VOTING IN 2020

BRIDGETT A. KING, PHD
IN-PERSON VOTING GUIDELINES

- Practice healthy behaviors to protect yourself and slow the spread of COVID-19
  - Wash your hands (before and after)
  - Wear a face covering
  - Practice physical distancing
- Check your voting location and requirements in advance because they may have changed due to COVID-19.
- Verify your voter registration information is correct in advance of reporting to the polling location.
- Contact your local or state election office for additional information for voters with disabilities.
- Make sure you have all necessary documents to avoid delays at the polling location.
- Where possible, review or complete a sample ballot at home to speed the process of casting your ballot at the polling location.
- Bring your own black ink pen.

Source: Centers for Disease Control
DESIGNING POLLING PLACES FOR DISTANCE

- No one size fits all solution
- Physical Distancing Considerations for COVID-19
  - 2’ x 2’ voter space for each voter
  - 6 foot social distance ring for each voter
  - Unidirectional path that instructs voters how to enter and exit the system
- Layout Accommodation Possibilities for COVID-19
  - Reductions in equipment
  - Maintain equipment; change the layout in the polling location
- HVAC and Water Supply Considerations for COVID-19
  - American Society for Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) Guidance for Polling Place HVAC Systems
Absentee and Provisional Ballots are not counted. **FALSE**

Absentee and Provisional Ballots are only counted if the election is close. **FALSE**
The November 2020 General Election will end when the polls across the country close on November 3, 2020.

FALSE
You cannot vote if you have been convicted of a felony.

DEPENDS
People who are homeless are not allowed to vote.

FALSE
College students have to vote at their permanent address. FALSE
RESOURCES

Google Doc of Resources
BRIDGETT A. KING, PHD
ASSOCIATE PROFESSOR & MPA PROGRAM DIRECTOR
DEPARTMENT OF POLITICAL SCIENCE
BAK0020@auburn.edu
The Virus and the Vote: COVID-19 and the 2020 Election

Nate Persily

nate@persily.com, @persily
The Problem

What steps should states and localities take now for the likelihood that sizeable shares of the population might not be able to vote safely in 2020 in the same way as recent elections?
The Solutions

- Move to vote by mail where possible.
- Retrofit as many polling places as possible to avoid risk to voters and poll workers.

- Not so easy.
- Continuum, not choice.
- Almost all jurisdictions will and should have some mix of the two.
The Constraints

- Time & Money
- People, Places, and Things
- Structural Impediments
  - Decentralization
  - Contracting/procurement process
  - Ill-fitted law/regulations
- Politics/Polarization/Partisanship
- Unpredictability
Trends in the Way Americans Vote
The Vote By Mail Landscape

States with blended policies in the Step 3 – 4 – 5 range:
- UT 100% VAH in 2019
- HI 100% in 2020
- CA targeting 2022/24
- NE has 11 counties on 100% VAH for 2020
- ND has 30 counties using 100% mailed-out ballot voting
- OH sends absentee request forms to all BM voters, for some elections
- MI, MN & PA have a permanent absentee list, but periodically send request forms, not ballots, to voters
- AL, KS, & WI offer permanent absentee status to voters with disabilities
- DC offers Step 4 to its voters

Vote at Home Status by State – March 2020

Source: National Vote-at-Home Institute, https://www.voteathome.org/
## Preparing for an Election Under Pandemic Conditions

<table>
<thead>
<tr>
<th>State</th>
<th>Number of Registered Voters (2018)</th>
<th>Mail Ballots Returned as Percentage of Turnout (2018)</th>
<th>All Voters Can Vote Absentee Without an Excuse</th>
<th>Online Absentee Voter Registration</th>
<th>Same Day Registration</th>
</tr>
</thead>
<tbody>
<tr>
<td>OR</td>
<td>2,748,232</td>
<td>100%</td>
<td>Vote by Mail*</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>WA</td>
<td>4,841,431</td>
<td>98%</td>
<td>Vote by Mail*</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>CO</td>
<td>3,953,613</td>
<td>95%</td>
<td>Vote by Mail*</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>UT</td>
<td>1,658,457</td>
<td>90%</td>
<td>Vote by Mail*</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>AZ</td>
<td>4,276,891</td>
<td>79%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>MT</td>
<td>706,173</td>
<td>73%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>CA</td>
<td>25,167,218</td>
<td>66%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>NM</td>
<td>1,261,639</td>
<td>63%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>HI</td>
<td>756,751</td>
<td>56%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>IN</td>
<td>4,590,196</td>
<td>33%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>FL</td>
<td>14,126,722</td>
<td>31%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>WY</td>
<td>283,941</td>
<td>30%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>ND</td>
<td>N/A**</td>
<td>29%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>ME</td>
<td>1,057,967</td>
<td>29%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>SD</td>
<td>594,453</td>
<td>26%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>MI</td>
<td>7,471,088</td>
<td>25%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>MN</td>
<td>3,422,515</td>
<td>25%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>IA</td>
<td>2,193,813</td>
<td>24%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>NE</td>
<td>1,219,276</td>
<td>24%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>OH</td>
<td>8,070,917</td>
<td>21%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>KS</td>
<td>1,835,473</td>
<td>16%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>NJ</td>
<td>5,869,078</td>
<td>13%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>ID</td>
<td>917,609</td>
<td>12%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>VT</td>
<td>489,385</td>
<td>10%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>NV</td>
<td>1,773,566</td>
<td>9%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>IL</td>
<td>8,751,060</td>
<td>9%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>AK</td>
<td>624,467</td>
<td>9%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>MO</td>
<td>4,127,333</td>
<td>9%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>NH</td>
<td>988,148</td>
<td>8%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>RI</td>
<td>781,478</td>
<td>7%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>MS</td>
<td>2,079,732</td>
<td>7%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>CT</td>
<td>2,369,335</td>
<td>6%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>TX</td>
<td>15,615,925</td>
<td>6%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>GA</td>
<td>6,944,851</td>
<td>6%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>OK</td>
<td>2,120,843</td>
<td>6%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>WI</td>
<td>3,442,004</td>
<td>6%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>MD</td>
<td>3,954,027</td>
<td>5%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>SC</td>
<td>3,538,580</td>
<td>4%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>DC</td>
<td>617,046</td>
<td>4%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>NY</td>
<td>12,695,763</td>
<td>4%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>DE</td>
<td>695,014</td>
<td>4%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>PA</td>
<td>8,607,748</td>
<td>4%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>AL</td>
<td>3,465,352</td>
<td>3%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>MA</td>
<td>4,574,967</td>
<td>3%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>LA</td>
<td>2,992,170</td>
<td>3%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>VA</td>
<td>5,666,627</td>
<td>3%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>NC</td>
<td>7,095,209</td>
<td>3%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>AR</td>
<td>1,786,840</td>
<td>2%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>TN</td>
<td>4,163,359</td>
<td>2%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>WV</td>
<td>1,245,827</td>
<td>2%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
<tr>
<td>KY</td>
<td>3,402,905</td>
<td>2%</td>
<td>✅</td>
<td>✅</td>
<td>✗</td>
</tr>
</tbody>
</table>

Source: Brennan Center
Challenges with Vote By Mail

- Fraud and Perception of Fraud
- Disenfranchisement and Bias
  - Bias in absentee participation
    - Who votes absentee?
    - Who needs/wants a polling place?
      - Voters reluctant to change
      - Distrust of Mail
      - Voters with Disabilities
      - Same Day Registrants
      - Failsafe
    - Lost votes – Late, challenged, errors
What is to be done?

- **Education/Outreach**
  - Voter education
  - Pollworker Recruitment
- **Temporal and Physical Spacing**
- **Reimagine polling places**
  - Socially distant voting – curbside, arena, “Take a number”
  - Sterilization/Disinfectant/PPE
- **All hands on deck!**
  - Corporate role
  - Intergovernmental coordination (esp. USPS)
Stanford-MIT Healthy Elections Project

HealthyElections.Org
Election Cybersecurity
The Landscape in 2020

J. Alex Halderman
University of Michigan
Every U.S. voting machine subjected to rigorous independent security review suffered vulnerabilities that would enable vote-stealing attacks.
Hacking Election Results

How hard would it be to invisibly change a national election outcome, by tampering with voting machines?

Easier than it might seem!

**Step 1**
Use pre-election polls to identify likely close states. Scan them all and choose the weakest targets.

**Step 2**
Infiltrate jurisdictions or service providers, and compromise election management computers.

**Step 3**
Spread malware to voting machines during pre-election programming that swaps, e.g., 5% of votes.

**Step 4**
Most states will throw away paper ballots without rigorously checking.
Consensus of election security experts and election officials: 

**Paper Ballots + Risk-Limiting Audits**

are key components of robust defense.

Paper as a Defense

Slow/expensive to tally
Verified by voter

Fast/cheap to tally
Unverified

AUDIT =? Memory Card
Risk-Limiting Audit (RLA)

Hand count randomly selected ballots until you establish, with high statistical confidence, that hand-counting all paper records would yield the same winner.

Various ways to implement RLAs, depending on local constraints.
The U.S. has made significant progress since 2016:

- Vastly greater awareness of election cybersecurity threats
- Increased cooperation between federal government and states/locals
- Upgrades to voter registration, intrusion detection, penetration testing
- Updated polling place equipment across many states
- Several states piloting RLAs
- and more

... but many challenges remain!
Challenge 1: Continued Use of Paperless Equipment

Polling Place Equipment
November 2020

- Hand marked paper ballots, BMDs for accessibility
- Hand marked paper ballots, DREs for accessibility with VVPAT
- Hand marked paper ballots, DREs for accessibility without VVPAT
- Ballot Marking Devices for all voters
- DREs with VVPAT for all voters
- DREs without VVPAT for all voters

65.5%
Percentage of registered voters living in jurisdictions using Hand Marked Paper Ballots for most voters

20.5%
Percentage of registered voters living in jurisdictions using Ballot Marking Devices for all voters

14.0%
Percentage of registered voters living in jurisdictions using Direct Recording Electronic (DRE) Systems for all voters

Graphic: https://verifiedvoting.org/verifier/
20% of voters live in places that use BMDs for all in-person voting

**Threat: Hacked BMDs can change close election outcomes, because many voters don’t check the printouts**

In a mock election we conducted, voters reported <7% of errors.

- In election with 0.5% margin, hacked BMDs could change outcome while resulting in only 1 problem report per 5000 voters
- **Steps to encourage verification can help, but not enough?**
  - If officials investigate when problem reports exceed 1% of voters, need voters to report >80% of errors to spot outcome-changing fraud
- **Using BMDs exclusively for accessibility is much safer**
  - If only 1.8% of voters use BMDs, need just 6.7% detection

“Can Voters Detect Malicious Manipulation of Ballot Marking Devices?” Bernhard, McDonald, Meng, Hwa, Bajaj, Chang, and Halderman (Oakland 2020)
Challenge 3: States Without Rigorous Audits

Are votes on paper and rigorously audited?

- **RLAs required**: 2 states
- **RLAs optional or piloted**: 9 states
- **Audits, but not risk-limiting**: 16 states
- **No pre-certification audits or incomplete paper trail**: 23 states

National cost to audit every federal race would be **< $20M/year!**

Data: Brennan (2019/08); NCSL (2020/02)
Fact: Most proven cases of election fraud involve absentee voting e.g., 2018 NC congressional race

However:
- Hundreds of cases, not millions
- Fraud is retail-level
- Needs large conspiracy
- Leaves physical evidence

Bigger worry is rapid expansion of vote-by-mail due to COVID-19
- New processes likely to create processing delays, voter confusion
- Postal Service meltdown could cause chaos in November
“No known technology guarantees the secrecy, security, and verifiability of a marked ballot transmitted over the Internet.” — The National Academies

19 states allow some to vote via email or fax. WV lets disabled/overseas voters vote online. Due to COVID-19, DE let everyone vote online. … will more states follow?

Research into E2E-V crypto may provide a path to secure online voting someday.

Systems fielded in U.S. now use simplistic approaches, are not verifiable or secure.

“Security Analysis of the Democracy Live Online Voting System” Specter and Halderman (June 2020)
Challenge 6: Achieving Legitimacy

Achieving integrity is not sufficient.

Elections have to convince supporters of losing candidates that they lost.

Even absent an attack, failures can create appearance of impropriety, undermine trust.

Engineer election systems to generate evidence of correctness through transparency, observability, etc.
Election Cybersecurity
The Landscape in 2020