Verified Voting

February 24, 2025

Education, Energy, and the Environment Committee
Maryland State Senate
100 State Circle
Annapolis, MD 21401
via electronic submission

Dear Chair Feldman and Committee Members,

On behalf of Verified Voting, I write to provide the Committee with information regarding Senate Bill 929, which would establish a Workgroup on Mail–In Ballot Accessibility. Since our founding in 2004 by a group of computer scientists, we have advocated for policies that promote the responsible use of technology in elections. While we do not necessarily oppose a workgroup to study ways to increase accessibility to the ballot, we want to ensure that the study does not include ways to return a voted ballot electronically over the internet.

Four federal government agencies have concluded in a recent risk assessment that electronic ballot return is "High" risk, even with security safeguards and cyber precautions in place. The agencies warn that **electronic ballot return "faces significant security risks to the confidentiality, integrity, and availability of voted ballots," and that these risks can "ultimately affect the tabulation and results and can occur at scale,"** and explicitly recommends paper ballots.[1] The risk assessment was issued by the Federal Bureau of Investigation (FBI), the Department of Homeland Security's Cybersecurity Infrastructure Security Agency (CISA), the U.S. Elections Assistance Commission (EAC) and the National Institute for Standards and Technology (NIST).

In its 2018 consensus report, *Securing the Vote: Protecting American Democracy*, the National Academies of Sciences, Engineering, and Medicine stated bluntly: "At the present time, the Internet (or any network connected to the Internet) should not be used for the return of marked ballots. Further, Internet voting should not be used in the future until and unless very robust guarantees of security and verifiability are developed and in place, as no known technology guarantees the secrecy, security, and verifiability of a marked ballot transmitted over the Internet."[2]

[1] U.S. Cybersecurity and Infrastructure Security Agency, Federal Bureau of Investigation, National Institute of Standards and Technology and the U.S. Election Assistance Commission, Risk Management for Electronic Ballot Delivery, Marking, and Return 1 (2020/2024), available at https://www.cisa.gov/resources-tools/resources/risk-management-electronic-ballot-delivery-marking-and-return.
[2] National Academies of Sciences, Engineering, and Medicine, Securing the Vote: Protecting American Democracy 9, 106 (2018), available at https://verifiedvoting.org/wp-content/uploads/2020/07/National-Academy-Report-_Securing-the-Vote-Protecting-American-Democracy_.pdf.

NIST, the federal agency responsible for issuing cybersecurity standards, conducted research on ways to enhance accessibility for voters with disabilities. In its 2022 report, *Promoting Access to Voting*, NIST did not recommend electronic ballot return, instead concluding, "there remain significant security, privacy, and ballot secrecy challenges."[3]

In late 2022, a blue ribbon panel convened by the University of California, Berkeley's Center for Security in Politics concluded that creating standards for online ballot return, so that it can be done securely and privately, was not feasible. "When internet ballot return is employed," the Working Group wrote, "it may be possible for a single attacker to alter thousands or even millions of votes. And this lone individual could perpetrate an attack from a different continent from the one where the election is being held—perhaps even while under the protection of a rogue nation where there is no concern of repercussions."[4]

We realize and understand that there are real barriers to the ballot for some voters, and we desire to see access to the ballot increased, not diminished. However, efforts to improve accessibility to the ballot must not undermine the fundamental principles of our democracy: private and trustworthy elections that give voters justified confidence that their votes were counted as cast. Electronic ballot return is not private, secure, or verifiable.

In 2023, Verified Voting published a report, *Casting Votes Safely: Examining Internet Voting's Dangers and Highlighting Safer Alternatives* (attached), in which several alternatives to electronic ballot return are explored. Some of these include: Remote Accessible Vote-by-Mail (RAVBM), bringing voting devices directly to voters, making all voting locations accessible, ensuring accessible equipment is available and functioning, making improvements to ballot marking device design and deployment, and providing transportation to voting locations.

As the Committee considers Senate Bill 929, we would ask that you carefully review the information and sets of reports referenced in this letter and narrow the mission of the proposed workgroup so as to not greenlight an inherently risky and dangerous voting option: electronic ballot return. We would welcome the opportunity to provide you—or other lawmakers—further information about the technical aspects and unavoidable and severe risks of electronic ballot return.

Respectfully submitted,

C.Jay Coles
Deputy Director of Legislative Affairs

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[3] National Institute of Standards and Technology, Promoting Access to Voting: Recommendations for Addressing Barriers to Private and Independent Voting for People with Disabilities 48 (2022), https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.1273.pdf.

[4] Michael Alvarez et al., University of California, Berkeley Center for Security in Politics, Working Group Statement on Developing Standards for Internet Ballot Return 10 (2022), https://csp.berkeley.edu/wp-content/uploads/2022/12/Working-Group-Statement-on-Internet-Ballot-Return.pdf. The working group was funded by Tusk Philanthropies, which campaigns for every American to be able to vote on their mobile phone.

October 2023

Casting Votes Safely: Examining Internet Voting's Dangers and Highlighting Safer Alternatives

VerifiedVoting

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Executive Summary

Democracy depends on citizens' trust in our elections, the ability to cast a ballot without obstacles, and having verifiable proof that the winner won and the loser lost. If expanded, internet voting would undermine the fundamental principles of our democracy: private and trustworthy elections that give voters justified confidence that their votes were counted as cast. We address internet voting's dangers and discuss better options that enable voter enfranchisement while still protecting the security of our elections.

Section I summarizes notable consensus studies on internet voting, all determining that its adoption threatens the validity of our elections, and widespread usage could compromise our elections at scale. Privacy concerns arise from the challenge of maintaining both voter anonymity and verification of a voter's identity. An election's integrity could be compromised by malicious actors intercepting, altering, deleting—or even claiming to alter—online ballots.

Section II highlights the importance of accessible elections and prioritizing voter enfranchisement while preserving a voter's right to a secret ballot. It proposes seven options that jurisdictions could implement to serve voters who traditionally experience hardship when voting remotely:

1. Provide Remote Accessible Vote-by-Mail Options
2. Improve Options for Military and Overseas Voters
3. Bring Voting Devices Directly to Voters
4. Make All Voting Locations Fully Accessible
5. Ensure Accessible Equipment is Available and Functioning
6. Make Improvements to Ballot Marking Device Design and Deployment
7. Provide Transportation to Voting Locations

In conclusion, internet voting fails to deliver on both privacy and verifiability, and its widespread use would result in unprovable election outcomes. This report underscores the significance of safeguarding both the democratic process and public confidence in elections. It advocates for innovative solutions that enhance accessibility without compromising verifiability. As election security and public trust remain paramount, the report strongly recommends against internet voting.

Acknowledgements

We are grateful to the following individuals who reviewed and commented on this document prior to publication:

Michelle Bishop, National Disability Rights Network
Jeremy Epstein, National Science Foundation
Dr. Justin Moore

The statements and recommendations in this document are from Verified Voting and do not necessarily reflect the views of these individuals or their employers, including the United States government. Their organizations are listed for identification purposes only.

Introduction

The internet has a valuable role to play in reducing barriers to the ballot box, including helping people register to vote, tracking their ballots, and staying informed about the election process—but casting votes over the internet is fundamentally not safe for our democracy. **Internet voting—also often called "electronic ballot return"—means returning a voted ballot over the internet electronically, including via mobile apps, email, fax, or a website portal.**

Internet voting undermines the fundamental principles of our democracy: private and trustworthy elections that give voters justified confidence that their votes were counted as cast. Internet voting is not private, secure, or verifiable. An election must not just convince the winners that they won, but prove to the losing candidates that they lost. Internet voting's expansion would result in unprovable election results and create grave public distrust in our elections. Our report addresses many concerns for voters and our democracy and offers alternatives that support trustworthy election outcomes.

The Current Landscape

Generally, internet voting is currently limited to a segment of voters—like military and overseas voters—in 32 states, Washington, D.C., and the U.S. Virgin Islands. Over 20 bills have been introduced in 2023 that would introduce or expand internet voting in states including Illinois, Maryland, Michigan, and Wisconsin. Verified Voting tracks current internet voting laws by state, including the type of internet voting, the voters permitted to use it, and links to current laws at verifiedvoting.org/internetvoting.

Section I — A Consensus: Internet Voting is Dangerous

INTERNET VOTING'S UNSOLVABLE VULNERABILITIES

Here we summarize the serious risks identified in the many studies examining internet voting.

Secrecy and privacy in democratic elections help guard against coercion and are essential to maintaining integrity in the electoral process. Every voter has a right to a secret ballot that cannot be traced back to them,[1] but a voter's identity must also be verified to ensure no one else votes in their name. Cybersecurity and elections experts warn that this combination of privacy and verification is unsolvable with current internet voting technology. **Internet voting exposes voters to widespread privacy violations** because online voters must transmit their identifying information with their votes in one single transaction. Although cryptographic methods theoretically allow a voter's identity to be permanently separated from their digital votes, these methods rely on security guarantees far beyond what today's internet can provide. Digitally linking a public identity to private votes is inherently risky.

1 Common Cause, Electronic Privacy Information Center, Verified Voting, *The Secret Ballot at Risk: Recommendations for Protecting Democracy* 1 (2016), https://secretballotatrisk.org/.

In contrast, paper ballot based systems are designed to maintain a voter's privacy because a voter's eligibility is verified before being irreversibly separated from the voter's ballot. When properly implemented, an in-person voter typically checks in at a polling location to verify their identity before proceeding to a separate area to fill out an anonymous ballot. When voting by mail, the voter's identifying information is typically separated from the ballot before the ballots are randomized for tallying.

Internet voting is also vulnerable to attacks. Corporations like banking institutions experience security vulnerabilities in their own online systems and transactions nearly every day, and their substantial budgets are a stark contrast to limitations faced by elections offices operating with small budgets and lean IT personnel. Cybersecurity and elections experts warn that internet voting is unsafe and, if implemented, makes U.S. elections easy targets for attackers who seek to change election outcomes or sow distrust in our democracy. Ballots cast over the internet could be intercepted, deleted, or altered at scale by bad actors. These actors could potentially change election results or create space for mis- and disinformation to spread about valid election outcomes.

Assuming that a voter even has access to a personal technological device and reliable internet,[2] a voter's device and network connection may be insecure.[3] Devices could be corrupted with malware or viruses that could tamper with a ballot and interfere with ballot transmission. Malware could spread to the elections office computer receiving the online ballot, potentially impacting all of the ballots received by the same computer and compromising elections infrastructure.[4] Elections websites and databases are also vulnerable; they could expose voters to identity theft or become manipulated or spoofed to confuse voters.[5]

Voter-verified paper ballots are recommended by election and cybersecurity experts as the most secure option for voting because they are a tangible voting record that can be audited and recounted to confirm election results. Internet voting cannot provide a paper ballot. Even if an election official prints an electronically returned digital ballot, the voter never interacted with that printed version and cannot verify it is correct.

2 *See* Erika Hudson & Michelle Bishop, National Disability Rights Network, *Blocking the Ballot Box: Ending Misuse of the ADA to Close Polling Places* 33 (Curtis Decker, David Hutt, Eric Buehlmann, Tina Pinedo, Kenneth Shiotani & David Card eds., 2020), https://www.ndrn.org/wp-content/uploads/2020/01/NDRN_Blocking_the_Ballot_Box_2020.pdf.

3 *See e.g.*, Verizon, Network Detection and Response, https://www.verizon.com/business/resources/solutionsbriefs/verizon-network-detection-and-response/ (last visited Aug. 9, 2023).

4 In this case, not only is the voter's ballot affected, but so too could be other ballots received by the same computer, as well as other aspects of the election infrastructure (e.g., if the ballot intentionally or accidentally contains ransomware).

5 *See* American Association for the Advancement of Science, *Internet or Online Voting Remains Insecure*, https://www.aaas.org/epi-center/internet-online-voting (last updated Mar. 10, 2021).

CONSENSUS STUDIES EXAMINING INTERNET VOTING

Internet voting has been assessed many times and always comes up short. Below we highlight notable studies. More studies—including those of some systems currently being marketed—are available at verifiedvoting.org/internet-voting-resources/.

Securing the Vote: Protecting American Democracy (2018)

National Academies of Sciences, Engineering, and Medicine

In its 2018 consensus report, *Securing the Vote: Protecting American Democracy,* the National Academies of Sciences, Engineering, and Medicine stated bluntly:

At the present time, the Internet (or any network connected to the Internet) should not be used for the return of marked ballots. Further, Internet voting should not be used in the future until and unless very robust guarantees of security and verifiability are developed and in place, as no known technology guarantees the secrecy, security, and verifiability of a marked ballot transmitted over the Internet.[6]

Report of the Select Committee on Intelligence on Russian Interference (2019)

U.S. Senate Select Committee on Intelligence

In 2019, the bipartisan U.S. Senate Select Committee on Intelligence reported on its findings that foreign governments were actively trying to attack American election systems. As part of that report, the Committee determined, "States should resist pushes for online voting.... While the Committee agrees states should take great pains to ensure members of the military get to vote for their elected officials, no system of online voting has yet established itself as secure."[7]

Risk Management for Electronic Ballot Delivery, Marking, and Return (2020)

CISA, EAC, FBI & NIST

Four federal government agencies—the Department of Homeland Security's Cybersecurity and Infrastructure Security Agency (CISA), the U.S. Election Assistance Commission (EAC), the Federal Bureau of Investigation (FBI), and the National Institute of Standards and Technology (NIST)—concluded in a risk assessment ahead of the 2020 election that "electronic ballot return" is "high-risk," even with security safeguards and cyber precautions in place. The agencies warn that electronic ballot return "faces significant security risks to the confidentiality, integrity, and availability of voted ballots," and that these risks can "ultimately affect the tabulation and results and can occur at scale," and explicitly recommend paper ballots.[8]

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6 National Academies of Sciences, Engineering, and Medicine, *Securing the Vote: Protecting American Democracy* 9, 106 (2018), available at https://verifiedvoting.org/wp-content/uploads/2020/07/National-Academy-Report-_Securing-the-Vote-Protecting-American-Democracy_.pdf.

7 S. Rep. No. 116-290, vol. 1, at 59–60 (2019), available at https://www.intelligence.senate.gov/sites/default/files/documents/Report_Volume1.pdf.

8 U.S. Cybersecurity and Infrastructure Security Agency, U.S. Election Assistance Commission, Federal Bureau of Investigation & National Institute of Standards and Technology, *Risk Management for Electronic Ballot Delivery, Marking, and Return* 1 (2020), available at https://s.wsj.net/public/resources/documents/Final_%20Risk_Management_for_Electronic-Ballot_05082020.pdf.

Promoting Access to Voting: Recommendations for Addressing Barriers to Private and Independent Voting for People with Disabilities (2022)

National Institute of Standards and Technology

NIST, the federal agency responsible for issuing cybersecurity standards, conducted research on ways to enhance accessibility for voters with disabilities. In its 2022 report, *Promoting Access to Voting*, NIST did not recommend electronic ballot return, instead concluding, "there remain significant security, privacy, and ballot secrecy challenges."[9]

Working Group Statement on Developing Standards for Internet Ballot Return (2022)

University of California, Berkeley Center for Security in Politics

In late 2022, a blue ribbon panel convened by the University of California, Berkeley's Center for Security in Politics concluded that creating standards for online ballot return, so that it can be done securely and privately, was not feasible. "When internet ballot return is employed," the Working Group wrote, "it may be possible for a single attacker to alter thousands or even millions of votes. And this lone individual could perpetrate an attack from a different continent from the one where the election is being held – perhaps even while under the protection of a rogue nation where there is no concern of repercussions."[10]

Section II — Recommendations for More Accessible and Inclusive Elections

Accessible elections remove barriers that might prevent individuals from exercising their right to vote and are designed to enable the full participation of all eligible voters. Examples include providing accessible polling places, voting materials, vote-by-mail, secure ballot drop boxes, assistive devices, voter education, and having reasonable deadlines to ensure every voice is heard. **Making elections more accessible and reducing barriers to voting are important goals that we must continue to work towards while still maintaining the integrity and security of our elections.**

With the right resources, jurisdictions can give voters options that are safe and secure without resorting to internet voting systems with known security risks. **This section identifies seven promising solutions for voters who traditionally experience hardship when voting remotely, including voters with disabilities and military and overseas voters.**

9 National Institute of Standards and Technology, *Promoting Access to Voting: Recommendations for Addressing Barriers to Private and Independent Voting for People with Disabilities* 48 (2022), https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.1273.pdf.

10 Michael Alvarez et al., University of California, Berkeley Center for Security in Politics, *Working Group Statement on Developing Standards for Internet Ballot Return* 10 (2022), https://csp.berkeley.edu/wp-content/uploads/2022/12/Working-Group-Statement on-Internet-Ballot-Return.pdf. The working group was funded by Tusk Philanthropies, which campaigns for every American to be able to vote on their mobile phone.

1. Provide Remote Accessible Vote-by-Mail Options

Remote Accessible Vote-by-Mail (RAVBM) allows voters to electronically receive and mark a ballot using a remote ballot marking system or their own computer or tablet software program (e.g., Adobe Acrobat) and then return their ballot by mail, to a drop box, or to their jurisdiction's elections office.[11] Voting by mail has become more widely available, allowing more voters to cast their ballots from their residence, but it is not accessible to all voters. Although RAVBM does not replace providing accessible systems in polling places and is not completely accessible for some voters, providing this option to voters with disabilities gives an equitable alternative to traditional vote-by-mail for voters without disabilities.[12]

RAVBM Process

RAVBM implementation varies by state. Eligible voters typically make a request to their elections office to use RAVBM.[13] In some jurisdictions, the process for delivery, marking, and returning RAVBM ballots is similar to the process for traditional vote-by-mail; in others, it differs.[14] In states that offer voters an accessible ballot—but not a remote ballot marking system—eligible voters may download their ballot on their own device, mark it using their own software and, if applicable, assistive technology, and print and return the ballot according to the rules in their jurisdiction. Eligible voters using a remote ballot marking system complete a similar process but mark their ballot using a commercial or state-developed browser-based program.

Needed Improvements

Remote ballot marking systems are available to some voters in more than half of U.S. states, with most systems limited to military and overseas voters.[15] Because many of these systems were developed by states using Federal Voting Assistance Program (FVAP) grants that were first offered in 2011 to develop online tools for blank ballot request and delivery for military and overseas voters, they were not developed with accessibility in mind. Every jurisdiction providing an accessible ballot or remote ballot marking system should ensure it is designed for use by all voters and follows best practices.[16] A 2020

11 *See e.g.*, California Secretary of State, *Remote Accessible Vote-By-Mail (RAVBM)*, https://www.sos.ca.gov/elections/voting-resources/remote-accessible-vote-mail (last visited Aug. 2, 2023).

12 *See* Lynn Baumeister, Whitney Quesenbery & Sharon Laskowski, National Institute of Standards and Technology, *Administering Accessible Vote by Mail Systems: Challenges and Innovations in Elections Offices* 6 (2023), https://doi.org/10.6028/NIST.VTS.100-1 ("[Offering accessible vote-by-mail] does not remove the requirement or need to provide accessible voting machines at in-person voting locations but provides the same option (voting by mail) to voters with disabilities that is offered to other voters.").

13 *Id.*, at 9.

14 *Id.*, at 10.

15 *See* Verified Voting, *The Verifier — Election Day Equipment — November 2024*, https://verifiedvoting.org/verifier/ (last visited Aug. 2, 2023).

16 *See generally* Sharon Laskowski, Shaneé Dawkins, Whitney Quesenbery, Nancy Frishberg, Pam Smith & Keith Instone, *Remote Ballot Marking Systems: Designing for usability, accessibility, and security* (2016), https://civicdesign.org/wp-content/uploads/2015/09/Principles-for-remote-ballot-marking-systems-16-0210.pdf.

lawsuit[17] brought by several disability rights organizations against the New York State Board of Elections foregrounds typical issues: the Board's initial creation of an electronically fillable PDF ballot that was intended to be screen-readable using common assistive technology, like Job Access with Speech (JAWS) software, Apple VoiceOver, or Android TalkBack, was difficult or impossible for some voters to use.[18] Disability advocates and users of the fillable PDF provided comments on the available system and, by 2022, the Board contracted with a remote ballot marking system provider, which, according to a voter, produced a "quick and easy" voting experience.[19] In other cases, voters have experienced difficulties finding their completed PDF ballots after downloading them, as well as completing the verification, signature, and enveloping processes.[20]

Additional ways to bolster accessibility include providing self-sealing prepaid envelopes for ballot return; including tactile markers and allowing signatures anywhere on the envelope; waiving requirements for witness or notary signatures; allowing anyone to return the voter's ballot for them; and including information about remote accessible vote-by-mail options in communications with voters.[21] When in place, well-designed RAVBM can be scaled up as needed to serve voters displaced by emergencies or voters unexpectedly in a hospital or nursing facility.[22]

Some remote ballot marking systems also present security concerns by sending voters' selections, "coupled with their identities, to an online service when generating marked ballots."[23] Jurisdictions providing remote ballot marking systems should use client-side systems, which reduces unnecessary risks to ballot secrecy and integrity by generating marked ballots locally in the voter's browser.[24] The most secure remote ballot marking systems do not require the voter to remain connected to the internet throughout their voting session.

17 *Hernandez v. N.Y. State Bd. of Elections*, 479 F. Supp. 3d 1, 4 (S.D.N.Y. 2020).

18 Tamia Fowlkes, *After Email-Based Voting Draws Criticism, NY Board of Elections Revamps Accessible Voting*, Columbia News Service (Nov. 7, 2022), https://columbianewsservice.com/2022/11/07/after-email-based-voting-draws-criticism-ny-board-of-elections-revamps-accessible-voting/.

19 *Id*.

20 *See E.g.*, Disability Rights Pennsylvania, *2020 Election Access Report* 34, 27–38 (2021), https://disabilityrightspa.org/wp-content uploads/2021/06/Election-Report-Final-060221.pdf.

21 *See* National Disability Rights Network, *Vote by Mail Must be Accessible to Voters with Disabilities* (Aug. 18, 2020), https://www.ndrn.org/resource/vote-by-mail-must-be-accessible-to-voters-with-disabilities/; *see also* Merced County, *What is Remote Accessible Vote by Mail?*, https://www.countyofmerced.com/Faq.aspx?QID=852 (last visited June 5, 2023) ("I am unable to make a "mark". Can I still vote using RAVBM?").

22 Baumeister et al., *supra* note 12, at 11–12.

23 Michael A. Specter & J. Alex Halderman, *Security Analysis of the Democracy Live Online Voting System* 20, (2020) ("Depending on which services [an adversary] compromised, they could change the code delivered to clients, steal sensitive private information, or modify election data, including voted ballots.") https://internetpolicy.mit.edu/wp-content/uploads/2020/06/OmniBallot.pdf.

24 *Id*.

2. Improve Options for Military and Overseas Voters

Missing the ballot return deadline has been the most common reason for ballot rejection among military and overseas voters in every presidential election since at least 2008.[25] Although overseas military voters can use free expedited mail return[26] and many states accept late-arriving ballots from military voters as long as they are postmarked by Election Day, some states still require ballots to be received on or before Election Day. States not currently doing so should consider counting military ballots postmarked by Election Day and received up to seven days after, which would give election officials in most states enough time to count our troops' ballots before certification. Extending ballot receipt deadlines logically reduces rejection due to lateness. In 2014, California extended its deadline for mailed ballots—from Uniformed and Overseas Citizens Absentee Voting Act (UOCAVA) voters and non-UOCAVA voters alike—to accommodate for almost all late-arriving ballots, which tended to arrive within three days after Election Day.[27] However, an extended deadline must be paired with voter information about the postmark requirements: late-arriving ballots still account for a large percentage of rejected vote-by-mail ballots in some California counties—but nearly 100% of late ballots are postmarked after Election Day.[28]

States should also inform their military and overseas voters about electronic blank ballot delivery options. In 2009, the MOVE Act expanded UOCAVA[29] to require states to send ballots to eligible voters 45 days prior to Election Day and to offer electronic transmission of blank ballots to military and overseas voters.[30] UOCAVA voters who choose to have ballots delivered electronically are more likely to actually receive their ballots than those who choose to have them delivered via postal mail.[31] In 2020, voters who requested their ballot after the 45-day deadline tended to return their ballots very close to Election Day, leading the Federal Voting Assistance Program (FVAP) to suggest that UOCAVA voters—

25 *See e.g.*, Federal Voting Assistance Program (FVAP), *2020 Report to Congress* 57 (July 27, 2020), https://www.fvap.gov/uploads/FVAP/Reports/FVAP-2020-Report-to-Congress_20210916_FINAL.pdf. In 2020, of ballots rejected, 44.7% of rejected military ballots and 41.3% of rejected overseas citizens' ballots were due to missing the return deadline.

26 United States Postal Service, *Frequently Asked Questions: Priority Mail Express Label 11-DOD for Military Absentee Ballots* (2020), https://about.usps.com/what/government-services/election-mail/pdf/military-absentee-ballot-faqs.pdf.

27 Erin McGhee with Daniel Krimm, Public Policy Institute of California, *Expanding California's Electorate Will Recent Reforms Increase Voter Turnout?* 11–12 (2014), https://www.ppic.org/wp-content/uploads/content/pubs/report/R_114EMR.pdf. In 2012, at least one of every five uncounted vote-by-mail ballots in 31 counties surveyed was rejected due to lateness. Twenty-four of the 31 counties provided more detailed data about the lateness of the ballots: ballots that arrived later than three days after the election accounted for about 4% of all late ballots across those counties. In two of the 24 counties, ballots that arrived later than three days after the election accounted for more than 15% of such ballots.

28 Kim Alexander & Dr. Mindy S. Romero, California Voter Foundation, *Improving California's Vote-by-Mail Process by Reducing Ballot Rejection: A Three-County Study* 5–6, 20–21 (2020), https://www.calvoter.org/sites/default/files/cvf_rejected_ballots_report.pdf.

29 Uniformed and Overseas Citizens Absentee Voting Act (UOCAVA), 52 U.S.C. §§ 20301–20311, 39 U.S.C. § 3406, 10 U.S.C. § 1566, and 18 U.S.C. §§ 608–609.

30 The MOVE Act amended provisions of UOCAVA, as part of the National Defense Authorization Act for Fiscal Year 2010 (Pub. L. No. 111–84)

31 *The UOCAVA Voting Process by World Region* (2022), https://www.fvap.gov/uploads/FVAP/Reports/Issue-Brief-3-UOCAVA-Voting-Process-by-World-Region.pdf. Of the 0.2% of ballots delivered to overseas UOCAVA voters that were returned as undeliverable, the majority were sent via postal mail to voters who had filed a ballot request before the election year, indicating that their address may have become outdated.

especially those in remote locations—request their ballots before the 45-day deadline.[32]

States must also publish clear instructions for completing the Federal Post Card Application (FPCA), if applicable, and Federal Write-In Absentee Ballot (FWAB).[33] States that still require the FPCA could allow UOCAVA voters to use the FWAB to both register and vote, instead of requiring first the FPCA and then the FWAB—the military voter equivalent of Election Day voter registration. This change would save voters half the time[34] and decrease deadline-related rejection rates.[35] In the last several federal elections, 60% of active duty military voters who did not vote reported their reason for not voting was lack of motivation—some "did not want to vote."[36] Similarly, in 2020, the percentage of overseas citizens who lacked motivation or interest in the election was nearly equal to the percentage of voters who experienced obstacles, like an unreliable foreign postal service.[37] To increase the return of voted ballots, states should make the voting process easier and more accessible with simple, common-sense improvements and also cultivate interest in voting. Improving the voting experience for servicemembers and overseas citizens is consequential, but online voting is not the answer.

3. Bring Voting Devices Directly to Voters

Voters unable to leave their residence should be provided other options for voting from home.[38] At a minimum, states should allow these voters to receive an emergency paper ballot. More than half of U.S. states provide emergency paper ballots to voters who are unable to vote on Election Day due to unforeseen medical reasons, and in at least 18 states local election offices will deliver paper ballots to voters who are hospitalized.[39]

Some voters are unable to feasibly mark emergency paper ballots without assistance, including voters with visual impairments or those with print disabilities that prevent them from holding or folding a printed ballot.[40] Without assistive technology, their only option is to receive assistance from another individual—a violation of the voter's right to a secret ballot. Jurisdictions should bring voting tools to voters where they are to better serve them. In the City and County of San Francisco, voters can request that election workers bring a Ballot Marking Device (BMD) to them at a hospital, assisted living facility,

32 *Id.*, at 2.

33 Voter confusion about requirements may lead to higher ballot return rejection rates. *See* FVAP, *supra* note 25, at 58.

34 *See id*, at 77.

35 *See id*, at 54. In 2020, 2.7% of UOCAVA FPCAs were rejected: 3.3% were military members and 2.3% were overseas citizens. Of these rejections, 15.2% were due to the elections office receiving the form after the state's absentee ballot request deadline.

36 *Id*., at 14. In 2020, 60% of active duty military members who did not vote stated lack of motivation—they did not want to vote.

37 *See id*., at 18.

38 Voters who vote from their residence also include voters who reside in institutions, like nursing homes or group homes. *See generally* National Disability Rights Network, *Voting Rights of Institutionalized People with Disabilities*, (June 2, 2022), https://www.ndrn.org/resource/voting-rights-of-institutionalized-people-with-disabilities/.

39 Bernard J. Wolfson, *In the hospital? You can still vote in California and most other parts of the country*, Los Angeles Times (Oct. 9, 2020), https://www.latimes.com/science/story/2020-10-29/hospital-patients-can-still-vote-in-california-and-most-other-parts-of-the-country.

40 *See e.g.*, Colo. Rev. Stat. § 1-5-706(2)(d).

or the voter's home.[41] In Multnomah County, Oregon, the Voter Assistance Team (VAT) can provide a variety of options to meet voters where they are, including delivering and picking up ballots; bringing a printer to voters who do not own one so voters can use their own computer or tablet; and, if needed, providing assistive technology so voters can mark and print a ballot at home.[42] In states that already provide some voters a remote ballot marking system, this option can be scaled up to include voters in unforeseen situations.

4. Make All Voting Locations Fully Accessible

Federal laws require in-person voting locations to be accessible.[43] This requirement is grounded in broader democratic principles: all citizens must have an equal opportunity to vote, irrespective of physical, mental, or social barriers. However, even in the most recent presidential election, voters with disabilities experienced difficulty voting in person at about twice the level of voters without disabilities.[44] During the 2022 federal election period, hundreds of voters called the Election Protection hotline about polling place access issues; the number was nearly one thousand in 2020.[45] In the May 2023 primary in Philadelphia—with a high-profile mayoral race on the ballot—only about one-third of the city's precincts offered voting in buildings that are considered "fully accessible," meaning voters must use an alternate entrance, request that a ramp be brought out, and may not have accessible parking available.[46] According to the National Disability Rights Network, accessible buildings have permanent ramps, power-assisted "push button" doors, wide entries, and permanent signage for accessible parking spaces and paths of travel.[47] Common barriers to access include narrow parking spaces that lack access aisles, poorly maintained and dangerous sidewalks, narrow door entrances with round knob handles, narrow

41 *See* City and County of San Francisco Department of Elections, *Meeting Minutes: Voting Accessibility Committee (VAAC)* 3 (Mar. 24, 2022) https://sfelections.sfgov.org/sites/default/files/Documents/GetInvolved/20220324_VAAC_Meeting_Minutes.pdf.

42 *See* Multnomah County, Accessible Voting Options, https://www.multco.us/elections/accessible-voting-options/ (last visited June 7, 2023); *see also* Multnomah County Elections (@multcoelections), Instagram, https://www.instagram.com/p/CgiQbtdvbbk/ (July 27, 2022).

43 *See* Americans with Disabilities Act (ADA), 42 U.S.C. § 12101 et seq. (1990); *see also* Voting Accessibility for the Elderly and Handicapped Act, 42 U.S.C. § 1973 *et seq*. (1984).

44 Dr. Lisa Schur & Dr. Douglas Kruse, Rutgers University, *Disability and Voting Accessibility in the 2020 Elections: Final Report on Survey Results Submitted to the Election Assistance Commission* 5 (2021), https://www.eac.gov/sites/default/files/voters/Disability_and_voting_accessibility_in_the_2020_elections_final_report_on_survey_results.pdf. In-person voters with disabilities have experienced a decrease in difficulties voting generally since 2012. *See also* U.S. Government Accountability Office, *Voters with Disabilities: Observations on Polling Place Accessibility and Related Federal Guidance* 19 (2017), https://www.gao.gov/assets/gao-18-4.pdf. Of 137 voting stations surveyed at 178 polling places in the November 2016 election, 89 were set up in ways that could impede the casting of a private and independent vote, including not having a voting system set up and powered on, not having earphones available, and not being set up to accommodate wheelchairs.

45 866-OUR-VOTE hotline, administered by the Lawyers' Committee for Civil Rights Under Law, Election Protection OVL dashboard (Nov. 3, 2020 and Nov. 8, 2022) (unpublished hotline tickets, which are created from calls to the hotline).

46 Laura Benshoff, *Despite advances, Philadelphia still falls short of providing equal polling place access to disabled voters* (May 8, 2023), https://pennsylvania.votebeat.org/2023/5/8/23060264/philadelphia-election-voting-rights-disability-ada-polling-place-access.

47 *See* National Disability Rights Network, *Polling Places Remain Inaccessible to Voters with Disabilities*, *Here's How to Fix Them* (August 18, 2020), https://www.ndrn.org/resource/polling-places-remain-inaccessible-to-voters-with-disabilities-heres-how-to-fix-them/.

hallways with protruding drinking fountains, and voting areas with narrow routes and loose power cords.[48]

The U.S. Department of Justice (DOJ), which enforces the Americans with Disabilities Act (ADA) of 1990,[49] examines polling places for accessibility. For example, in the City of Chicago in 2016, the DOJ and Equip for Equality, the federally funded protection and advocacy (P&A) system for people with disabilities in Illinois, determined that many of Chicago's 1,500 voting locations were inaccessible to voters who use wheelchairs, have mobility impairments, are blind, or have vision impairments.[50] Typically, DOJ investigations result in a settlement agreement that requires accessibility modifications or relocation to more accessible buildings.[51] This occurred in Chicago, where the Board of Elections committed to making all voting locations accessible by the 2018 general election. It remains a work in progress: in the 2022 general election, only 10% of voting locations were fully ADA-compliant,[52] although the Board of Elections—in collaboration with Equip for Equality—recently introduced a temporary system to classify the accessibility of voting locations, with a focus on voters with mobility impairments, until they reach 100% ADA compliance for all voting locations.[53]

When making voting locations more accessible or when considering relocation, election administrators should include voters with disabilities in their design planning.[54] If permanent alterations to improve accessibility are not feasible, election workers can still make temporary improvements for the election period, including marking off accessible parking spots with designated signs, adding temporary ramps, and even propping open inaccessible doors.[55]

48 *See generally* U.S. Department of Justice, Disability Rights Section, *Solutions for Five Common ADA Access Problems at Polling Places* (2014), https://archive.ada.gov/ada_voting/voting_solutions_ta/polling_place_solutions.pdf; *see also* Hudson & Bishop, *supra* note 2, at 20–24

49 42 U.S.C. § 12101 *et seq*.

50 U.S. Attorney's Office, Northern District of Illinois, *United States Announces Settlement with Chicago Board of Elections to Ensure Compliance with Americans with Disabilities Act* (Apr. 20, 2017), https://www.justice.gov/usao-ndil/pr/united-states-announces-settlement-chicago-board-elections-ensure-compliance-americans; *see also* Hudson & Bishop, *supra* note 2, at 45–46. The DOJ reviewed more than 100 voting locations in the 2016 primary election; Equip for Equality inspected an additional 1,000 voting locations in the general election, finding even more inaccessible polling places.

51 *See* Hudson & Bishop, *supra* note 2, at 45–46.

52 Kinsey Crowley, A.D. Quig & Kori Rumore, Chicago election: *Voters with disabilities still face obstacles at scores of polling places*, Chicago Tribune (February 27, 2023), https://www.chicagotribune.com/politics/elections/ct-chicago-elections-voter-accessibility-ada-20230227-j4ms437qlfcptcumiwswetpbxy-story.html

53 Chicago Board of Elections, *Chicago Board of Elections Releases New Accessibility Tiers for Polling Places Ahead of Election Day on Feb. 28th* (2023), https://app.chicagoelections.com/Documents/general/Chicago%20Board%20of%20Elections%20Releases%20New%20Accessibility%20Tiers%20for%20Polling%20Places%20Ahead%20of%20Election%20Day.pdf. In the 2023 primary election, 302 voting locations were highly or fully ADA-compliant, 143 had medium accessibility, and 327 had low or no accessibility; all Early Voting sites in Chicago are fully ADA-compliant and operate as vote centers for any voter in the jurisdiction to use on Election Day.

54 National Disability Rights Network, *supra* note 47.

55 *Id*.

Where allowed by law, jurisdictions must also follow best practices to support curbside voting, which enables voters to cast a ballot in person outside of their voting location.[56] Election workers should provide informative and visible signage, ensure accessible parking is available, and offer appointments. Poll workers must be properly trained on how to assist curbside voters with accessible equipment, if needed, and allow them to mark ballots privately.

5. Ensure Accessible Equipment is Available and Functioning

The Help America Vote Act (HAVA) of 2002[57] requires that each voting location used in federal elections be equipped with at least one accessible voting machine, like a Ballot Marking Device (BMD) or Direct Recording Electronic (DRE) voting machine. However, on Election Day, the Election Protection hotline invariably receives calls from voters who are unable to vote privately and independently because accessible equipment is not properly set up or functioning, or because poll workers are unfamiliar with the equipment and thus unable to assist them.[58] To wit: resulting from a 2016 change in voting equipment, the National Federation of the Blind (NFB) sued the state of Maryland, alleging that, because of poor poll worker understanding of BMDs and the identifiability of the BMD-produced ballots, blind voters had—and would continue to have—an unequal voting experience.[59] Poll workers are often the primary point of contact for voters and must be comprehensively trained on all equipment in use. In Maryland, the court noted that "the best way" to ensure poll workers could better assist voters using BMDs would be through "increased hands-on training."[60]

The National Disability Rights Network also suggests that jurisdictions consider dedicating one election worker per voting location to accessibility. This poll worker would be tasked with becoming expert in the accessible equipment, ensuring the location is ADA-compliant, and supporting voters with disabilities who need assistance.[61] Especially when a jurisdiction starts using new equipment, poll workers should be given sufficient opportunities to practice using the new equipment so they are able to assist voters and troubleshoot issues, if needed.

6. Make Improvements to Ballot Marking Device Design and Deployment

Accessible equipment must give voters a meaningful opportunity to verify that machines accurately recorded their vote selections. Voting machines that retain paper records behind a window or have "cast ballot" pop ups that cover the ballot review screen make verification nearly impossible for many voters

56 *See* U.S. Election Assistance Commission, *Curbside Voting (2022),* https://www.eac.gov/sites/default/files/electionofficials/QuickStartGuides/Curbside_Voting_EAC_Quick_Start_Guide_508.pdf.

57 52 U.S.C. § 21081 *et seq*.

58 *E.g.*, 866-OUR-VOTE hotline, *supra* note 45.

59 *Nat'l Fed'n of Blind, Inc. v. Lamone*, 438 F. Supp. 3d 510 (D. Md. 2020).

60 *Id*., at 541 ("Simply requiring everyone to use BMDs does not automatically mean that every election judge will know how to walk a voter through the voting process step-by-step. The best way to do that is through increased hands-on training.").

61 National Disability Rights Network, *supra* note 47.

with disabilities.[62] In any jurisdiction using BMDs, voters should be reminded to check their ballots after marking them and again after printing—critically, voters should be reminded before casting their ballots at the scanner or ballot box.[63] When jurisdictions use BMDs that produce paper ballot formats that differ from the hand-marked paper ballots used by most voters and those BMDs are used by only a few voters, the privacy of those voters' ballots is put at risk.[64]

In Maryland, the paper ballots produced by the BMDs in use showed only voters' selections and differed in size and shape, making them distinguishable from hand-marked ballots.[65] As a result of a settlement, the State Board of Elections agreed to ensure at least 50% of all Election Day polling places have at least two BMDs, to offer both hand-marked paper ballots and BMDs neutrally to all voters, and to attempt to have at least 10 voters at each polling place use the BMDs.[66] In jurisdictions similarly using BMDs that produce distinguishable ballots, to preserve ballot anonymity, quality assurance, and voter dignity, a variety of voters in a polling place should be offered BMDs as a voting option. As appropriate, jurisdictions could consider implementing procedures like training poll workers to explicitly invite every 20th voter to use a BMD.[67]

7. Provide Transportation to Voting Locations

Access to a vehicle has a substantial impact on a voter's ability to vote. A pair of Harvard researchers studied in-person Election Day voter turnout in Michigan, which was chosen because car ownership statistics represent those throughout the U.S., finding that 66% of voters with access to a household car voted in person on Election Day in the 2018 general election, while only 36% of voters without access to a car voted.[68] People with disabilities are even less likely than people without disabilities to own

62 Other barriers to verification include the inability to print ballots in languages other than English and the encoding of voters' selections in barcodes.

63 *See e.g.*, Matthew Bernhard et al., *Can Voters Detect Malicious Manipulation of Ballot Marking Devices?* (2020), https://ieeexplore.ieee.org/document/9152705.

64 Verified Voting, *Policy on Direct Recording Electronic Voting Machines and Ballot Marking Devices* 8 (2019), https://verifiedvoting.org/wp-content/uploads/2020/06/VV-BMD-Policy-V4.pdf.

65 *Nat'l Fed'n of Blind, Inc. v. Lamone*, 438 F. Supp. 3d 510, 518 (D. Md. 2020) (quoting 98 Md. Op. Att'y Gen. at 166).

66 Pamela Wood, *Maryland settles lawsuit over machines used by blind voters*, The Baltimore Sun (Sept. 1, 2021) https://www.baltimoresun.com/politics/bs-md-pol-blind-voting-20210901-gvppd2wtaveijalyaz5hh7t7l4-story.html. Maryland was also required to contribute $2,000 toward the NFB's production of an educational video about working with blind people at the polls and, upon its next election equipment upgrade, to ensure that hand-marked paper ballots and BMD-produced ballots are similar in shape and size.

67 *See* Verified Voting, *supra* note 64.

68 Justin de Benedictis-Kessner & Maxwell Palmer, *Driving Turnout: The Effect of Car Ownership on Electoral Participation,* Political Science Research and Methods 3–4 (Oct. 6, 2021), https://maxwellpalmer.com/research/jdbk_mp_driving_turnout.pdf. The authors of the study controlled for demographic and geographical characteristics that might affect participation rates and ruled out most other explanations for differences in turnout, determining that access to a car has a consistently positive effect on participation.

or have access to a car; they are also more likely to use public transportation.[69] In 2018, the National Federation of the Blind (NFB) began partnering with the rideshare company Lyft to offer $15 promotion codes through NFB affiliates in Colorado, Maryland, Massachusetts, Nevada, Ohio, Tennessee, Texas, Utah, Virginia, Washington, and Wisconsin.[70] NFB also helps arrange free rides to voters who live farther away from a voting or dropbox location, or in areas where Lyft doesn't operate. In 2020, the NFB again partnered with Lyft, with the Texas affiliate office seeing increasing interest in the program from the outset of early voting.[71]

When choosing voting locations, election administrators should consider driving distances, availability of public transportation, and rideshare availability in the area. "Polling place closures and consolidations could disproportionately impact young, lower-income, Black, Hispanic and disabled voters.[72] Voters from the Michigan study who did not have access to a household car and lived more than a 40-minute drive from their voting location were found to be the least likely to vote.[73] Election administrators should advertise any free or low-cost ride to the poll programs and reach out to local democracy organizations to develop programs to help fill transportation gaps.

Conclusion

The internet promises much, but when it comes to voting, unfortunately it fails to deliver on both privacy and verifiability. Subjecting military voters and voters with disabilities to a voting system that is less secure defies the democratic principle that all voters have the right to a safe and secure system in which they can justifiably be confident their votes count. Promising examples shared in this report highlight the innovative ways in which election officials are making their elections accessible, and more research and collaboration—plus sustained, adequate funding for election officials—is needed to improve voting accessibility in ways that do not create risk to our elections. At a time when election security and public confidence are under relentless attack, we cannot resort to insecure internet voting technology—the stakes are too high.

69 Bureau of Transportation Statistics, *Travel Patterns of American Adults with Disabilities* (Jan. 3, 2022), https://www.bts.gov/travel-patterns-with-disabilities. 22% percent of non-workers with disabilities and 12.2% of workers with disabilities live in zero-vehicle households. In the U.S. 8.7% of all residents have no access to a car.

70 National Federation of the Blind, *A Lyft to the Polls* (Nov. 1, 2018), https://nfb.org/blog/lyft-polls.

71 Jennifer Liu, *How voting rights groups are providing free and safe transportation to the polls during the pandemic*, CNBC (Oct. 26, 2020), https://www.cnbc.com/2020/10/26/free-discounted-transportation-options-to-get-to-your-polling-place.html.

72 *Id.*; *see also* Natalie Landreth, *Why should some Native Americans have to drive 163 miles to vote?*, The Guardian (June 10, 2015), https://www.theguardian.com/commentisfree/2015/jun/10/native-americans-voting-rights.

73 Benedictis-Kessner & Palmer, *supra* note 68, at 7–8. Car access did not affect whether voters were more likely to complete absentee ballots.