



MODULE 4
Benefits

QUALITY SAMPLE VALIDATION



A. Purpose

This module provides instructions for validating Benefits Timeliness and Quality (BTQ) nonmonetary determinations samples--which comprise separate samples for separations and non-separations--and lower authority appeals samples. These samples can be validated for any quarter that falls within the validation year. They must be validated every three years, unless the size of the universe from which the sample is drawn is not within $\pm 2\%$ of the ETA 9052 or the ETA 9054L benchmark counts. In that case, the validation must be repeated the following year.

A properly selected sample is: (a) of the correct size, (b) randomly selected, and (c) drawn from the correct universe. The validator must check the size and randomness of the sample as soon as the sample is drawn because the quality review can only proceed for a randomly drawn sample of the correct size. If the sample is not of the correct size or is not random, a new sample must be selected, as many times as needed, until the draw is random and of the right size. The universe should be checked as soon as the report counts are available.

State staff needs to validate separations and non-separations samples separately for nonmonetary determinations, and the lower authority sample. Nonmonetary determinations counts are validated in Population 5 and lower authority appeals counts in Population 8. These two populations must have passed validation before the ETA 9052 and ETA 9054L counts can be used as benchmarks for validating the universes of the samples.

B. Sample Size

Sample sizes are set based on the volume of nonmonetary determinations and lower authority appeals decisions reported in the preceding calendar year.

Sample sizes for nonmonetary determinations are based on total counts reported on the ETA 9052 report, and are of size 100 (50 separations and 50 non-separations) for states that reported 100,000 or more nonmonetary determinations and 60 (30 separations and 30 non-separations) for states that reported less than 100,000. However, the sample size for nonmonetary determinations may be increased in any given quarter to make up for cases discarded in the previous quarter. For example, if the assigned sample size is 100, and in the previous quarter 2 non-separation cases could not be reviewed because the case material was not found, the sample size for the quarter must be equal to 102: 50 separations and 52 non-separations.

Sample sizes for lower authority appeals decisions are based on total counts reported on the ETA 9054L report, and are of size 40 for states that reported 40,000 or more appeals and 20 for states that reported less than 40,000.

If a sample is determined to have an incorrect sample size, it must be drawn again with the correct size before the quality review can proceed.

C. Sample Selection

Different methods can be used to select the quality samples. For example, states can use balanced systematic selection (as described in Handbook 301, Appendix A, pp. A-4 to A-6), systematic random sampling, or use a utility that randomizes the file.

In *systematic random sampling*, a starting point is selected at random from the sampling universe, and thereafter observations are selected at regular intervals. The size of the population is divided by the desired size of the sample and rounded to the nearest integer to get the sample interval i , which is then used to select every i^{th} observation from a file containing all records in the universe. For example, if a sample of 30 cases is wanted from a universe of 300 records, then the sample interval is $300 \div 30 = 10$, and every 10th observation is selected. To determine the starting point--i.e., the first case to be selected--the validator multiplies a random number between 0 and 1 (supplied by the National Office or generated by a random number generator utility) by the sample interval, and rounds it to the closest integer. In the previous example, if the random number is 0.2354, then $0.2354 \times 10 = 2.354 \approx 2$, so the observations selected are 2, 12, 22, etc.

To validate that the sample selection was random when *systematic random sampling* is used, the validator needs to check that the sample interval and the starting point were calculated correctly, and that the observations were selected accordingly.

When a sampling utility is used, usually the sample frame is randomized and the first n observations are selected, where n is the desired size of the sample (in the previous example, the first 30 observations). This method is somewhat more difficult to validate because it could involve reviewing the sample against the source file, or reviewing the utility specifications.

If the sample selection procedure is random, the sample can proceed to the quality review. Otherwise, the sampling procedure must be fixed and the sample redrawn until it is randomly selected.

D. Sample Universe

The number of observations in the sample universe for nonmonetary determinations must be equal to the sum of all total counts in the ETA 9052 for the reporting quarter being validated. Although to pass validation, Populations 5 must have passed report validation to make sure that the reported counts are accurate benchmarks, Module 4 validations should be done anyway. If the number of observations in the universe is within $\pm 2\%$ of the count used for comparison, then the sample universe passes validation, and results are valid for three years. Otherwise, the state needs to revalidate the sample the following year.

The number of observations in the sample universe for lower authority appeals must be equal to the sum of all total counts in the ETA 9054L for the reporting quarter being validated. Although to pass validation, Population 8 must have passed report validation to make sure that the reported counts are accurate benchmarks, Module 4 validations should be done anyway. If the number of observations in the universe is within $\pm 2\%$ of the count used for comparison, then the universe

passes validation, and results are valid for three years. Otherwise, the state needs to revalidate the sample the following year.

If ETA 9052 or ETA 9054L reported counts are not available when the quality samples are drawn, comparing the sampling universe with the reported counts can be performed later to ensure that the validation process does not delay the quality review process.

E. Sample Validation

To validate the quality samples, the validator must complete the following steps:

Step 1 Select reporting period

- Obtain a copy of the quality sample for the reporting period you want to validate and for the previous quarter. Verify that all transactions in the universe are for the indicated reporting period and that the reporting period to be validated falls within April 1st of the previous year and March 31st of the current year.

Step 2 Validate the sample size

- Check that the sample size is in accordance with the number of transactions reported in the previous year. For nonmonetary determinations the sample size should be 100 (50 separations and 50 non-separations, plus the make-up cases, if any) for states that reported 100,000 or more nonmonetary determinations and 60 (30 separations and 30 non-separations, plus make-up cases) for states that reported less than 100,000 nonmonetary determinations. For lower authority appeals, the sample size should be 40 for states that reported 40,000 or more appeals and 20 for less than 40,000.
- If the sample size is not correct, the sample fails validation. Do not proceed any further. The sample needs to be redrawn and validated again until it is of the correct size.

Step 3 Validate that the sample selection was random

- Determine which method was used to select the sample.

If balanced systematic selection was used, verify that all steps were followed as described in Handbook 301, Appendix A, pp. A-4 to A-6. (This instruction applies to both nonmonetary determinations and lower authority appeals). Handbook 301 also references the PICKNUMB sampling routine and refers the reader to Appendix A of Handbook 401. The current (2007) version of Handbook 401 no longer contains Appendix A. Readers needing guidance with the PICKNUMB program should contact the National Office or obtain versions of Handbook 401 dated 2000 or earlier.

If systematic random sampling was used, then:

- Obtain a copy of the sample universe.
- Check that the sample interval used to select the sample is equal to the number of cases in the universe divided by the sample size.

$$\text{interval} = \text{Round}\left(\frac{\text{universe size}}{\text{sample size}}\right)$$

Remember that for nonmonetary determinations, the sample size must include additional cases for any cases that were discarded in the previous quarter.

- Check that the starting point (first case selected) is equal to the random start number supplied by the National Office multiplied by the sample interval, rounded to the nearest integer.

$$\text{starting point} = \text{Round}(\text{random number} \times \text{sample interval})$$

- Check that the proper subsequent cases were selected. For example, if the random start was 10 and the interval was every 40th case, check that 50, 90, 130, and so on were selected.

If a sampling utility was used, then:

- If the sample was drawn from a randomized file, determine how the file was randomized and print out the file to check that it was not ordered by date, local office number, or other nonrandom means. Compare this order with the way the file was ordered prior to randomization to ensure that the file was randomly reordered.
- Check that the first n cases were selected where n equals the sample size.

If it is determined that the sample was not randomly selected, the sample fails the validation. Do not proceed any further. The sample needs to be redrawn and validated again until it is randomly selected.

Step 4 Validate the sample universe

This step should be performed when the ETA 9052 or the ETA 9054L counts are available.

- Ensure that all the records in the sampling universe for nonmons and appeals are within the time period validated. Otherwise, they cannot be properly compared with the 9052 or 9054 counts and the validation will fail at this step.
- For nonmonetary determinations, check that the total number of determinations in the sample universe is equal to or within $\pm 2\%$ of the sum of all the total counts reported on the ETA 9052 for the quarter being validated. To pass this step, Population 5 must have passed validation.
- For lower authority appeals, check that the total number of appeals in the sample

universe is equal to or within $\pm 2\%$ of the sum of all the total counts reported on the ETA 9054L for the quarter being validated. To pass this step, Population 8 must have passed validation.

Whereas the 9054 counts include both monetary and nonmonetary appeals, the 9057 sample universe may include only *nonmonetary* appeals. Further, this universe should not include appeals decided but for which no hearing materials were available to review--decisions representing withdrawals, dismissals, and no-shows. If the universe was built by excluding monetary and non-reviewable appeals, then it should be smaller than the count reported on the ETA 9054L reports. To compare this universe properly with the 9054L count, add in the number of excluded appeals back into the universe as in the example below. If the sum of the two groups is within 2% of the count reported on the ETA 9054L report for the quarter, then the universe passes validation. Alternatively, the sample cases may be drawn from a universe that includes all appeals, in which a flag distinguishes the reviewable nonmonetary appeals from others. In such a case compare the size of the universe file directly with the 9054L count.

The following example shows one state's adjustments to the appeals sampling universe count to compare it properly with the 9054L count.

*Universe File	1,663
Withdrawn Cases	+124
Dismissed Cases	+477
Monetary Cases	+2
<u>Program type U8</u>	<u>+32</u>
Universe Matching 9054L definition	2,298

If the universe fails the validation, the sample has to be validated again by the next validation year. Otherwise, it must be validated again in three years.

F. Results

In August 2014, a screen to enter and transmit the results of Module 4 validations was added to the state Sun DV WS software. Instructions have been posted to the DV Web page and will be incorporated into the next edition of the DV Operations Guide. A facsimile of the data entry and transmission screen is below.

QUALITY SAMPLE VALIDATION
BTQ1 - Nonmonetary Determinations - Separations
Validation Worksheet

Report Quarter:
 Year:

Validation Item	Validation	Result	Score
Universe	a) Validated Population 5	Pass <input type="text"/>	
	b) All records are in reporting number	Yes <input type="text"/>	
	c) Number of records in universe	<input type="text"/>	
	d) ETA 9932 Counts	0	
	e) Difference		
Sample Size	f) %Difference		
	g) Expected Value	30 <input type="text"/>	
	h) Actual Value	30 <input type="text"/>	
Randomness	i) Difference:		
	a) Random sampling method used	Balanced Systematic Selection <input type="text"/>	
	(a.1) Followed steps in Handbook 301	Yes <input type="text"/>	
	(a.2) Expected Interval Size		
	(a.3) Actual Interval Size	<input type="text"/>	
	(a.4) Difference		
	(a.5) Starting point is correct	Yes <input type="text"/>	
b) Right cases were randomly selected	Yes <input type="text"/>		
Overall Validation Score:			