they would likely hear it from (principally, elites and the news media), and how likely it is that they would update their views on the election system (persuasion). At each step in this process, the effects of reforms that appear promising on paper may be blunted.

Second, across a wide variety of democracies, surveys show that individuals who support losing candidates tend to be less trustful of election results (Anderson et al. 2005). Cross-national evidence suggests that eliminating this "winner-loser gap" in confidence is infeasible.

Third, there may be a disconnect between objective conditions and subjective perceptions. In the long run, perceptions tend to update in the direction of factual evidence, but this process is slowed by selective exposure to information (people choosing to consume congenial information) and motivated processing of information (people interpreting information to align with their prior beliefs). Accordingly, officials should expect the link between objective performance – i.e., whether or not elections are *actually* secure – and voters' perceptions to be tenuous and unresponsive to reforms.

Fourth, given the decentralized nature of election administration in the U.S. and the news media's focus on events that are considered newsworthy, it is likely that election trust is a weak link problem: (perceived) errors in a single jurisdiction will attract more attention than well-performing systems in hundreds of counties. In this sense, despite the decentralized nature of election administration, there is also an inescapable interdependence. Any given locality is vulnerable to what happens – or what is perceived to happen – in others. Indeed, a consistent finding in the academic

literature is the existence of a hierarchy of trust whereby voters report more confidence in ballots counted near them – their own vote, the vote of their county – than in faraway ballots. As a result, and related to the fact that most voters express satisfaction with their own voting experience, seeking to improve the voting experience is unlikely to produce drastic changes in attitudes.

Fifth, the structure of the U.S. political system may present a particularly difficult challenge to building trust in elections. The polarized two-party system increases the stakes of electoral outcomes and enhances the winner-loser gap, the partisan media environment fosters unrealistic expectations about the outcomes of elections, and the decentralized election administration system results in appreciable and poorly understood variation in procedures and performance across the fifty states.

Recommendations from the Academic Literature

We now turn to reviewing the existing empirical evidence that provides more actionable advice.

Picking the Low-Hanging Fruit

As mentioned above, voters know very little about the minutiae of election administration. As an example, in a 2022 survey, just 15 percent of respondents were aware that election officials conduct signature verification on mail-in ballots. The share of respondents who indicated that they knew about 10 different measures taken to secure elections ranged from 4 to 41 percent. As a result, before designing more complex messages, election officials who seek to improve trust in elections should pick the proverbial "low-hanging fruit" by telling voters about steps that they have already taken to secure elections. Some will find these to be insufficient or unconvincing, but many voters are not aware of them. Reaching voters and providing this information may be an important first step.

Communicating with Political Elites and the Media

Messages from elites are one of the most important factors shaping public perceptions of elections. It would therefore be worthwhile to conduct, for example, surveys of political elites asking them about how they view various reforms and testing the effects of those reforms on their views about election security. Such studies face challenges in both recruiting elites to participate and in asking participants to consider hypothetical situations but could nonetheless be valuable. Additionally, election officials should continue to invest time in outreach to the media and elected officials to help them better understand and communicate election security procedures, the reasons for long vote counts, and shifts in vote margins. These sources can typically reach far more voters than officials can via, e.g., direct outreach on social media.

Counting Ballots and Reporting Results

Americans have become accustomed to the timely communication of election results. Prior to 2020, the only presidential election in recent memory that had not been decided in a matter of hours was the 2000 election, which is today remembered for poor administration that likely influenced the outcome (Wand et al. 2001).

What happens on election night – and, in some cases, in the days and weeks that follow – is likely to exert a strong influence on voter trust. Outside of that context, election officials struggle to

capture voters' attention. The time period surrounding a general election – and, most importantly, election night itself – is a crucial opportunity to build trust because public attention is so much greater. But this moment represents both an opportunity and a risk: the *absence* of problems in counting ballots and reporting results is not a story that is likely to attract much news coverage. By contrast, any (perceived) issues on and around election night are likely to be a major news story.

There is some evidence that the non-random processing of ballots – the so-called "blue shift" whereby election results lean more Democratic as more ballots are processed – creates distrust. These shifts are a recent phenomenon that began with the 2004 election (Foley 2013; Foley and Stewart 2020) and they are, of course, not indicative of malfeasance. The reality that ballots are not processed in random order is a regular feature of election night coverage. As the first returns come in, anchors often explain that an early lead may not be meaningful. It also featured prominently in pre-election coverage, when media outlets nationwide warned of a "red mirage" on election night.[7] Still, the concept is likely a difficult idea for voters to understand. Furthermore, political elites have exploited it. In a court filing after the 2020 election, the state of Texas, the plaintiff in the case, stated that the probability of Biden winning all of Georgia, Michigan, Pennsylvania, and Wisconsin – given the state of the race as of 3 a.m. on the night following the election – was "less than one in a quadrillion" (Bump 2020). In the 2020 presidential election, the absolute size of the "blue shift" was similar to that in 2016. However, the variance of the blue shift across the fifty states was much wider, creating more opportunities for politically motivated actors to pick and choose examples. In a survey experiment following the 2022 Senate election in Nevada, respondents expressed substantially less trust in the result of the election in a condition that mentioned that the winner, incumbent Democrat Catherine Cortez Masto, trailed "until the last day of the count," five days after election night (Bright Line Watch 2022). Officials should consider ways to increase public and media awareness of the reasons for this phenomenon as well as exploring feasible measures that could speed up the count.

As mentioned, there are also large discrepancies in the speed of reporting across states. These discrepancies are, of course, not evidence of fraud. Nonetheless, they may well seem odd to voters who are not familiar with the intricacies of election administration. We are doubtful that voters understand the tradeoffs involved – e.g., some states offer later deadlines for mail-in ballots to promote participation. In a survey conducted in early 2020 by Berkeley's Institute of Governmental Studies in California, 64 percent of registered voters stated that it is more important to "maximize opportunities given Californians to register to vote" than to ensure a faster vote count. Among Republican respondents, 39 percent said the same. In the abstract, voters want election results to be communicated quickly, but there are signs that highlighting the costs of speediness can make voters more understanding of (perceived) delays. More research is needed to craft effective messages on this point.

Digital Communications

The impact of partnerships with technology companies, online voter information centers, and other forms of digital communication by election officials is not well understood. Suttman-Lea (2022) conducted a census of the digital presence of every local election office in the nation during the 2020 election cycle, searching for an official website as well as Facebook, Twitter, and Instagram accounts. She found that the vast majority of local election offices (89 percent) have websites but

[7] There are reasons to doubt the efficacy of these "pre-bunking" messages. Most notably, voters who select into consumption of news outlets that produce these stories are likely to be more trusting of elections.

fewer are active on social media, with 33 percent active on Facebook, 9 percent on X (formerly Twitter), and 2 percent on Instagram. Such communication efforts are more common in Democratic-leaning areas. Suttman-Lea and Merivaki's (2023) analysis finds that digital communication is associated with greater confidence that voters' own ballots and those of others are counted accurately. When Americans were asked which sources they trust to evaluate the fairness and integrity of elections, 50.4 percent chose state and local elections officials – far more than any other source (Gaudette et al. 2022). This finding suggests that election administrators may be well-positioned to deliver informational messages that build trust in elections. Initial evidence from survey experiments testing the impact of video messages produced by election officials in six states shows that they increase trust among respondents in their own states (Gaudette et al. 2023a) and in other states (Gaudette et al. 2023b). However, reaching voters in the real world with these messages may, again, prove challenging. Crafting messages in collaboration with local candidates of both parties is a promising avenue.

Looking Forward: What Should Be Done?

Theoretical Framework

We have little credible evidence on the effects of reforms on voter trust. In response to the unprecedented effort to overturn the election result in 2020, election officials across the country have sought to implement various measures that may improve voter confidence such as ballot tracking, live feeds of ballot counting, etc. Before implementing reforms, election officials should consider their likely effects using the theoretical framework presented in this paper. To summarize, proposals to reform election administration should contend with the fact that few voters will be aware of the changes, those who will are likely to have learned of them through political elites, and voters who are predisposed to believe in voter fraud may misinterpret the effects of the reforms.

Field Experiments

Moving forward it is crucial that election officials aim to test the effects of proposed or adopted reforms, ideally in partnership with academic researchers using randomized designs that expose a subset of voters to the reform or information about it and measure the effects of this content on their attitudes. Such randomized evaluations are especially important for reforms that could have counterproductive effects – for instance, transparency measures that could lead to misinterpretation or further distrust. We emphasize the value of partnerships between academics and election officials to carry out field experiments when possible. These types of studies enable us to estimate the causal effects of interventions under real-world conditions in a way that is rarely possible with survey experiments (often conducted under hypothetical conditions) or with observational data (where causal relationships are difficult to demonstrate).

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Response to "Communicating with Voters to Build Trust in the U.S. Election System"

Brianna Lennon, *Boone County, Missouri*[1]

Since late 2020, election officials have tried to understand and reverse the alarming trend of decreased confidence in elections across the country. However, despite our adoption of reforms and best practices aimed at rebuilding trust – including increased transparency, improved voter education, and better media relationships – it often seems like we are unable move the needle on public confidence. As a result, data-driven discussions about rebuilding trust are of particular interest to election officials as we work to reassure voters the elections we administer are safe, accurate, and secure.

In "Communicating with Voters to Build Trust in the U.S. Election System," Bergeron-Boutin, Clayton, Kousser, Nyhan, and Prather look at approaches that election officials have tried and their effects on public trust. Many of the best practices should sound very familiar to any election official who has been in the role since 2020. Ideas like offering office tours, building relationships with local news, and implementing processes that speed up ballot counting have come to fruition in local election offices across the country. However, the authors remind us that there are no academic studies on whether these ideas demonstrably improve voter confidence. From a practitioner's perspective, the value of the paper is buoyed by the authors' recognition that election officials have finite time and resources, so their recommendations center on finding the most effective ways to boost voter confidence and not pitching a solution that would be impractical in the confines of an elections office.

Two lessons should stand out for practitioners. First, the vast majority of voters continue to report they have good experiences at their local polling places and elections offices. While heartening, the expectation is that positive experiences should correlate to increased voter trust, but that assumption does not prove to be true. Ensuring a good experience for voters is still worthwhile, but the conclusion here is that practitioners should not expect a return on investment that improves public trust.

Second, even without an academically demonstrable correlation between improving election administration processes and increasing voter trust, the authors emphasize that process improvement does decrease potential mistakes during an election. Given the media's likelihood to report only on mistakes and the subsequent potential partisan exploitation of those mistakes, the authors' message is particularly strong when considering the high number of new election administrators entering the profession. Offices that may be "weak links" due to a lack of experience or institutional knowledge can be exploited to create a narrative that elections across the country should not be trusted, so it is worth the time to invest in elections offices that may need to revisit their processes or incorporate best practices.

Overall, it became clear throughout the paper that election offices alone cannot solve the ubiquitous challenge of increasing confidence in elections. Many elements outside of election officials' control – from media reporting to the reactions of partisan elites and candidates – have far more impact on voter confidence. This is an important reminder to practitioners as they weigh how to invest their limited resources. To address this shortcoming, the authors ultimately encourage

[1] Brianna Lennon is the county clerk for Boone County, Missouri.

partnership between academics and election officials, and this paper provides a good foundation to build upon for future collaborative research.

Response to "Communicating with Voters to Build Trust in the U.S. Election System"

Dana Lewis, *Pinal County, Arizona*[1]

I believe this article is a valuable resource for election officials, such as myself, as a confirmation by academics of what we in the industry already feel to be true. The involved researchers and analysts have established theories and used scientific data to capture the work of practitioners for historical preservation. With this information we can hope to start a trend to ensure past doubts about electoral processes dissipate and trust through transparency and communication is imbedded in all jurisdictions. In all aspects of life, those who do the job often wonder if those who write about and critique the field have anything more than a surface-level understanding. It was refreshing to read a perspective offering both deep respect and knowledge.

The peaceful transition of power has been a cornerstone in the history of our constitutional republic. As an elected official who administers the electoral process, I have firsthand experience that conducting an election is difficult and campaigning is hard. Elections are a complex mixture of energy and emotion. Elections should focus on policy over personality. It is unfortunate when someone who does not understand the process attacks the policy and the people involved with the task. I fondly recall the times of effective civil discourse when participants could have conversations, ask questions, and step away having gained fundamental knowledge and understanding. There was a marked point after 2016 where accusations and insults, magnified by social media and online elements, exacerbated the problem. This chipped away at the faith of the integrity of our systems. When voter trust is broken, anxiety is then generated. This occurs because the mind associates the event with a sense of danger to the well-being of the establishment. We must prioritize being transparent in our communication with voters, being consistent with our messaging, and inviting them into our processes. Since elections are complicated, those who execute the details are humans and will make mistakes. When we admit this and actively seek feedback from those involved and demonstrate our commitment to improve and finally align our actions with our words, we will rebuild this trust over time.

This research piece was thoughtful and expressed how the importance of understanding the communication among media, stakeholders, and voters is more imperative than ever. However, it is important to bring more attention to candidates who did not win their races yet are still involved in politics and choose to speak up in support about the trust they have in the administrators and processes of elections. This practice is uncomfortable for many, but those who are emboldened to embrace it, learn from the loss, and speak with optimism about their experience can assist the election community more than they know. The security of our election processes is always questioned, possibly due to the constant improvements being made. We are now more aware than ever of outside influence and internal scrutiny, and we are being proactive instead of reactive because of lessons learned. Election officials today have resources that didn't exist 20 years ago. We have created a network of support with colleagues and utilize nonpartisan organizations like the Election Center to learn, grow, and support each other. These think tanks assist us with retention of staff to ensure institutional knowledge and resiliency, creating stronger communication plans and security fortifications.

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[1] Dana Lewis is the recorder for Pinal County, Arizona.

I would request for researchers to look deeper into how the COVID-19 pandemic affected distrust in elections. Historically, we would encourage members of the public to be involved in our processes by volunteerism and active participation in their civic responsibilities. The pandemic shut that practice down at a time when social media was manipulated to push distrust in government. Additionally, the pandemic affected our relationships with Native American communities in Arizona with turnover in tribal leadership leading to lack of ability to connect. We believe this resulted in a marked decrease in Native American voter participation. Authors might find a connection there, and I would relish reading an article on that to see if it related to distrust in our system.

State of the Field in Election Official and Poll Worker Recruitment, Training, and Retention

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ABSTRACT
This article presents the current state of knowledge about the practice of election administration in the United States in three key dimensions: 1) baseline demographics, 2) credentialing and skills development through training and best practices, and 3) turnover and retention. Research includes information about who works in this field, what they do, how they arrive at their positions, their credentials and other forms of professionalization, and the current stressors they face in a unique and perhaps unprecedented environment. Findings suggest areas for further study within the election administration literature, and connections with other fields that may prove fruitful for expanding the extant literature and improving practice.

This piece represents a brief summary of our larger report on the current state of knowledge about the election administration workforce in the United States in three key dimensions. Lessons learned from this collection of information about who works in this field, their skills and qualifications, and

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the current stressors they face in a unique and, perhaps, unprecedented environment surrounding American elections may inform future research and practice in the field. The major sections we summarize here include 1) workforce demographics; 2) approaches to training, certifying, and otherwise professionalizing or credentialing local election office staff and the temporary workforce including poll workers; and 3) workforce retention and current stressors pressing on those in the field. For each of these in the sections that follow, we provide a topline summary of what is known. We then conclude with a discussion of issues the field should consider moving forward.

Workforce Demographics

The election administration workplace is highly localized and varies widely. The largest of the country's approximately 8,000[13] local election jurisdictions have hundreds of staff, and the smallest only one or two. The most comprehensive data are drawn from a series of surveys of local election offices conducted by the Democracy Fund and the Election and Voting Information Center at Reed College. Demographic data about office leadership include age, gender, race, education, method of selection, salary, and partisan identification[14] (Adona et al. 2019; Gronke, Manson, and Lee 2019; 2020; Gronke, Manson, and Crawford 2018; Mason, Adona, and Gronke 2020). These data show little difference over the past 15 years (comparing Gronke et al. 2023 to Fischer and Coleman 2011) with the exception of salaries (which have not kept pace with inflation) and educational attainment (which has increased).

If we compare the Census Bureau's American Community Survey data on the public workforce to existing survey data on the members of the profession (Adona et al. 2019; Gronke, Manson, and Lee 2019; 2020; Gronke, Manson, and Crawford 2018; Manson, Adona, and Gronke 2020), we see some similarities and differences. The election administration workforce appears to mirror the larger public administration workforce and office administration workforce with respect to race, ethnicity, and gender. However, there are some notable differences. Overall, the election administration workforce nationally appears to be older and appears to have more employees with a bachelor's degree or higher. However, the salary comparison appears to be about equivalent.

Functions

Broad and different groupings of functions and organizational arrangements are known to exist around the country (Adona et al. 2019; Burden et al. 2013; Gronke et al. 2023; Hale, Montjoy, and Brown 2015). Some offices are entirely devoted to election administration and/or voter registration while some offices take on other functions in addition to one or both of these primary functions[15] while some bifurcate the process across multiple offices. Despite variations in state laws and in the configuration of responsibilities of local offices, election administrative subsystems are largely the same across the states and territories. Most people register in advance; candidates are qualified; ballots are prepared; ballots are delivered in some fashion to voters; voters make selections and cast ballots, and those ballots are counted.

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[13] Although 8,000 is not an exact count, it is widely reported in research. The count depends on levels of government, functions, and other factors (see, Gronke et al. 2023).

[14] Strongly majority white, non-Hispanic, female, and aged 50 or older; majority elected, half with at least a college degree; and slightly less than half earning more than $50,000/year. Partisan identification is divided among Republican, Democrat, and Independents. See https://democracyfund.org/idea/pursuing-diversity-and-representation-among-local-election-officials/

[15] Election administrators may be housed in offices as diverse as county clerk, recorder, controller, auditor, and assessor (Hale, Montjoy, and Brown 2015; Hale and Brown 2024).

Differing Arrangements and Processes

The election administration workforce also includes a non-full-time-equivalent (FTE) workforce. Non-FTE workers do not appear to be distinguished in extant research and may be simply subsumed into a poll worker category. In short, an office may be staffed by a combination of year-round, full-time employees (which may be elected, appointed, or career); year-round part-time employees; seasonal employees or temporary workers (some hired by the jurisdiction and some brought in through temporary employment agencies); contractors; interns; and, then finally, short-term workers whom we often think of as poll workers. From a human resources perspective, how these people are in-processed may be different. From a functional perspective, where these people work across the election administration subsystems also varies.

Poll Workers

Poll workers are typically not full-time election workers or employees of election offices. They are recruited and trained to assist in the voting process during an election and are the typical interface for voters who cast votes in person. Typical poll worker activities include verifying the identities of those who come to vote, assisting voters with signing documents required to cast a ballot, providing ballots and setting up voting equipment, managing voter flow into and through the poll site, and performing other functions as dictated by the state or local election authority including accessibility and language assistance.

Data collected by the U.S. Election Assistance Commission (EAC) through its voluntary Election Administration and Voting Survey (EAVS) include the number of poll workers deployed, age of poll workers, and ease of recruiting poll workers (EAVS 2022).[16] In 2022, states reported 181,790 precincts and 94,793 physical poll sites at which 64,219,101 poll workers assisted voters with in-person early and election day voting (EAVS 2022). The composition of poll workers typically trends older. EAVS data (2022) indicate that poll worker recruitment challenges have not disappeared but have declined since 2018. More than 15 percent of poll workers in 2022 were serving for the first time. Reported challenges include pay, hours, and locations of service.

Training, Credentialing, and Other Professionalization

Systematic approaches to training, credentialing, and other forms of professionalization have emerged over the past 40 years and include training and certification at the national and state levels, as well as numerous opportunities to gather resources and transfer knowledge both generally and in curated forms of information such as professional or best practices (Hale and Brown 2020). Training initiatives targeted at election office staff include national training programs, certification and credentialing programs, and state-based training programs connected to state associations of election officials or state election offices. The field also places significant emphasis on training temporary poll workers. Election administration functions are supported in many states by state associations of government officials. These associations exist to provide mutual support, education and training for members; some are formally organized, and some are informal groups.

Across the states and territories, as in all other aspects of election administration, there is significant variance in training requirements. Half of the states and territories have statutory requirements, and half do not. This is similar for training mandated from the state chief election

[16] See, e.g., https://www.eac.gov/sites/default/files/2023-06/2022_EAVS_Report_508c.pdf

official (not that these are mutually exclusive). Further, some states offer training through state associations even if not required by the legislature or chief election official of the state. Existing training is offered in a variety of different ways – through state staff, through university-based programs, and through association programs that bring in experts to provide training.

In addition to state certification, the National Association of Election Officials (the Election Center), in partnership with Master of Public Administration Program faculty at Auburn University, established certification in election administration and voter registration for Election Center members including election officials and service providers in the field. The EAC currently offers online training modules and plans a large national training program. The Elections Group, LLC, also offers training materials and has posted on its website a guide to creating a training manual (www.electionsgroup.com).

Other Professionalization

In addition to formal training and certification, three threads of professionalization are apparent in the election administration field. These include university-based education, professional practices that inform the field, and performance measurement approaches embedded in professionalization. The field has undergone significant efforts to capture and measure election performance over the last 20 years. From 2002, HAVA required that the EAC report to Congress. This has been accomplished, at least in part, through the EAVS which captures election output data across the states and jurisdictions, as well as policy information. After the EAVS, the Survey of the Performance of American Elections (SPAE) was launched to capture information about the voter experience – some of which is also captured in the American National Election Survey (ANES) which significantly pre-dates both of these efforts (Stewart 2023). The SPAE was complemented simultaneously by the Democracy Index (Gerken 2009) which attempted to gauge how well states (as aggregates of local jurisdictions) were performing with respect to registration, balloting, and counting. This was followed by the Election Performance Index (EPI) which was built on the Democracy Index and expanded to examine other aspects of election administration (Stewart 2018). Various efforts have expanded on this foundation, e,g., the Election Administration Professionalization Index (Hale and Brown 2020), as well as other nuanced studies designed to capture aspects of election administration accuracy and efficiency.

University-Based Education

Two university-based educational programs support the field. One is the graduate certificate in election administration at Auburn University, which is adjacent to its master's program. The other is the election administration certificate offered at the University of Minnesota. Ad hoc course offerings exist in institutions across the country. In 2015, a systematic effort to identify and link such courses to degree-granting programs was initiated by scholars engaged in the field through the Network of Schools of Public Policy, Affairs, and Administration (NASPAA)[17] through creation of an organized committee on election administration.[18]

[17] NASPAA administers accreditation for higher education programs in public administration, public affairs, and public policy.

[18] Dr. Kathleen Hale was among the founding members of the group and its first chair followed in that role by Doug Chapin and Dr. Thessalia (Lia) Merivaki.

"Best" Practices[19]

The advent of professional practices as a technique for disseminating information and innovation to election officials began in the 1990s with general good government awards through the International Association of Clerks, Recorders, Election Officials, and Treasurers (IACREOT, now known as the International Association of Government Officials, or IAGO). The concept was adopted by the Federal Elections Commission and its National Clearinghouse for Information on the Administration of Elections as the precursor to today's EAC. Around the same time, in 1996, the Election Center (National Association of Election Officials) established awards for professional practices papers. In 2016, the EAC began a similar awards program, their Clearies, as a part of its clearinghouse function.

Poll Worker Training[20]

Poll worker training is widely recommended to address statutory compliance and areas of discretion (e.g., Alvarez and Hall 2006; Burden and Milyo 2015; Hall, Monson, and Patterson 2009; Jones and Stein 2021). Studies associate such training with voter confidence across stages of the process including identification and registration, poll site management, equipment use, and special circumstances such as provisional balloting (Atkeson et al. 2014; Atkeson and Saunders 2007; Burden and Milyo 2015; Claassen et al. 2013; Hall, Monson, and Patterson 2009; Jones and Stein 2021; King 2017).

Workforce Retention

Since 2020, limited analysis indicates a significant number of election officials, as many as one in five (Benenson Strategy Group/Brennan Center for Justice 2023), will soon be leaving the field in greater than expected numbers. This is at least in part due to the contentious nature of working with the public and concerns for personal safety (Edlin and Norden 2023; Gordon et al. 2022; Ramachandran 2022; Waldman 2022).

In the case of election office staff, one consideration is whether increased wages would make a difference in mitigating attrition, given that the field is widely reported to be under-resourced (Gordon, Thorning, and Weil 2022; Hale and Brown 2020; Stewart 2023). No systematic research has been conducted on the effect of increased wages on the election administration workforce; however, inferences can be drawn from both economics and public administration. The evidence supporting a positive influence of increased wages on retention for bureaucrats and politicians is mixed (Altindag, Filiz, and Tekin 2020; Besley 2004; Brewer, Selden, and Facer 1998; Burden and Milyo 2015; Christensen, Paarlberg, and Perry 2017; Clerkin and Coggburn 2012; Frederickson and Hart 1985; Gagliarducci and Nannicini 2013; Katz 1986; Kotakorpi and Poutvaara 2011; Mocan and Altindag 2013; Messner and Polborn 2004; Moynihan and Pandey 2007).

[19] Best practices as an official, government designation connotes a procedure that is generalizable and adaptable based on scientific standards (see., e.g., various examples at www.nist.gov).

[20] This report recognizes the diversity of positions held by part-time, temporary, or seasonal staff in election offices. This section is limited to a discussion of poll workers as no literature examines other categories of non-FTE workers.

Poll Workers

The statutes regarding who can serve as a poll worker and where they can serve vary across the 50 states and U.S. territories and, in many instances, constrain the recruitment and retention efforts of local election officials and opportunities to serve the public. Some jurisdictions require that workers serve in their assigned voting precinct while others allow them to serve anywhere in the county, a concept known as portability. There is also variation in compensation, requirements for training, and work hour requirements on election days (United States Election Assistance Commission 2022). Although compensation and hours of work vary, poll workers generally receive low pay for long hours (Kimball et al. 2010; McAuliffe 2009; Merivaki 2020). These workplace conditions are typically offered as barriers to poll worker recruitment. Burden and Milyo (2015) caution against increasing poll worker pay because of its weak connection to civic duty motivation; increased pay may result in the inclusion of poll workers who are motivated more by monetary reward than civic duty, and such individuals may require more supervision and training.

Conclusions

The gaps in knowledge highlighted in this article suggest that a census of the actual election administration workforce may be useful to facilitate comparisons within or across appropriate subgroups and against the broader public administration workforce. Utility can also be found in studies that examine whether and how training and certification matter and which approaches to training work best for different types of poll workers. Questions exist about whether the array of "best practices" and prevailing wisdom stand up to systematic investigation including whether these practices travel across states and jurisdiction sizes and types. Finally, more research is needed to identify and understand approaches to recruitment and retention that are most effective in ensuring a diverse body of election officials and poll workers and to identify and understand the factors that actually influence recruitment and retention of election officials and poll workers.

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Response to "State of the Field in Election Official and Poll Worker Recruitment, Training, and Retention"

Rachel Harris, *Polk County, Florida*[1]

As an election administrator, the topics of poll worker recruitment, training, and retention are more than just topics of interest. They are among every election office's greatest challenges. Election administrators are forced to grapple with these problems every election cycle, often resorting to brainstorming sessions during the little down time available to us. We have to grow our pool of seasonal poll workers, but we are convinced we should not just hire anyone. We want workers who are passionate about elections, believe in our democracy, are dedicated, and – most importantly – have excellent customer service skills. We need to feel confident our poll workers will give our voters the best voting experience possible, and they will represent the elections office in a manner of which we can be proud.

So it was with much interest that I read this article. Perhaps it could shed more light on what has eluded so many of us election administrators to this day. Perhaps the findings would lead to a formula that could guide us in our endeavors. Although much of the information here is very useful in a theoretical sense and quite interesting, I find it difficult to translate that data into practical terms and apply it in a way that is not already being accomplished.

A topic close to my heart, which has not been touched on and may be worthwhile to research, is how communications and outreach efforts contribute to poll worker recruitment. I believe leveraging various platforms and channels to communicate more effectively can have a significant impact on poll worker recruitment through increased visibility. This can increase awareness of poll worker opportunities to reach a broader and more diverse audience. Additionally, direct communication with potential candidates via outreach activities throughout the community helps build trust and engagement. This can lead to greater poll worker application rates and a higher probability that applicants will see the process through to completion. Yet in comparing notes with my colleagues in other counties and states, I have found that many election offices or election boards may have a communications coordinator but do not have a department or team designated for the purpose of outreach. Those that do may not have considered launching a campaign targeted towards poll worker recruitment. It would be an interesting study to make comparisons between offices that implement outreach efforts in varying degrees and those that do not to determine how significant of an impact varying degrees of efforts have on poll worker recruitment.

By the same token, an interesting subject to evaluate for poll worker retention is social accountability. For example, if an individual decides to get in shape, the individual is much more likely to be successful after developing relationships at a gym rather than attempting to get in shape independently at home. That same logic could be applied to retention of poll workers. It is not always possible to keep the same teams together as several factors comprise the basis for making those decisions. But whenever possible, if the same workers are consistently kept together, they may grow comfortable as a team, which contributes to their desire to return each election, year after year. The power of the team may play an important role in retaining workers and may well be worth keeping in mind.

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[1] Rachel Harris is director of community services for the Supervisor of Elections in Polk County, Florida.

Response to "State of the Field in Election Official and Poll Worker Recruitment, Training, and Retention"

Diane Mullins, *Cook County, Illinois*[1]
Edmund Michalowski, *Cook County, Illinois*[2]

This article offers a timely and much needed focus on the people behind the process of elections. In this time of rising levels of discomfort with the election process, it is necessary to ask the serious question, "How are the people that handle our election process being prepared to do the job?" This article encourages us to look at the workers we entrust with the responsibility of ensuring our inalienable right to vote.

Summary

The primary reporting of this article deals with 1.) workforce demographics; 2.) approaches to training, certifying, professionalizing, or credentialing local election office staff and temporary poll workers; and 3.) workforce development and current stressors pressing on those in the field. This article determined that most of the election administration workforce mirrors the demographics of the larger public administration workforce. Training was looked at through two lenses, permanent employees and temporary workforce, both using adult learning strategies. In both cases certifying and training adults in the field of election administration should be designed and delivered in multiple modalities, and training materials should be accessible in multiple ways. Workforce development mostly focused on election day workers and what motivates their participation. Overall, this article raised issues on how to fortify election administration by looking at what we have, finding better ways to make sure every worker understands the election process and is properly trained for the role, and how to maintain a healthy workforce.

Reflection

According to this article, the election administration workforce comes from a variety of backgrounds and, overall, appears to be older than other public administration sectors. This stands to reason since a lot of election knowledge comes from on-the-job experience. Looking at the general functionality of elections, as stated in this article, the election administrative subsystems are largely the same across the states and territories. According to this article, many election office positions have similar titles with different work responsibilities. If we had a more uniform way to identify what specific roles election officials are responsible for, then we could systematically study what is being done and develop ways to help new workers.

Training in election administration is an area that needs more attention given that the field is distinct from other areas of local civil service. According to this article, systematic approaches to training, credentialing, and other forms of professionalization have only emerged over the past 40 years. When speaking of election administrative management, having a more specific type of training in a formal and more general way could create an arena of comradery and support in the election administration field. The vast majority of the election workforce are one-day poll workers whom we

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entrust to manage local polling locations. It is critical we make sure they are well-trained, confident in what they are doing, and able to interact with the public in a positive way. This article clearly communicates that training, when done with the adult learner in mind, can yield greater public confidence in election workers.

The workforce development view in this article focused on the poll worker. The struggle is getting registered voters to train and work for one day for nominal pay in sometimes challenging conditions. The article seems to reframe the thought by encouraging people to take an opportunity to do their civic duty. It is more advantageous to attract people whose primary focus is not pay but is to do a good job and participate for the sake of democracy.

A major takeaway in this article is the comprehensive way that adult learning methods were analyzed. It is exciting to see the development of election administration and poll workers be highlighted. If we want a better election system, it is necessary for us to invest in developing the people behind the system. A good start is increasing research in election administration education.

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