Sampling for Medical Chart Audits
Approaches and Considerations

Anyone who has spent time in the healthcare industry is familiar with medical chart audits, though the reasons for chart audits vary greatly. The audit could be a component of an internal compliance plan, part of a voluntary overpayment process, a requirement of a Corporate Integrity Agreement (CIA), or a commercial payer or Medicare request. Most feared of all, the request could come directly from the government.

In most cases, the auditors are reviewing the physician progress notes to confirm that the documentation and coding are accurate for the payments received and if the visit or procedure was medically necessary. Some providers perform the audit process prospectively to identify errors before the claims are submitted.

An internal audit process could be a 100% chart review, a predetermined volume of charts per provider monthly or annually, a certain time period for new providers, or certain CPT codes that are commonly miscoded. Good practice is to have the process documented in a Compliance Plan.

When it comes to chart audits, it is generally not feasible to review every claim submitted to the payer. This is where sampling comes in. A probe sample might be intentional or random. An intentional sample could be hand selected to determine if there is an issue; a random sample would be selected using a software system.

Microsoft Excel has a random selector that could be used, but the most common is RAT-STATS, a free statistical software package that providers can download to assist in a claims review. The package, created by the Office of Inspector General (OIG) in the late 1970s, is also the primary statistical tool for the OIG's Office of Audit Services. Among other tasks, the software assists the user in selecting valid random samples and estimating improper payments.CIAs require the use of RAT-STATS.

Regardless of the purpose of the audit, the process or methodology of how the charts are selected should be determined beforehand. An intentional sample cannot be extrapolated. If an extrapolation of overpayment is a possibility, defining the sampling universe is crucial. The overpayment calculations produced by RAT-STATS are based on the incorrect payments found in the audit extrapolated across the entire sampling universe that the random sample was selected from.

There are different types of sampling that can be used, but the most common are Simple Random, Stratified, and Cluster.

Simple Random sampling is when each claim (or other sampling unit) has the same chance of being selected. Each claim is ordered in some way – an identifier, date of service, procedure code, etc. – and assigned a number. A random number generator is used to select the numbers to sample. This method ensures that the entire data set is represented across all attributes.

An example of simple random sampling comes directly from a CIA:

Paid Claim: A claim submitted by Provider and for which the Provider has received reimbursement from the Medicare program or a state Medicaid program.

Population: The Population shall be defined as all Paid Claims during "a defined time period."

Overpayment: The amount of money the provider has received in excess of the amount due and payable under Medicare or any state Medicaid program requirements, as determined by the IRO in connection with the claims review.

Stratified sampling is when the data set is broken out into similar groups. Each group should contain data points that are similar to each other but are distinct from other groupings and avoid overlaps. For instance, one grouping might consist of A, B, and C while another consists of 1, 2, and 3. These two groups are similar in that they contain three characters in a specific sequence, yet they are different because one is made up of letters while the other is numbers. A real world example of this could be by procedure codes. Within each group of similar codes, a Simple Random sample would be completed. This will give information about the group individually that can be combined with other results for a holistic view.

Medicare and Medicare contractors often use Stratified sampling. If a provider receives a demand letter for an extrapolated overpayment amount, the claims data files, the documented process on how the sampling was done, and the overpayment calculations that were determined should be available to the provider. This is often where a provider retains an attorney and an outside auditing firm to help with the appeal process.

Lastly, we have Cluster sampling. This method is when the data is split into separate groups and then Simple Random sampling is applied to each group separately. Once the groups are randomly selected, then the claims in each group selected are reviewed. An example of Cluster sampling could be by date of service, where the process would use the date of service as the sampling unit. Once the sample is selected, all claims within that date of service are reviewed.

Understanding how samplings are created is key to ensuring a quality and thorough audit process. While there are several other sampling methods out there, the ones described here are most commonly used.

Have additional questions regarding sampling and methodolgies? We can help!

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