USING TECHNOLOGY TO ENHANCE MILITARY & OVERSEAS VOTING VOL. 2:

RECOMMENDATIONS FOR USE OF DATA STANDARDIZATION AND PERFORMANCE METRICS

CSG
The Council
of State
Governments

I. INTRODUCTION

In September 2013, The Council of State Governments, or CSG, entered into a cooperative agreement with the Federal Voting Assistance Program, or FVAP, launching the four-year, $3.2 million Overseas Voting Initiative, or OVI.

The goal of this collaboration is to improve the voting process for citizens covered by the *Uniformed and Overseas Citizens Absentee Voting Act*,[1] or *UOCAVA*, specifically by improving the return rate of overseas absentee ballots. This effort augments FVAP's ongoing efforts to engage its stakeholders—especially state and local election offices—and improves the voting process for individuals covered under *UOCAVA* and for the election offices that implement *UOCAVA* provisions.

The *Uniformed and Overseas Citizens Absentee Voting Act*, or *UOCAVA*, covers U.S. citizens who are active members of the Uniformed Services—the Army, Navy, Air Force, Marine Corps, and Coast Guard, the commissioned corps of the Public Health Service, and of the National Oceanic and Atmospheric Administration—and their eligible family members, members of the Merchant Marine and their eligible family members, and U.S. citizens residing outside the United States.

The Military and Overseas Voter Empowerment Act,[2] or MOVE Act, enacted in 2009, promoted the use of technology to address some of the long-standing issues that faced military personnel, dependents and overseas citizens covered by *UOCAVA*. Among other provisions, the MOVE Act required states to:

- Transmit ballots no later than 45 days prior to a federal election;

- Provide *UOCAVA* voters with the option to request and receive voter registration and absentee ballot applications by electronic transmission; and

- Give *UOCAVA* voters the option of receiving a blank absentee ballot via an electronic transmission method.

MOVE also required states to work to ensure that electronic transmission procedures protected the security of the balloting process and the privacy of voters who used these electronic transmission processes.

The Military and Overseas Voter Empowerment Act, or MOVE Act, expanded *UOCAVA* significantly in 2009, when Congress passed the law to provide greater protections for service members, their families and overseas citizens. Among other provisions, the MOVE Act requires states to transmit validly-requested absentee ballots to *UOCAVA* voters no later than 45 days before a federal election, when the request has been received by that date, except where the state has been granted an undue hardship waiver approved by the Department of Defense for that election.

Since the enactment of the MOVE Act amendments, FVAP recognized a need to develop a data source to identify and assess the effectiveness of these reforms. At the time, the primary data source for *UOCAVA* voting was a separate survey of election officials that asked for overall transaction numbers in the aggregate. Later, FVAP agreed to consolidate its survey efforts, and its corresponding questions migrated into Section B of the Election Administration and Voting Survey,[3] or EAVS, administered by the U.S. Election Assistance Commission, or EAC. For the EAVS, each state reports data for each local election jurisdiction on a variety of aspects of the *UOCAVA* process, including the total number of registrants, the total number of ballots sent out to voters and the number of ballots returned, and the adjudication of these ballots. These data are helpful in painting a broad picture of trends in the overall experience of *UOCAVA* voters in each jurisdiction. However, because the data are aggregated—totals of each individual transaction—they do not help FVAP or election officials understand the more individual experience that voters have in their transactional interactions with their state or local election offices. The larger need for FVAP remained for identifying a data source that provides transactional data to better understand the customer service aspects at each step of the voting experience—from registration and ballot requests to the balloting process—and determine how they can help voters lower their risk of ballot rejection and optimize their opportunity for success.

The U.S. Election Assistance Commission, or EAC, administers the biennial Election Administration and Voting Survey, or EAVS, to collect state-by-state data on the administration of federal elections. The EAVS reports include data on the ability of civilians, military members and overseas citizens to successfully cast a ballot and contain the most comprehensive, nationwide data about election administration in the United States. It is a survey of all States, the District of Columbia, Guam, Puerto Rico, American Samoa and the U.S. Virgin Islands.

CSG OVERSEAS VOTING INITIATIVE: TECHNOLOGY WORKING GROUP

One major component of the CSG OVI was the creation of a technology working group to study ways technology could be used to enhance the voting process for military and overseas citizens. CSG and FVAP recognized that election officials across the country were incorporating innovative technologies to improve the voting process, including improvement of the *UOCAVA* voting experience, and set forth to draft best practices in this area based on this group's work.

The CSG OVI's Technology Working Group was comprised of state and local election officials from across the United States, who came together to identify ways in which the election experience for *UOCAVA* voters could be improved in the specific area of technology. Working together, the

group identified three primary areas where state and local governments can use technology improve the *UOCAVA* process: digital signing using the Department of Defense Common Access Card, or CAC, duplication of damaged or machine unreadable ballots, and the standardization of data collection.

II. STANDARDIZATION FOR MILITARY & OVERSEAS VOTING DATA

In elections, there is a wealth of data that can be used to understand the effectiveness and efficiency associated with the administration of *UOCAVA* voting. At its core, improved effectiveness and efficiency will directly affect the quality of a person's customer service experience when voting. Consider, for example, a hypothetical person in the military who is overseas and who wants to vote. This person is covered by *UOCAVA*, and can register to vote and request an absentee ballot using the Federal Post Card Application, or FPCA. He or she sends in the FPCA form and is now registered. At the appropriate times, the person is sent an absentee ballot for each election. This voter might receive his or her ballot by mail, by email or via an online portal. In fact, the voter might receive ballots by all three methods at the same time. The voter then decides whether or not to vote. If the voter returns the ballot, it may be possible to return the ballot via email, fax, online portal, or by mail depending on state requirements. That is another decision point, and thus, another data point.

For this one voter, there is an abundance of information about his or her voting experience that does not involve personally identifiable information. For example, the FPCA provides:

- Country of destination for the ballot;
- Date that the voter submitted his or her registration and ballot request form;
- Date when the voter was sent his or her absentee ballot(s);
- Mode(s) of delivery used to send the absentee ballot(s);
- Whether the voter returned a ballot;
- Mode of delivery used to return the ballot;
- Date the ballot was received at the local election office, or LEO; and
- How the ballot was adjudicated—was it included in the ballots for tabulation or was it rejected (and why was it rejected).

A critical problem with this voter's information is that it may not be captured and stored in a way that is easily retrievable or easily combined with other data. In a useful format, these data are invaluable for the FVAP and election officials as

they work to better serve the needs of *UOCAVA* voters. By analyzing data about each voter's interaction with their state or local election office, it is possible to learn about the success and effectiveness of the interaction based on voter behavior. For example, data can tell how long the overall voting process took for each voter—from when the ballot was sent out to the voter to when it was returned by the voter to the local election office. Additionally, these data can better isolate key factors that contribute most to overall ballot success or rejection. For example, how often is voter behavior a key contributor for returning a late ballot that is subsequently rejected? These data exist; the problem is obtaining these data from each state election office, or SEO, and LEO.

THE NEED FOR DATA STANDARDS

The lack of election data management and transfer standards has been recognized as an important issue for election administration in the United States for over a decade. A 2005 study noted that election officials typically use proprietary voting systems, provided by private election technology providers. One consequence of this model is that "[t]here is not a common standard or set of standards for sharing election data across these proprietary systems."[4] Although there have been a number of efforts to develop election administration data standards in recent decades, there are currently no commonly accepted data standards for elections data specific to *UOCAVA* voters. In general, the absence of such standards leads to inefficiencies and errors making timely data reporting more difficult.

In order to capture data on each transaction a *UOCAVA* voter has with their election office, there needs to be a data standard that captures transactional-level data. For example, the standard would capture each step in the absentee voting process—from registration and ballot request to the return of the ballot and its final adjudication. The need for such analyses using standardized election data is especially great in the area of *UOCAVA* voting. The special voting rights afforded to *UOCAVA* citizens can pose unique administrative issues for election officials. It has long been known that the issues associated with ballot transit— the time associated with a LEO transmitting a ballot to a *UOCAVA* voter and then receiving it back—can affect whether the ballot is ultimately counted.[5] Furthermore, with the passage of the MOVE Act, jurisdictions often have to juggle multiple ballot requests from *UOCAVA* voters— requests made by mail and electronically—and may have to track multiple ballot transmissions procedures, sometimes using various mode of transit. Understanding how LEOs and voters are using electronic ballot transmission is an important evaluation question. Ultimately, accurate transactional information about each aspect of a *UOCAVA* voter's experience is necessary for evaluating the factors that lead to voter success or failure.

ISSUES WITH *UOCAVA* DATA MANAGEMENT

At the outset of its work on data standardization, the OVI supported research regarding effective data standardization and the issues associated with Section B data in general. This research was included in the *UOCAVA Data Management Best Practices*[6] report and the EAVS Section B or ESB Data Standard[7]. It both informed the work of, and was influenced by the work of, the Data Standardization/Performance Metrics Subgroup of the CSG OVI Technology Working Group. This research identified issues associated with data standardization for *UOCAVA* voting systems, and sets forth a path for implementing a *UOCAVA* data standard in the future.

The *UOCAVA* Data Management Best Practices report analyzed the information and data that are collected at the local level related to *UOCAVA* election administration. The analyses identified three key challenges related to *UOCAVA* administrative data:

• The election officials tasked with collecting and reporting *UOCAVA* election administration data typically have little understanding regarding how these data will ultimately be used. At the same time, consumers of these data—including the EAC and FVAP—often find that aggregate data fail to meet their needs.

• Existing election administration management systems are often not designed in a way that allows for *UOCAVA* administrative information to be tracked effectively. This problem sometimes forces election officials to use parallel or ad hoc systems (e.g., a separate spreadsheet outside the election management system) for keeping track of *UOCAVA* information.

• The diversity of data collection and reporting systems across election jurisdictions in the United States make it difficult for jurisdictions to collect and report the precise and consistent data that FVAP and others require for their analyses.

The report recommended the development of common definitions for many *UOCAVA* administrative practices. Using these common definitions, a standard data schema could then be developed for reporting these data, and this standard data schema for *UOCAVA* voter transactions could be used to collect and transmit all *UOCAVA* data. This report strongly recommended that state and local election officials be trained regarding the importance of the standard and be given the necessary tools so that they can best report transactional data using the data standard.

THE CSG OVI DATA STANDARDIZATION/PERFORMANCE METRICS SUBGROUP AND THE EAVS SECTION B DATA STANDARD

The Data Standardization/Performance Metrics Subgroup of the CSG OVI Technology Working Group met for over two years, studying the current state of *UOCAVA* administrative and outcomes data. The subgroup noted that most of the available information on *UOCAVA* voting is currently reported to the EAC and FVAP as a part of the EAVS. The EAVS requires election officials to report the totals for various transactions that occur as they administer an election for their *UOCAVA* voters. For example, jurisdictions report the total number of *UOCAVA* ballots that are sent in an election, the total number of *UOCAVA* ballots returned, and the total number of those *UOCAVA* ballots counted in a given election.

These aggregated data are important and useful, but FVAP and the subgroup members discussed how micro-level, transactional data provide a richer source of information. Election officials, FVAP, stakeholders and researchers can use transactional data to better understand the experiences of *UOCAVA* voters and successful *UOCAVA* voting outcomes.

This subgroup identified several benefits that would arise from having a clear data standard for *UOCAVA*:

• It would ease the reporting requirements that election officials face.

• It would allow election officials to provide clear documentation to other interested stakeholders and constituents of how their data is structured and understood.

• It would ensure the production of uniform and readily comparable transactional data. These data can be used by election officials, FVAP, stakeholders and researchers to better understand *UOCAVA* voter success, and analyze data across jurisdictions to identify best practices.

• It would facilitate identification of voter transactional successes and jurisdiction-to-jurisdiction best practices, and will help election officials provide better service to their own *UOCAVA* voters.

• It would give election officials quality information which can be used to navigate post-election disputes, challenges and election recounts. Individual transaction data in a standardized format, coupled with better data management practices in general, will help local election officials address any issues that arise regarding data quality and the status of ballots that may be contested in a recount or challenge.

• It would reduce errors, inaccuracies and administrative costs, leading to a more efficient and effective process

for *UOCAVA* voting. A common data standard can be implemented using automated tools and these tools can make the *UOCAVA* process more efficient and effective.

The subgroup recommended that election officials adopt the ESB Data Standard—discussed below—to collect and report transactional data about *UOCAVA* voters. Such a data standard can be integrated directly with existing election administrative systems and export the *UOCAVA* transactional data in a common format for post-election reporting and other administrative uses. The transactional data could then be easily and accurately aggregated into the summaries needed for post-election reporting, such as the EAVS, without significant cost or loss of data quality.

THE *UOCAVA* DATA STANDARD

The Data Standardization/Performance Metrics Subgroup engaged with CSG OVI staff to develop a proposed *UOCAVA* data standard. The data standard focuses on facilitating election administrators reporting *UOCAVA* transactional data in a relatively simple and efficient manner. This standard reports data in formats that are common in industry, academics and government. The assumption is that by providing accurate information about each *UOCAVA* voter transaction, the micro-level information can then be used for subsequent reporting of transactions or aggregate outcomes. The CGS OVI research provides a schema for how the transactional data necessary for EAVS Section B reporting should be formatted.[8] A portion of the transactional data elements that are part of that schema are listed in Appendix A along with a link to the full data standard documentation.

PROGRAMMATIC BENEFITS OF HAVING A DATA STANDARD FOR *UOCAVA* VOTING

There are several important benefits to having a data standard for *UOCAVA* voting. Some of these benefits

are realized by state and local election offices and some by FVAP and the EAC. These include: easing the cost of administrative reporting, providing needed metrics for understanding voting success, yielding information to improve service provision to *UOCAVA* voters, and helping to generate data that can be used for post-election dispute resolution.

EASY REPORTING

If a single data standard that allowed for the analysis of election administration existed, the process of reporting data could be greatly simplified; answering the EAVS or providing data to the EAC would become a simple matter of exporting the data. Currently, one problem with reporting election data is that they are kept in different formats in different state and local databases. The same data point—the date of return of an absentee ballot—might be in a different date format and have a different name across databases, for example, the equivalent fields of "return_date" and "ret_dt." Combining these items into a single *UOCAVA* voting dataset is difficult. A data standard means that once a jurisdiction makes the upfront effort to set up their system to support the standard, exporting data is easy and relatively costless. With a published set of data standards, election officials will have a published target for how to conform their data or, at a minimum, provide the documentation necessary for an independent observer to understand their data complexities.

UNDERSTANDING VOTING SUCCESS

FVAP defines absentee voter success as whether a returned ballot is accepted for voting. Analyzing transactional data will allow factors to be identified that maximize voter success. LEOs and SEOs will be in a position to leverage these findings to improve voter success, as well as have the data they need to do their own voter success analyses, without having to rely solely on anecdotal information. By identifying successful practices, LEOs and SEOs can

determine the best services at the lowest cost to their voters. The *UOCAVA* voter benefits because they are receiving the best service, based on data-driven solutions to the issues they have voting.

IMPROVED DATA FOR IMPROVED CUSTOMER SERVICE

The CSG OVI Policy Working Group has already noted that increased transparency can improve the electoral process.[9] Similarly, data standards have the ability to support greater levels of transparency for each voter and lead to more sound public policy. This improved transparency will also provide SEOs and LEOs with more usable and accurate information about the process of voting within their offices. By viewing *UOCAVA* voters as customers, election offices and FVAP can work to improve their processes by understanding the actions of voters and how this affects LEO workflows across the entire cycle of the election. For example, SEOs and LEOs are unlikely to have analyzed how long it takes to process an FPCA or the impact of being able to email a *UOCAVA* voter to answer questions. Having transactional data will allow LEOs and SEOs to understand their processes and subsequently improve them.

POST-ELECTION DISPUTE RESOLUTION

This focus on standard data transactions in the voting process improves the transparency of the election process and can help reduce post-election controversy and possible litigation over *UOCAVA* balloting. With effective data collection and data standardization, election officials will easily be able to provide objective evidence of what transpired at the voter level throughout the election. Election officials will also benefit from being able to use a national data standard. Voters, candidates, media and advocates should have increased confidence in the election process when they all have access to standardized data that supports the final results of the election.

COST SAVINGS AND EFFICIENCIES OF HAVING A DATA STANDARD FOR *UOCAVA* VOTING

There are several forms of cost savings that result for LEOs and SEOs who adopt a standard for *UOCAVA* data. First, adopting this standard and using the tools that allow data export of voter-level administrative data in an appropriate form reduces the costs associated with completing Section B—the *UOCAVA* section of the EAVS. These tools include a combination of technology in the form of scripts and applications and administrative processes that allow for better and more complete data collection. The key benefit from using these tools is that the data do not have to be aggregated into a report; instead, the raw transactional data can be exported and then analyzed by FVAP and the EAC. FVAP will be working with the EAC to see how this standard can be applied to the

entire EAVS, which would make the entire EAVS reporting process quite simple. Second, the benefits associated with effective program evaluation and identification of effective practices will allow SEOs and LEOs to know what works and what does not work for serving the *UOCAVA* population.

ORANGE COUNTY, CALIFORNIA, REGISTRAR OF VOTERS' EXAMPLE

There are many examples of how data standardization can help election officials in their work. Data that is formatted using a common standard can more easily be merged with other data, for analytic purposes. For example, the Orange County, California, Registrar of Voters adopted an industry-standard address format, and this allowed them to use a third-party data provider to locate voters who had not participated in any election over a four-year period. This data merge identified 122,000 voters who had new addresses according to the third-party data provider. The voters were sent postcards under the National Voter Registration Act provisions for removing voters from the rolls. In total, 18,800 of these voters returned the postcard, 16,000 voters were removed from the rolls, and 2,800 voters who still lived in Orange County and wished to remain registered to vote had their address updated. Since 2012, Orange County's address matching process has allowed it to correct address records for over 80,000 voters. Orange County had tried other methods to update voter addresses, but they were mostly unsuccessful. Only when Orange County adopted a standardized address data format were they able to effectively match voters against external data provided by a third party. The overall cost for using a third-party data provider and for contacting 250,000 voter records was almost $60,000. The cost savings that resulted from the initial pilot of 18,800 voters' addresses was over $44,000 after one election and the cost savings after four elections will be over $94,000 because of reduced costs associated with printing sample ballots and mailing costs.

UOCAVA DATA STANDARDIZATION SUCCESS

All the potential benefits outlined above can only be realized if it is possible for state and local election officials to capture and process data using a standardized data format. FVAP wanted to ensure that it was possible to obtain transactional data from a local election office and that local election offices collect *UOCAVA*-related EAVS data. It conducted a proof-of-concept test using 2012 Tarrant County, Texas, (Fort Worth) data and determined that 90 percent of its data mapped to the EAVS Section B data elements.

Over the past year, a consensus-driven data standard for collecting EAVS Section B data has been developed by CSG OVI in collaboration with its Technology Working Group's Data Standardization/Performance Metrics Subgroup

TARRANT COUNTY, TEXAS ELECTION DATA

	Request Mode	Total Ballots	Return Rate	Rejection Rate	Rejected due to lateness
All Data	Email	2,564	74.53%	6.19%	75.42%
	Mail	36,019	90.13%	1.59%	52.24%
	FPCA-Email	2,564	74.53%	6.19%	75.42%
	FPCA-Mail	1,377	74.49%	3.86%	84.21%
UOCAVA	Email	2,564	74.53%	6.19%	75.42%
	Mail	1,480	74.23%	4.45%	85.11%
	FPCA-Email	2,564	74.53%	6.19%	75.42%
	FPCA-Mail	1,377	74.49%	3.86%	84.21%

Figure 1- This is an overview of pre-project Tarrant County, Texas, (Fort Worth) election data from the 2012 EAVS representing a comparison between all election data and UOCAVA-specific election data in the areas of request mode (email, mail, FPCA-email and FPCA-mail), total ballots, return rate, rejection rate, and rejected due to lateness. This chart notes that UOCAVA ballots have a higher rejection rate and a higher percentage that are rejected due to lateness than the total number of ballots in Tarrant County.

FROM DATA TO INFORMATION

CSG OVI Technology Working Group proposes structured data.

Local Election Officials establish system exports.

Post-Election:

Local Election Officials push information to CSG OVI Data Validation Tool.

through the ESB. Through this mechanism and the cooperation with and dedication of members of all of the OVI working groups, OVI was able to collect standardized *UOCAVA* data from election jurisdictions across the country which has assisted in the development of the ESB Data Standard. CSG OVI and FVAP are currently developing a system for uploading data for processing and analysis and are also conducting further outreach to jurisdictions across the United States, with the intent of collecting and standardizing data in jurisdictions that represent 90 percent of the *UOCAVA* election community.

The ESB Data Standard is a relatively simple specification for CSV files that use the Open Knowledge Foundation's JSON data table schema.[10] Ideally, the data that are provided in the schema are formatted using standards created by the International Organization for Standardization, or ISO.[11] For example, providing dates and addresses in standardized formats allows for data to be analyzed with minimal translation. The idea behind the standard is that each transaction between the voter and the election office would be "atomistic," meaning that the transaction data would completely describe the transaction in question. Each transaction would be clear as to the action taken (e.g., a ballot was received by a voter), when the transaction occurred, and, where possible, the relative success of the transaction.[12]

RECOMMENDATIONS[13]

RECOMMENDATION: State and local election offices should work with FVAP and the EAC, to adopt and implement the ESB Data Standard, recognizing that it is the best vehicle for reducing the burden of completing federal reporting requirements for military and overseas voting and for capturing and analyzing voter success data. Using a single data standard would simplify the process of reporting data. Once a jurisdiction makes the upfront effort to setup a system to support the standard, exporting data would be easy and relatively costless. The jurisdiction would export their transactions related to the issue in question—such as *UOCAVA* voting—and the data could then be analyzed easily to address a variety of research questions, something that is difficult to do currently with the aggregated data reported in the EAVS.

RECOMMENDATION: CSG should work with FVAP to identify a method or partner agency that can support automated data collection and validation to ensure the continued use of this standard.

RECOMMENDATION: FVAP should continue to work cooperatively with the EAC and the National Institute of Standards and Technology, or NIST, to establish data repositories and related standards to support the long-term sustainability of the ESB Data Standard. FVAP should also share lessons learned to assist similar EAC efforts in the future to reduce post-election reporting requirements.

RECOMMENDATION: Once the ESB Data Standard is released, state and local election officials should ensure that the standard is incorporated into appropriate election

technology provider contracts so that data can be exported using the ESB Data Standard. Adopting the ESB Data Standard requires election offices to engage in two important changes to their business practices. First, they will need to ensure that they are formatting data such as dates and state abbreviations using widely adopted standards. Second, they need to think of each transaction between the voter and the election office as a discrete and complete activity. Each transaction needs to be clear as to the action taken (e.g., a ballot was received by a voter), when the transaction occurred and, where possible, the relative success of the transaction.

CONCLUSION

Standardizing data in the pursuit of these uniform datasets is a natural fit for the fragmented nature of election administration in the United States. The long-term goals of the ESB Data Standard is to automate the collection of the data for EAVS Section B and to serve as a model for the collection of all EAVS data in an automated fashion. Analyzing transactional data will allow FVAP to identify the factors that maximize voter success, as well as provide LEOs and SEOs with the individual-level, transactional data they need to understand how they currently provide service to *UOCAVA* voters and how this process can be improved, without relying solely on anecdotal information.

The Data Standardization/Performance Metrics Subgroup considered the benefits that would be achieved from having a single standard for collecting and reporting *UOCAVA*-specific voter data at the transaction level—each critical interaction between the voter and state or local election office. Specifically, the subgroup considered how the data currently reported in the EAVS Section B—the *UOCAVA* section of the survey—could be standardized for reporting purposes as part of an ESB Data Standard. This standard would support FVAP's current focus on developing a more automated process to obtain transactional-level data that will drive new voter-oriented programs. During its review, the subgroup identified several important benefits which would result from a *UOCAVA* data standard, with some of these benefits realized by state and local election offices and others by FVAP and the EAC. These benefits include:

- **EASE OF REPORTING**—Data reporting would be simplified with the consistent use of a single data standard like the ESB Data Standard for *UOCAVA* voting, and election data more generally, by all target consumers for these election data, including EAC, FVAP and state and local election offices. Answering the EAVS or providing data to the EAC and FVAP becomes a simple matter of exporting the transactional data. A data standard means that once a jurisdiction makes the upfront effort to set up an election management system to support the standard, exporting data is easy and relatively costless. This greatly reduces the overall administrative burden associated with the current post-election survey program administered by the EAC and FVAP.

- **UNDERSTANDING VOTING SUCCESS**—Analyzing transactional data would allow election administrators and FVAP to identify the factors that maximize voter success. These data can also provide state and local election offices with the data they need to justify resource requests and improve their services. By adopting successful election practices, state and local election offices can improve services at a lower cost to their constituencies simply through more effective resource allocation. Current post-election survey data only provide aggregate counts at the state and local elections levels, which is a sound practice for comparative analysis, but does not permit a deeper examination of individual contributors to voter success.

- **IMPROVED CUSTOMER SERVICE**—Understanding voter success should lead to improved customer service because state and local election offices would have more accurate information about ways in which voters are served by their offices. By viewing *UOCAVA* voters as customers, state and local election offices together with FVAP can work to provide evidence of what transpired at the voter level.

- **COST SAVINGS AND EFFICIENCIES**—By adopting the ESB Data Standard and using the tools that allow data export of voter-level administrative data in an appropriate form, the costs associated with completing Section B of the EAVS decrease dramatically. The data would not have to be aggregated into a report but instead the raw transactional data could be exported for analysis by FVAP and the EAC. FVAP will work with the EAC to explore how this standard can be applied to the entire EAVS, which would simplify the EAVS reporting process. Having transactional data would allow for effective program evaluation and identification of effective practices. State and local election offices would then better understand what works and what does not work in serving the *UOCAVA* population.

- **SUPPORTING OTHER INITIATIVES**—The ESB Data Standard has the potential to support other efforts, such as the CSG OVI's Military Ballot Tracking Pilot, or MBTP program. The MBTP examined the benefits of standardizing one set of barcode tracking elements for military ballots during the 2016 general election. It has the potential to not only provide greater levels of visibility and transparency to the mail balloting process for military voters, but holds real promise for increasing the level of customer service available to military voters by tracking a ballot, just as they would a package from their favorite online retailer. ☑

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APPENDIX A

EAVS Section B Data Standard

The EAVS Section B Data Standard, or ESB, aims to provide a simple way to supply data for Section B of the Election Administration and Voting Survey, or EAVS. Although the EAVS data can be used to compare election administration at the state-level, these aggregate data are not intended to evaluate voter-level transactions and what contributes to a voter successfully receiving and casting a ballot. The ESB Data Standard gives states and local election offices a mechanism for reporting data in a structured format, where deeper analysis of voter behavior can occur and potential pitfalls in the administrative process can be isolated.

The standard captures information about UOCAVA transactions, such as:

- When a voter requests a ballot;
- When the ballot request is processed;
- To what country the ballot is sent, and when;
- Why an application/ballot is rejected; and
- Whether a voter is military or overseas citizen.

To make the process of collecting data easier, this project borrows lessons from the Voting Information Project's,[14] approach to data collection, using a flat file format for data collection and push any transformations downstream.

The official ESB Data Standard documentation can be found here: https://eavs-section-b-data-standard.readthedocs.io/en/latest/.

ENDNOTES

1 *Uniformed and Overseas Citizens Absentee Voting Act* of UOCAVA information can be found here: www.fvap.gov/info/laws/uocava

2 Information about The Military and Overseas Voter Empowerment, or MOVE, Act can be found here: www.justice.gov/opa/pr/fact-sheet-move-act

3 For more information, see: www.eac.gov/research-and-data/election-administration-voting-survey/.

4 R. Michael Alvarez and Thad E. Hall, 2005, "The Next Big Election Challenge: Developing Electronic Data Transaction Standards for Election Administration," IBM Center for the Business of Government. www.businessofgovernment.org/report/next-big-election-challenge-developing-electronic-data-transaction-standards-election-adminis

5 See, for example, see R. Michael Alvarez, Thad E. Hall, and Brian F. Roberts. "Military voting and the law: procedural and technological solutions to the ballot transit problem," Fordham Urban Law Journal 34 (2007): 935.

6 Placeholder footnote for report link on CSG OVI website to go up when this paper goes up as we do not want link live before report issuance.

7 The official ESB documentation can be found here: https://eavs-section-b-data-standard.readthedocs.io/en/latest/

8 The EAVS Section B Data Standard uses a JSON ("JavaScript Object Notation") table schema approach, which is human-readable and usable by many different types of computer software systems. This makes it an excellent format for data management and exchange.

9 The CSG OVI Policy Working Group Recommendations can be found here: knowledgecenter.csg.org/kc/system/files/CSG%20OVI%20Recommendations%20Report%20Updated.pdf

10 This schema can be found here: http://specs.frictionlessdata.io/json-table-schema/

11 More information on ISO can found be here: http://www.iso.org/iso/home.html

12 For many transactions, it is difficult to define a "successful transaction" because of the nature of voting. For example, if ballots are sent to voters, the only failure definitions are ballots that are returned and reports by voters that their ballot did not arrive. A voter who does not report that their mail ballot did not arrive may not report the problem and instead vote a ballot they received in another way (e.g., via email), using the Federal Write-In Absentee Ballot, or FWAB, or simply not vote.

13 The complete recommendations from the CSG OVI Technology Working Group can be found here: http://www.csg.org/OVI/documents/KKOVITechRecs.pdf

14 Information about the Voting Information Project can be found here: https://votinginfoproject.org/

ABOUT CSG

Founded in 1933, The Council of State Governments is our nation's only organization serving all three branches of state government. CSG is a region-based forum that fosters the exchange of insights and ideas to help state officials shape public policy. This offers unparalleled regional, national and international opportunities to network, develop leaders, collaborate and create problem-solving partnerships.

ABOUT OVI

Many active duty military personnel are located in remote areas abroad and have limited access to state voting information and, in some cases, their ballot. U.S. citizens living overseas also have unique challenges in exercising their right to vote. These challenges are complicated by extreme variation in how states conduct elections and how absentee ballots are processed.

In September 2013, CSG launched a four-year, $3.2 million initiative with the U.S. Department of Defense Federal Voting Assistance Program or FVAP, to improve the return rate of overseas absentee ballots from service members and U.S. citizens abroad.

As part of this effort, CSG's Overseas Voting Initiative maintains two separate advisory working groups. The CSG Policy Working Group is examining military and overseas voting recommendations from the Presidential Commission on Election Administration, as well as other successful programs and practices across the country. The CSG Technology Working Group is exploring issues such as performance metrics and data standardization for incorporation into state and local elections administration policies and practices for overseas ballots. Through the initiative, CSG will provide state policymakers and state and local election officials with best practice guides to ensure the men and women of the U.S. military and Americans living overseas are able to enjoy the same right to vote as citizens living in the United States.

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