Delaware Health and Social Services

Department of Health and Social Services
Division of Medicaid & Medical Assistance

Statistical Sampling for Overpayment Estimation

Overview

- Sampling Basics
- Statistically Valid Random Sample (SVRS) Selection
- Overpayments

Sampling Basics

Sampling Basics : Why Sample?

- We need to know some characteristic(s) of a large population (universe)
- To Save the Cost of Collecting and Processing Data from an Entire Population
- To Make an Inference or Estimate Something
  - Quantify what the data is saying
  - Statistical Sample for Overpayment Estimation (SSOE)

Sampling Basics : Key Terms

- An ***element*** or unit is an object on which an observation or measurement is taken, such as a claim.

- A *population* (***universe)*** is a collection of all elements about which we wish to make an inference.
  - E.g. All claims for clients that received E&M services from Dr. John Doe for a determined period of time

Sampling Basics : Key Terms

- ***Sampling units*** are non-overlapping collections of elements from the universe that cover the entire universe.

- A ***frame*** is a list of sampling units.

- A ***sample*** is a list of sampling units drawn from a frame or a collection of frames.

Statistically Valid Random Samples (SVRS)

Purpose and Steps are detailed in Chapter 8 of the Program Integrity Manual by Centers of Medicare and Medicaid Services PIM 8.4.1

- The purpose is to provide instructions on the use of statistical sampling in the reviews to calculate and project (extrapolate) overpayment amounts to be recovered by recoupment, offset or otherwise

- These instructions are provided to ensure that a statistically valid sample is drawn and that statistically valid methods are used to project an overpayment where the results of the review indicate that an overpayment has been made

Steps for Conducting Statistical Sampling PIM 8.4.1.3

1. Selecting the provider or supplier
2. Selecting the period to be reviewed
3. Defining the universe, the sampling unit, and the sampling frame
4. Designing the sampling plan and selecting the sample
5. Reviewing each of the sampling units and determining if there was an overpayment
6. As applicable, estimating the overpayment

PIM Guidelines in 8.4.1.4 for Determining when Statistical Sampling may be Used

- High Level of Payment Error Exists
  - *Error Rate Determination*
  - *Probe Samples*
  - *Data Analysis*
  - *Provider / Supplier History*
  - *Information from Law Enforcement*
  - *Audits or Evaluations by the OIG*
  - *Allegations of wrongdoing by provider's current/former employees*

- Documented Educational Intervention Has Failed to Correct Payment Error

Time Period Considerations
PIM 8.4.3.1

- How long the pattern of sustained or high level of payment error is believed to have existed
- Volume of claims involved
- Length of time that a policy has been in effect
- Extent of review already conducted or currently being conducted
- Dollar value of the claims that are involved relative to the cost effectiveness of the sample

Random Numbers and Seed(s)
PIM 8.4.4.2

- A record shall be kept of the random numbers actually used in the sample and how they were selected.
- The source of the random numbers used to select the individual sampling units, including the program and the algorithm/table used, must be documented in the record and available for review
- Seed – a number used to initialize the random number generator used to select the random sample. Ensures you can reproduce the same sample.
- All steps taken in the random selection process, exactly as done, must be documented to ensure that the necessary information is available for anyone attempting to replicate the sample selection.

SVRS Design – Basic Process (PIM 8.4.1.3)

- The sampling process starts with a request from the State
- Select the Provider
- Determine the period to be reviewed
- Define
  - Universe
  - Method
  - Sampling Unit – Client/Date of Service, Claim, etc.
  - Sampling Frame
  - Sampling Plan and select the sample
- Python Programs
  - Input, format, analyze data
- RAT-STATS
  - Free statistical software available on the Office of Inspector General (OIG) website
  - Estimates the sample size for the random sample
  - Generates random numbers used to select the random sample
- Quality control at each step (Peer, Statistician, Manager)

Overpayments

Overpayment Process

- The SUR Unit reviews each sample unit, issues a decision on each claim, and determines if there was an overpayment

SUR Decision	Overpayment
Allow	$0
Deny	Paid Amount
Reduce	Difference in Payment between the original code/units billed and the correct code/units

- If records are requested and they are not provided, those items are to be treated as improper payments and can be denied (PIM 8.4.5.2)

Types of Overpayments

- Actual Overpayments
- Extrapolated Overpayments
- Recalculations

Actual Overpayment
PIM 8.2.1.1

- For those claims reviewed, the sum of payments made to a provider/supplier for services determined to be medically unnecessary or incorrectly billed

Extrapolated Overpayment PIM 8.2.1.1 and 8.4.5

- The total overpayment obtained by projecting an overpayment from a Statistically Valid Random Sample (SVRS) to all similar claims in the universe
- Must be based on SVRS
- Requires Statistician review and approval
- “In most situations the lower limit of a one-sided 90 percent confidence interval shall be used as the amount of overpayment to be demanded for recovery from the provider or supplier.”

Recalculations

The overpayment may be recalculated based on decisions from the following three levels of appeal:

1. Redetermination decision by SUR

2. Deputy Director appeal decision

3. Director Appeal Process (only when overpayment of $25,000 or more) Director's discretion of assigning hearing officer

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Thank You