



What Providers Need to Know About Statistical Sampling & Extrapolation

This information was developed by the Wisconsin Department of Health Services (DHS) – Office of the Inspector General (OIG) to help educate providers on federal and state program requirements. Featured topics include the rules and regulations that providers must follow, as well as program guidance, best practices, and helpful resources to support program participation efforts.

Overview

Wisconsin Administrative Code allows DHS to use statistical sampling and extrapolation to help determine amounts owed by providers. In order to participate in the Wisconsin Medicaid program, DHS requires providers to accept and agree to the use of these methods in audits and investigations. Details may be found under [Wis. Admin. Code § DHS 105.01\(3\)\(f\)](#).

Recent audits conducted by the OIG show billing inconsistencies over prolonged periods. Should billing inconsistencies persist, the OIG will use extrapolation and other potential methods to determine amounts owed by providers.

Statistical Sampling

Statistical sampling is a way of gaining information about a provider's entire set of claims data for a specific period without having to review every claim. Since it is often impractical to review each claim due to the large volume submitted by providers, statistical sampling offers a mathematical approach for selecting claims in a manner that is representative of those claims billed for a specified period.

While there are different ways to conduct the statistical sampling selection process, the OIG uses methods that have long been proven as mathematically valid. Confidence level, precision, and replicability are some of the tools that the OIG uses to select a statistically valid sample.

The OIG then audits the sample to determine how many dollars may have been paid in error, which is known as the error rate.



Did you know?

OIG extrapolation estimates are calculated by professional statisticians.

Extrapolation

In simple terms, "extrapolate" means "to project." Extrapolation occurs when the statistical sampling error rate is projected onto the entire population of claims billed by a provider during the specified period. The result is an estimate of the total dollars paid in error in that timeframe, which is the total estimated amount owed by the provider.

Again, this amount is an estimate due to the fact that every filed claim was not audited. However, the estimate is mathematically valid because confidence levels of 90% or higher are used in the calculations, meaning that the estimate would be correct 90% of the time.



Examples

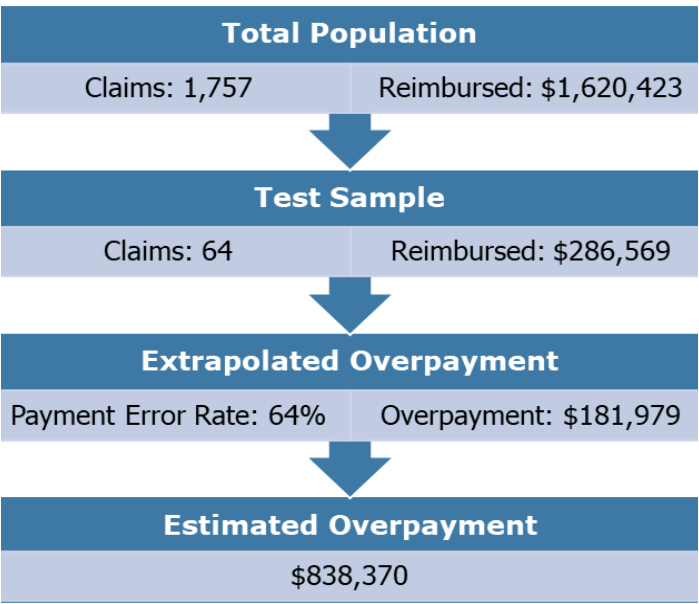
The following two examples further illustrate how the OIG uses statistical sampling and extrapolation to determine provider overpayments.

Example One

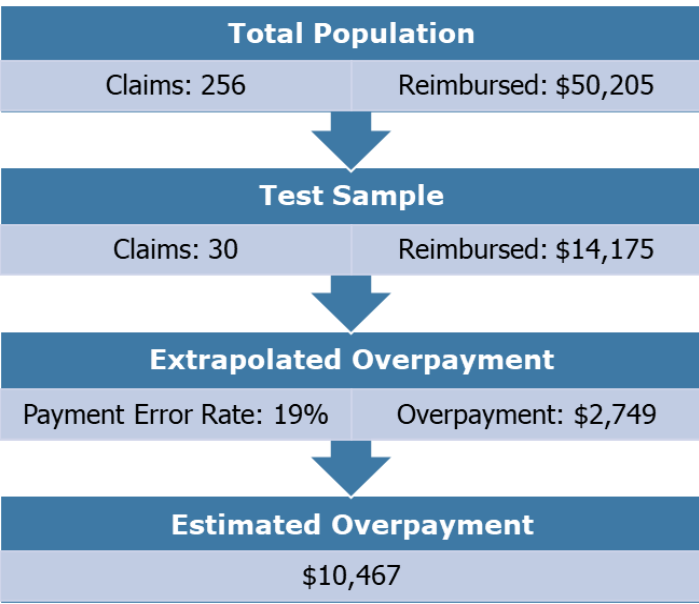
The flowchart on the right features a provider's total population of 1,757 claims with \$1,620,423 in reimbursement, from which the OIG selected a statically valid test sample consisting of 64 claims with \$286,569 in reimbursement.

Due to compliance issues identified by the OIG while reviewing the 64 sample claims, the provider received a \$181,979 overpayment. This equates to 64% payment error rate.

Factoring in statistical adjustments, like confidence level, precision, and replicability, the OIG projected the 64% payment error rate onto the 1,757 total claims population, resulting in an estimated \$838,370 provider overpayment.



Example Two



The flowchart on the left showcases a provider's total population of 256 claims with \$50,205 in reimbursement, from which the OIG selected a statistically valid test sample that included 30 claims with \$14,175 in reimbursement.

Compliance issues discovered by the OIG while reviewing the 30 sample claims resulted in a provider overpayment of \$2,749, which equates to a 19% payment error rate.

Upon applying confidence level, precision, and replicability statistical adjustments and projecting the 19% payment error rate onto the 256 total claims population, the OIG estimated that the provider received a \$10,467 overpayment.

Get Billing Help!

The OIG encourages providers to seek help with billing questions prior to submitting claims by calling Providers Services 800-947-9627.

Contact Us

- For assistance with OIG audits, contact the staff person listed on your audit letter.
- To report suspected fraud, call 877-865-3432 or visit www.reportfraud.wisconsin.gov.