

Clear Your Sampling & Extrapolation Backlog

Automated Sampling and Extrapolation for Health Care Audits and Investigations

In health care program/payment integrity, samples of claims are reviewed to determine whether payments for services were appropriate. Results of these reviews are then extrapolated to the population of claims to identify overpayments made to a provider, group of providers, or for a benefit overall. Medicare, Medicaid, and private health plans often seek overpayments from a single provider. In these cases, program integrity organizations and health plans are faced with a choice of how to select claims to include in their audit or investigation. They can review all claims, review a non-statistical sample of claims, or review a statistically valid sample of claims.

Option 1: Review all provider claims

The first option, reviewing all of a provider's claims, is normally cost- and time-prohibitive. While this has the potential to identify all overpayments for a provider, the costs associated with reviewing a large number of claims will likely exceed the identified overpayment, making this option a non-starter for most organizations.

Option 2: Review a non-statistical sample of claims

Many organizations use the second option, non-statistical sampling methods, such as selecting the 10 highest paid claims for review. Non-statistical sampling methods allow organizations to control the size and make-up of their samples, which also allows them to control the resources need to review the sampled claims. However, any overpayments identified will be limited to these 10 claims.

Option 3: Statistically Valid Sampling

This brings us to the third option, statistically valid sampling, such as simple random sampling or stratified sampling. A statistically valid sample must have a clearly defined universe and each sampling unit must have a known, non-zero probability of selection. Statistically valid samples are designed to reach a certain level of precision, or how close the sample can come to approximating the population. When samples meet these conditions, the overpayment identified in the sample can be extrapolated to the provider's universe of paid claims.

Statistically valid sampling and extrapolation can result in significantly larger overpayments for providers while still limiting the costs of review. An example adapted from actual sampling and extrapolation work performed by IntegrityM best illustrates this point. A statistically valid sample for a provider with just over 10,000 claims consisted of approximately 100 claims. Medical review of this sample resulted in an identified overpayment of approximately \$6,000. When extrapolated to the provider's universe of claims, the total overpayment to this provider was over \$500,000. Reviewing only about 1 percent of a provider's claims allowed for a valid estimate of the full overpayment amount made to the provider.

Automated Statistical Sampling & Extrapolation Services

Healthcare programs are stretched for resources. They often find their teams spending valuable hours on manual medical review, reviewing every claim in their investigations. Statistically valid sampling and extrapolation can significantly increase the return on investment (ROI) for audits and investigations. However, these processes take time and statistical expertise, and are often subject to strict guidelines imposed by federal guidelines, state law, or contract agreements. Fortunately, IntegrityM offers a solution that makes statistically valid sampling and extrapolation possible for all organizations. Automated Sampling and Extrapolation powered by GL $\tilde{Y}D(\Sigma)^{TM}$ takes the manual steps out of the sampling and extrapolation process and performs the complex calculations in just minutes, not hours, which also increases ROI.

Automated statistically valid sampling and extrapolation can be a powerful tool, allowing for the effective use of audit and investigative resources. Statistically valid sampling allows organizations to collect information about a particular universe for a relatively low cost. Rather than incurring the time and expense of reviewing the entire universe, the conclusions drawn from the sample can be extrapolated to the universe. When sampling and extrapolation are performed using a statistically valid methodology, these conclusions are scientifically and legally supported.

We can help Federal, State and private healthcare systems perform automated sampling and extrapolation in a fraction of the time. For teams of any size and varying needs, the benefits are clear: repeatable, reliable, and defendable analyses.

Client Testimonial on IntegrityM's Automated Sampling & Extrapolation Solution $GL\bar{Y}D(\Sigma)^{M}$

"We will definitely be increasing our use of GLYD(Σ)[™] and feel very fortunate to have this software tool. It's definitely paid for itself and investigators have less records to review, our dentists have less records to review, and our overpayments/recoveries have increased through the use of extrapolation."

Liberty Dental Health Plan