



# VETERANS EXPERIENCE OFFICE

## VETERAN EDUCATION TRANSACTIONAL SURVEY

### METHODOLOGY BRIEF: SAMPLE DESIGN

The Veteran Benefits Administration oversees several programs that support Veterans furthering their education or receiving approved training. This includes such programs as the Montgomery GI Bill (Active Duty and Reserves), the Reserve Educational Assistance Program (REAP), and the Post 9/11 GI Bill. Veterans that participated in these four initiatives were identified for measurement regarding their experience in the benefits process. Recent recipients of the Education benefits process will be **contacted via email** and invited to complete a brief **online survey**. The goal of this document is to describe the number of veterans that will be contacted for the survey.

**Target Population:** Veterans that applied for an education program OR had their school enrollment certified OR received a tuition/stipend payment in the **past calendar month**. These will represent the 3 major reporting groups.

Over a million veterans took advantage of these services in 2015. The chart below shows the population figures from that year. VEO will conduct a biweekly random sample from persons with an email address provided to the VA. In order to reduce respondent burden, only a portion of participating veterans are contacted. This reduces the number of veterans that will be contacted multiple times throughout the year to maintain quality estimates in successive months. We also stipulate that persons will not be contacted repeatedly for consecutive months. The total amount of veterans contacted will be determined to ensure a certain level of precision for the resulting monthly survey estimates<sup>1</sup>.

Education Benefit	Chapter Type	FY 2015 Annual Beneficiaries <sup>1</sup>	FY 2015 Monthly Beneficiaries	Proposed Monthly Respondent Size	Monthly Recruitment Sizes
Post 9/11 GI Bill	33	790,480	65,873	3,300	16,500
Montgomery GI Bill (Active Duty)	30	61,403	5,117	1,100	<5,500
Montgomery GI Bill (Selective Reserve)	1606	63,030	5,252	1,100	<5,500
Reserve Educational Assistance Program	1607	9,965	830	1,100	<5,500

1. Source: FY 2015 Annual Benefits Report (see footnote for web address).

### Sample Size Determination

Sample size will be based on a 95% Confidence Level and a 3% Margin of Error. This is a standard level of precision used by survey administrators (Lohr 1999). It requires a minimum sample size of 1,100, which will be applied separately to each of the for benefit groups (Post -9/11, MGIB-AD, MGIB-SR, and REAP). Within the largest beneficiary group, Post-9/11, VEO intends to obtain precision estimates for three major reporting groups: Applications, Enrollments, and Payments. Therefore, the minimum sample size across groups would be 6,600. It is advisable to increase upon this to improve estimates for subpopulations of interest (e.g., Age Group, Gender, etc.). For these reasons, the monthly sample target is set at 6,600 (1,100 per group). Presuming a 20% response rate, obtaining 6,600 respondents would require contacting **33,000 veterans per month**. This represents the maximum number of persons that may be contacted on a monthly basis. In practice, these numbers may be reduced based on the population sizes for a particular month. Due to seasonality, the amounts of applications, enrollment certifications, and payments will fluctuate each month.

1. <https://benefits.va.gov/REPORTS/abr/ABR-Education-FY15-02032016.pdf>
2. Lohr, Sharon Sampling Design and Analysis 1999

## Sampling Design

The Veteran’s Experience Office will conduct a probability sample on the monthly target population. A frame is prepared by extracting population information directly from governmental database resources: the Veteran Business Administration Enterprise Data-Warehouse (EDW). These extracts will also be used to obtain universe figures for the sample weighting process.

Beneficiaries will be randomly selected from the biweekly population according to a stratified design. The object is to obtain a *representative* sample, with respect to the stratification variables. There should also be ample precision for all major reporting variables. This may require oversampling at the Chapter level (sample weighting ) Levels 1 and 2 will be defined explicitly and will have allocation targets. The allocation targets will fluctuate with monthly changes in the population. However, the demographic strata in level 3 will require implicit selection via sequential sampling, and will not have explicit targets for each grouping.

- Level 1 – Encounter Type: Applications, Enrollments, and Payments (explicit)
- Level 2 – Chapter Type (30, 33, 1606, 1607) (explicit)
- Level 3 – Demographics: Age Group, Gender, Location (Implicit)

The exact allocation will be dependent on the biweekly beneficiary populations. At the middle and end of every calendar month, a database query will be enacted, and the sample will be selected from those persons with a valid email address. Selected persons will be invited to join the survey and provide information on their experience with the education benefits process from the past month. Their answers will be collected for a two-week period, at which point the survey will close. Beneficiaries will never be contacted in consecutive months, and respondents will not be contacted again for a 3-month period. Once all the responses are collected, the sample will be weighted to reflect the entire population (email and non-email).

Many survey practitioners recommend the use of weighted survey estimates improve inference to the population. The method attempts to correct for under-coverage and non-response biases. The sample weighting methodology will be applied separately to each encounter type: Applications, Enrollments, and Payments. Age Group and Gender will be included as the primary weighting variables. VEO will consider adding Chapter Type as a secondary weighting variable, providing that its inclusion does not add substantial variation to the final weights.

## Summary

Sampling Design Feature	Description
Survey Reporting	Monthly, Quarterly
Data Collection	Biweekly
Stratification (Explicit)	Encounter Type, Chapter Type
Stratification (Implicit)	Age Group, Gender, Location
Quarantine	3-months for Respondents, 1 month for Non-participants
Weighting Classes	Encounter Type (Application, Enrollment, Payments)
Weighting Variables	Age Group, Gender , Chapter Type

1. <https://benefits.va.gov/REPORTS/abr/ABR-Education-FY15-02032016.pdf>
2. Lohr, Sharon Sampling Design and Analysis 1999