

# ROSS HEALTH ACTUARIAL

MANAGED CARE • RISK MODELING • DECISION SUPPORT

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**STATISTICAL**

**SAMPLING**

**DESIGN**

**FOR**

**HEALTH**

**CLAIMS**



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Providers face a major challenge in getting paid for their services in today's health care financing environment. Due to escalating costs and tight fee schedules from public and private payers, billing and collecting the full allowable amount for services is now more important than ever. At the same time, the federal government pursues any suspected overpayments, which can be costly in terms of management time, legal costs, and recoveries at a multiple of the alleged overpayment. Managed care companies may aggressively deny claims, further adversely affecting revenue. Meanwhile, administrative billing requirements have never been more complex.

Ross Health Actuarial can help you meet the challenges and risks associated with the billing process in a cost effective manner through the use of our superior stratified sampling design process.

**THE**

**ENVIRONMENT:**

**"THE BIG**

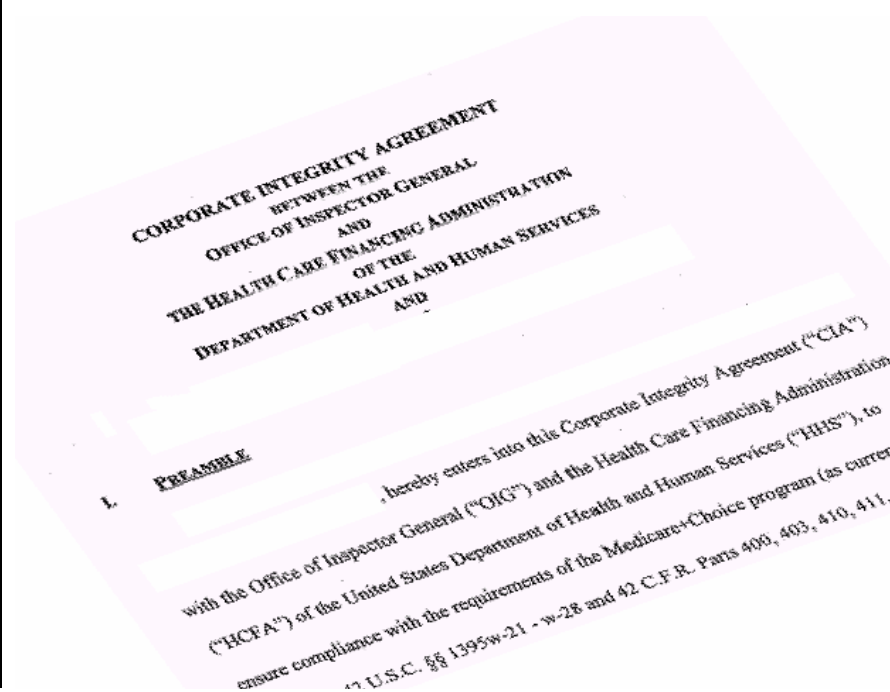
**SQUEEZE"**

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COMPLIANCE  
AUDITS  
AND  
FCA  
INVESTIGATIONS

An organization-wide evaluation of Medicare billings may result from a proactive compliance program, a False Claims Act investigation, or as part of a Corporate Integrity Agreement following an FCA settlement. A well designed stratified sampling method can help to contain the auditing costs through a smaller sample size, while improving accuracy and isolating potential outliers which may skew audit results.



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Ross Health Actuarial can help you develop a concurrent claim review process to identify and minimize potential claim problems before they are submitted. We work with you to identify the key variables which can generate problems, i.e. service providers, specific services, billing personnel, or payer. We then use a statistical sampling model to develop review guidelines which will efficiently meet your objectives of controlling risk while balancing the cost of the review process.

**CONCURRENT**

**REVIEW:**

**A**

**STATISTICAL**

**QUALITY**

**CONTROL**

**APPROACH**

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<b>MANAGED CARE CONTRACTUAL REIMBURSEMENT REVIEW</b>	<p>Due to cost trends and competition, managed care payers are placing additional pressure on provider reimbursement at the time of payment. Providers may find significant adverse revenue deviations due to issues of administrative compliance, medical necessity, incorrect fee schedules, downcoding of services, and alternate payer provisions. A payment audit conducted within an effective statistical sampling framework can help improve provider revenues by:</p> <ul style="list-style-type: none"><li>• Identifying payers and provisions generating revenue shortfall and payment delays.</li><li>• Providing a sound basis for negotiating the recovery of underpayments.</li><li>• Identifying areas where process improvement will generate improved revenues.</li><li>• Prioritizing issues for contractual renegotiations.</li></ul>
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We work with you to develop a sampling methodology tailored to your situation and goals. Steps in the design process include:

- **Determine study objectives.** The purpose of the study and the desired degree of monetary precision and statistical confidence are the starting point in the design process.
- **Identify stratification variables.** We combine our knowledge with yours to define strata which will correspond to variations in claim overpayments/underpayments.
- **Data analysis and modeling.** Your claim data is analyzed to determine the size of potential strata. At this point, we incorporate results from any preliminary audits in the modeling process.
- **Final sampling design and allocation of sample sizes.** Based on expected variations between the strata, and the relative cost of sampling from the various strata, the final sampling design is proposed which will efficiently meet the study objectives.
- **Extrapolation of audit results and report preparation.** The results from the audit process are extrapolated, and a report is prepared summarizing the process, the range of estimates produced by the study, and the statistical confidence of the results.

THE

DESIGN

PROCESS

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## CASE STUDY

To illustrate the benefits of a stratified sampling methodology over a simple, unstratified sampling approach, actual claim data were analyzed for stratification variables, and claim overpayments were modeled under two types of scenarios. One scenario had a low frequency of overpayments, while the other had a relatively high frequency of overpayments. For each case, the results of a stratified and unstratified sampling approach were simulated, and the results compared.

The following summarizes the dramatic effect of stratified sampling on sample sizes. This translates into significant savings in audit and review costs, or improved performance within a given budget.



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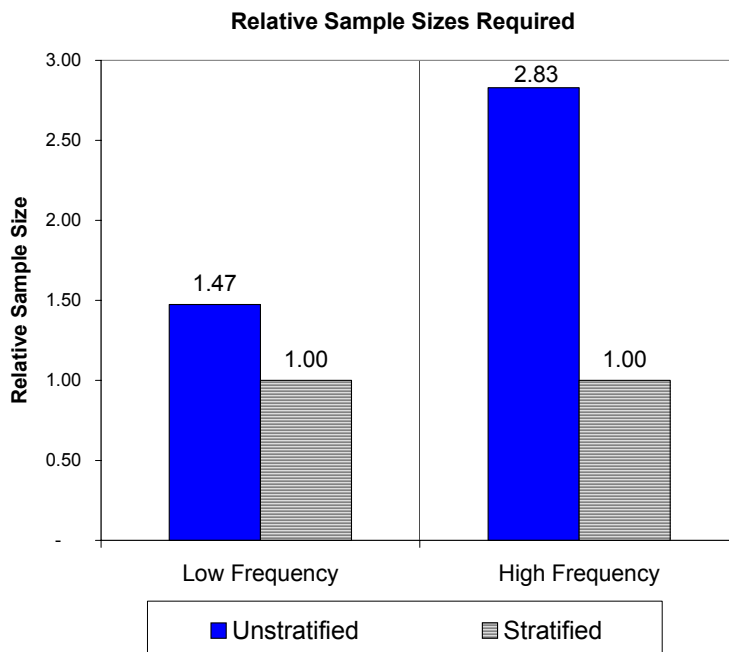
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- For both scenarios, the unstratified approach would require significantly greater auditing costs to produce the same level of monetary precision.
- The low frequency scenario would require an approximately 50% larger sample size.
- The high frequency scenario would require a sample size of 2 to 3 times larger if stratified sampling were not used.

CASE

STUDY

RESULTS



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