Introduction

Tens of millions of eligible Americans are not registered to vote, and they are disproportionately younger, lower-income and people of color. Although many unregistered Americans express no interest in voting, over a quarter surveyed reported an intention to register but hadn’t had the time, didn’t know how or found it inconvenient. In 2017, more than 6 in 10 Americans said they had never been asked to register to vote. This means that up until very recently our system of democracy relied on the majority of Americans proactively seeking out and completing the registration process in order to exercise their right to vote.

Even as many states enact laws making it more difficult to vote, there is a counter-movement afoot to expand access to the ballot box, starting with automatic voter registration (AVR). In the last six years, twenty states and the District of Columbia have implemented some version of AVR. Nationwide, millions of Americans have become registered through AVR policies. It has proven essential for expanding the electorate and facilitating participation in elections. AVR improves voter turnout by about 1.3% by eliminating the entry barriers of voter registration processes. While this number may appear insignificant, a 1.3% increase in turnout would have meant a massive influx of more than 2 million additional voters in 2020. AVR also improves the reliability and security of voter registration rolls by ensuring voter registration data is accurate and up to date.

The design of AVR systems varies among states, offering policymakers the opportunity to learn from this natural experiment and adopt best practices to optimize the effectiveness of the system. The principal dividing line is between what are called front-end and back-end systems. In other words, does the system place the opportunity to decline registration in the DMV transaction (known as front-end AVR)? Or is the system truly automatic, registering demonstrably eligible voters by default and allowing opt-out afterwards (known as back-end AVR)? Both systems of AVR have demonstrated positive effects, but is one system better?

This brief seeks to provide policymakers and advocates with insight into Colorado’s transition from a front-end to a back-end system. The analysis draws on compelling new data from Colorado, the first state to make the switch, to demonstrate the advantages of back-end AVR.

Colorado’s Registration Rate
Since transitioning to back-end AVR in May 2020...

- 74% Increase in voter registration rate at the DMV
- 173% Increase in pre-registration rate at the DMV*

*Colorado allows citizens to pre-register to vote starting at age 16.

Currently, California and Washington are considering legislation to move from a front-end opt-out AVR system to a back-end AVR system. The initial data from Colorado is very promising and should encourage policymakers that it is worth making the switch to a back-end system. Now, more than ever, it is crucial to have strong policies in place that help Americans participate in elections.
How Does AVR Work?

AVR is a game-changing policy that starts from the premise that voting is the right of every eligible citizen and therefore, an individual should not be burdened with complicated registration paperwork to exercise this right. Instead, it should be the responsibility of the government to ensure that eligible citizens are registered to vote in their local jurisdiction. Historically, the U.S. is the only advanced democracy where the burden to register falls entirely on the individual.³

AVR is accomplished through partnerships between Secretary of State offices in charge of voter registration and other state agencies that already collect relevant information to establish proof of eligibility. Through normal interactions with certain agencies designated by the state — usually state departments of motor vehicles (DMVs) — eligible Americans are automatically registered to vote unless they explicitly decline registration. Information about a person that the designated state agency normally collects through its regular course of business, including name, date of birth, and address, is electronically transferred to election officials for inclusion on voter registration rolls.

AVR eliminates the hassle of someone having to obtain, complete, and return complicated forms to register or update their address when they move.

States have adopted two different approaches to AVR. Under a front-end AVR system, DMV customers are given the opportunity to decline voter registration during the DMV transaction. A back-end AVR system registers an eligible DMV customer to vote by default if they provide proof of citizenship during the transaction, streamlining the process and cutting down on wait times at DMVs. A mailer notifies them afterwards, providing an opportunity to review the information and decide whether they wish to opt out of voter registration away from the bustle of a DMV office. While the majority of states that have adopted AVR systems so far have chosen a front-end system, a growing number of states including Alaska, Colorado, Delaware, Nevada, Oregon and Massachusetts have opted for back-end AVR.

The Benefits of AVR

AVR is essential to building a more inclusive democracy and minimizing disenfranchisement. It removes many of the barriers that stand in the way of an American exercising their constitutional right to vote and offers multiple benefits.

Increases Voter Registration Rates

The main selling point of AVR is its promise to substantially increase registration rates. By operating out of frequently visited government agencies, AVR ensures voter registration services are affirmatively provided to large numbers of people who may not otherwise have occasion or the patience to register to vote on their own time. Operating AVR out of DMVs is a particularly effective way to register new voters as it captures young 16 or 17-year-old pre-registrants when they first get their licenses, as well as young people turning 18 as they become newly eligible to vote.

Saves Taxpayer Dollars

By streamlining the voter registration process through electronic transfers between designated agencies and election administration offices, AVR also reduces headaches for government personnel and saves the government money. Washington State saved $176,000 in just the first two-years following implementation of its AVR program.⁶ Delaware’s State Election Commission documented $200,000 in reduced labor costs the first
year it switched from using paper forms to sending voter information electronically from the DMV to election officials. In a large state like California, the cost savings estimates range from $7-9 million.

These cost savings come from a variety of sources. AVR replaces error-prone and labor-intensive paper registration forms with accurate and electronic registration transactions. Similarly, because registration information is updated any time a person interacts with a designated agency like the DMV, AVR reduces undeliverable mail (including mail ballots), saving unnecessary printing and postage costs. Finally, by registering more people to vote and updating more addresses at the DMV, AVR reduces the need for provisional ballots and same-day registration at the polls.

**Improves Accuracy of Voter Rolls**

AVR also ensures more accurate and up-to-date voter rolls, reducing the number of people who are functionally disenfranchised because they are unregistered or registered at an out of date address, while building public trust in the system. Since AVR is conducted electronically, it eliminates administration errors like misspellings and typos that are common when hard-copy paperwork is involved. Accuracy and reliability of voter registration rolls is particularly important in vote-by-mail states like Colorado as registration information, such as names and addresses, must be up to date for election officials to send voters their mail ballots.

**Optimizing AVR Systems**

Both front-end and back-end opt out AVR programs result in a greater number of new registrants being added to state voter rolls. With an increasing number of states moving to AVR and the benefit of new data from initial adopters, it is worth investigating if one system achieves better results.

States with front-end AVR systems observe high rates of eligible individuals declining to register to vote, with typically more than half of DMV customers declining the voter registration opportunity. For example, under California’s front-end AVR system, 55% of unregistered individuals who interact with the DMV decline voter registration. Similarly, under Washington’s system, over 60% of customers chose the opportunity to decline voter registration. Although some share of this population declining registration is not eligible to register, the majority are likely eligible citizens. Behavioral science supports the notion that front-end systems do not capture all eligible individuals interested in registering to vote. There are many reasons someone may decline registration services at the DMV, even though they in fact would like to register. For example, they may be in a hurry and worry that saying “yes” to registration will result in delays or increased paperwork, or they may incorrectly believe they are already registered to vote. Similarly, many people decline to update their address at the DMV because they erroneously believe it is already current.

For this reason, some states that have adopted front-end AVR, such as California and Washington, are contemplating moving to a back-end system. Advocates for back-end AVR argue that it captures more people who wish to register by moving the opt-out decision point to a mailer, which allows an individual the time to make a more thoughtful decision than in the course of a hurried DMV transaction. Previously, assertions that back-end opt out AVR is more effective at increasing registration than front-end opt out have been based largely upon strong anecdotal and behavioral evidence rather than statistical data. That is until now. Colorado recently became the first state to move from a front-end system to a back-end one. A case study below explores the transition and examines new data from the state.
Moving Toward a More Inclusive Democracy: Optimizing Automatic Voter Registration Systems

For years, Colorado has led the charge in groundbreaking, comprehensive election policies that put voters first. The state stands out as a leader in expansive early voting, same-day voter registration, ballot tracking and curing processes, and risk-limiting audit procedures. It also boasts a gold standard mail voting system that automatically sends mail ballots to registered voters each election, while retaining robust in-person voting options, such as vote centers, for those wishing or needing to utilize equipment or assistance available at in-person voting locations. The state has employed doomsday training to prepare election officials for Election Day problems and some Colorado jurisdictions have even experimented with mobile voting vehicles to make the process of voting and returning mail ballots from home more convenient.

Colorado's election system has long served as a model for other states looking to adopt gold standard election policies. It is also unique for being the first state to have originally implemented a front-end AVR system and subsequently shifted to a back-end AVR system. Colorado should serve as a model for other states considering a similar transition and as a case study in what gains states can expect to see once they do so.

The History of AVR in Colorado

The history of AVR adoption and implementation in Colorado took place over three distinct phases. Initially, Colorado adopted front-end opt out AVR for all new registrants and existing registrants requiring registration updates. Later, Colorado implemented back-end opt out AVR for existing registrants requiring registration updates, while retaining front-end opt out for new registrants. In 2020, Colorado completed the transition to a back-end system for all unregistered customers who show proof of citizenship. This is the model in use today. Colorado’s AVR program operates out of state DMVs, which collects citizenship information as part of its normal course of business. Importantly, only those unregistered people who provide proof of citizenship are eligible for back-end AVR. Real ID mandates have aided this process since individuals must provide documents proving citizenship to obtain a Real ID license. Individuals who do not provide proof of citizenship but swear to U.S. citizenship and do not opt out are still registered, as required by the National Voter Registration Act (NVRA), but through a front-end version of AVR.

Each of Colorado's three phases of implementation is explored in detail below.

Phase 1: Front-End AVR (February 2017–June 2018)

Colorado first launched AVR in February 2017. The program was initially configured as a front-end opt out model that worked as follows: When an individual came to the DMV to initiate a transaction, such as an application for a driver's license or license update, they were assessed for AVR eligibility. Those who showed proof of non-citizenship were filtered out. Remaining individuals were provided an opportunity to...
decline being automatically registered or having their registration updated during the DMV transaction. If the registrant did not decline registration or updating, their information was electronically transferred to the Colorado Secretary of State’s office. The information was then used to register the person to vote for the first time or to update an existing registrant’s registration information. No additional steps were required on the part of the individual. This process was also used to pre-register 16 and 17-year-olds.

In April 2018, the state made important revisions to customer-facing language. Specifically, the language was altered to eliminate suggestibility biases in the question’s framing. The earlier iteration was confusingly worded and highly suggestive to those interacting with the DMV that they should decline registration services. The old language read, “We are going to use the information that you provided today to register you to vote or update your registration unless you decline at this time.” This was changed to more user-friendly versions based on guidance from the Center for Civic Design. For in-office transactions, the language became: “While you’re here, let’s make sure you get your ballot for the next election. I’ll use the information you’ve given me today to keep your voter registration up-to-date or register you to vote, if that’s ok with you.” For online transactions, the language similarly became: “Let’s make sure you get your ballot for the next election. The information you’re entering today will be used to keep your voter registration up-to-date or register you to vote, unless you decline by checking the box below.”

**Phase 2: Front-End AVR with Limited Back-End AVR (July 2018–April 2020)**

In July 2018, Colorado began implementing back-end AVR, although the first phase applied only to existing registrants requiring registration updates. Existing registrants who interacted with the DMV would have their information automatically transferred to the Colorado Secretary of State’s office. Election officials would update the person’s registration with any new name or address information and then the person would receive a mailer after informing them of the change and providing an opportunity to correct it, if necessary. Even though the system was officially a back-end system, the language during the DMV transaction did not change, meaning existing registrants were still asked during the DMV transaction whether they wished to decline registration or updates. Any in-person declination by an existing registrant was ignored during this period.

The registrant was still provided formal declination opportunities by returning the mailer. By June 2019, the DMV technology upgrade was complete, allowing existing registrants and unregistered individuals to be sorted into different workflows at the point of the DMV transaction. With this upgrade, existing registrants were no longer presented with an opportunity to decline the update during the DMV transaction. Throughout this period, unregistered individuals were still subject to front-end opt out and were asked about declination at the DMV.

**Phase 3: Back-End AVR (May 2020–present)**

In May 2020, Colorado completed its transition to a back-end opt out AVR program for all existing registrants and any new registrants who provide proof of eligibility during the DMV transaction, including pre-registrants who are 16 and 17-years-old. This makes Colorado one of six states to have adopted a back-end model and the first to move from front-end to back-end. Now, when an unregistered Colorado resident interacts with state DMVs and provides proof of eligibility (including citizenship) as part of their transaction, their information is automatically electronically sent to the Colorado Secretary of State’s office for verification. The new registrant then receives a mailer instructing them that if they wish to decline registration, they should return the notice by mail or respond by email. Unless they do so, they will automatically be added to the voter rolls. Similarly, any registered voter with updated information will receive a mailer informing them of the change and providing an opportunity to decline to have their registration information updated. The state still has a separate registration program for individuals who do not provide proof of citizenship but who confirm citizenship through attestation under penalty of perjury during their DMV transactions. These individuals must still be given an opportunity to register to vote under the NVRA.
Colorado’s Results

Since AVR’s initial adoption in 2017 until February 2022, more than 912,000 new registrants were added to state voter rolls. Of those, more than 144,500 were new 16 and 17-year-old pre-registrants. Additionally, 3.4 million updates were made for existing registrants through AVR.

Registration Rate

Both the state’s front-end opt out and back-end opt out programs have been successful in expanding the state’s electorate. The rate at which unregistered individuals are registering at the DMV increased by 74% (jumping from 32% registering under a front-end model from 2017 to 56% under a back-end system) and a 173% increase in the pre-registration rate at the DMV (jumping from 25% pre-registering to 68%). This translates into nearly 180,000 more people registered to vote within the first 22 months of implementation. It is also likely that the impact of back-end registration will grow as the pandemic wanes and more DMV customers return to in-person transactions (where a much higher proportion are subject to back-end opt-out).

Examining registration declination rates is a particularly effective way to measure the success of AVR programs and for comparing front-end versus back-end opt out models. When asked whether they wished to decline registration when they were at the DMV or on the DMV website, an average of 68% of unregistered people opted out of becoming newly registered to vote. This declination rate covers all front-end opt out AVR transactions for potential new registrants, including pre-registrants, from 2017 through September 2021. In looking only at the period of May 2020 through February 2022, declination rates for front-end AVR transactions remain constant at about 69%. In contrast, fewer than 1% of people, or 0.61%, declined to be registered if they were offered the chance to do so by mailer after they left the DMV.

*Under the current system, all unregistered individuals who have shown proof of eligibility are subject to back-end registration. For customers with unclear eligibility, they are subject to front-end opt-out to establish eligibility.
Conclusion

Against the backdrop of full-on assaults and more subtle efforts to undermine our democracy, it is crucial that states move in the opposite direction to rebuild trust and participation in the electoral process. AVR — and an accompanying voter education plan — should be a key component of any agenda to fortify our democracy. The data shows that AVR — regardless of the model — offers measurable benefits to state governments and their residents in the form of cost savings, administrative efficiencies, and cleaner voter rolls. Most importantly, AVR brings more Americans into the democratic fold by increasing registration rates.

Colorado’s AVR journey proves that transitioning from front-end opt out to back-end opt out AVR is not only feasible but also well worth the effort. Colorado’s back-end version of AVR was ultimately more effective at adding more new registrants to state rolls — as many as 180,000 more voters as compared to its front-end system (or a 24 percentage point increase in the registration rate). We can expect the effectiveness of the back-end system to only grow as more people return to in-person DMV transactions where the system is in place. Colorado should serve as a model for other states looking to remove voter registration as a barrier to participation, and achieve a robust and inclusive democracy.
Annex 1: CO AVR Registration Data

Registration rates for each of Colorado’s three distinct phases of implementation are described below.

**Phase 1.** Front-end opt out AVR for all registrants: From February 2017 through June 2018 Colorado was operating front-end opt out AVR for all registrants, however the Secretary of State’s office only was able to provide data from April 2017-on. During this period, Colorado DMVs facilitated more than 2 million total AVR transactions. From available data beginning in April 2017, out of 616,400 unregistered people who interacted with the DMV and were offered voter registration through front-end AVR, roughly 180,000 people were newly registered, resulting in a declination rate for registration of 70.8%. Data on pre-registration is only available beginning in October 2017, but from October 2017 through June 2018, out of 85,700 unregistered 16 and 17-year-olds who were offered pre-registration through front-end AVR, roughly 16,700 accepted, resulting in a declination rate for pre-registration of 80.5%.

During this period, more than 1.3 million existing registrants were offered services to update their registration information. During this period, 442,300 existing registrants, including pre-registrants, elected to update their registration information, while 859,000 existing registrants declined when asked, resulting in a declination rate for updates of 66.0%.

**Phase 2.** Back-end opt out for existing registrants and front-end opt out for new and pre-registrants: Between July 2018 and April 2020, Colorado DMVs facilitated 2.6 million AVR transactions. Out of 916,000 unregistered people who interacted with the DMV and were offered voter registration through front-end AVR during this period, more than 313,900 people were newly registered to vote through the state’s front-end system, resulting in a declination rate of 65.7%. Out of 165,586 unregistered 16- and 17-year-olds who were offered pre-registration through front-end AVR, roughly 46,200 accepted, resulting in a declination rate of 72.1%.

More than 1.6 million of the transactions during this period involved existing registrants, including 16 and 17-year-old pre-registrants, subject to the state’s new back-end opt out model. During the short period during which existing registrants were still given the option to decline having their registration information updated, 331,800 existing registrants elected to update their information compared with 573,100 existing registrants to decline registration updates. However, among those who declined, 33.5%, on average, had outdated information that needed updating. The back-end process ensured that hundreds of thousands of people who unnecessarily or incorrectly declined an update still had their voter registration information automatically updated.

**Phase 3.** Back-end opt out for existing and pre-registrants, as well as for most new registrants: Since May 2020, Colorado DMVs provided AVR services to more than 2.4 million new and existing registrants, including 16 and 17-year-old pre-registrants. In all, more than 272,000 Coloradans were newly registered under the state’s back-end program. Of 274,160 eligible individuals channeled through the back-end AVR process, only 1,662 declined, resulting in a declination rate of 0.60%. Of those, 43,870 were newly registered pre-registrants. Of 44,078 16- and 17-year-olds channeled through the back-end process, only 208 declined, resulting in a declination rate of 0.47%.

During this same period, more than 1.66 million existing registrants were offered registration update services through back-end AVR, more than 14,500 of whom were pre-registrants. Today, over 80% of eligible people visiting state DMVs are subject to back-end opt out AVR, either for new registrations or updates to existing registrations.
Endnotes

1 Reuters estimates that 206,557,583 voters were registered in the 2020 election out of 239,247,182 eligible Americans (meaning 86% of eligible voters were registered). “Fact check: ‘133 million registered voters’ argument uses flawed logic” (January 1, 2021). Available at: https://www.reuters.com/article/uk-factcheck-voters-133-million/fact-check-133-million-registered-voters-argument-uses-flawed-logic-idUSKBN296284


3 Ibid


6 Automatic Voter Registration and Modernization in the States” Brennan Center for Justice (Updated: February 1, 2021). Available at: https://www.brennancenter.org/our-work/research-reports/automatic-voter-registration-and-modernization-states

7 Ibid