CommsCoach
by GovWorx

Raising the Bar:

Why High-Volume QA is Essential in 9-1-1

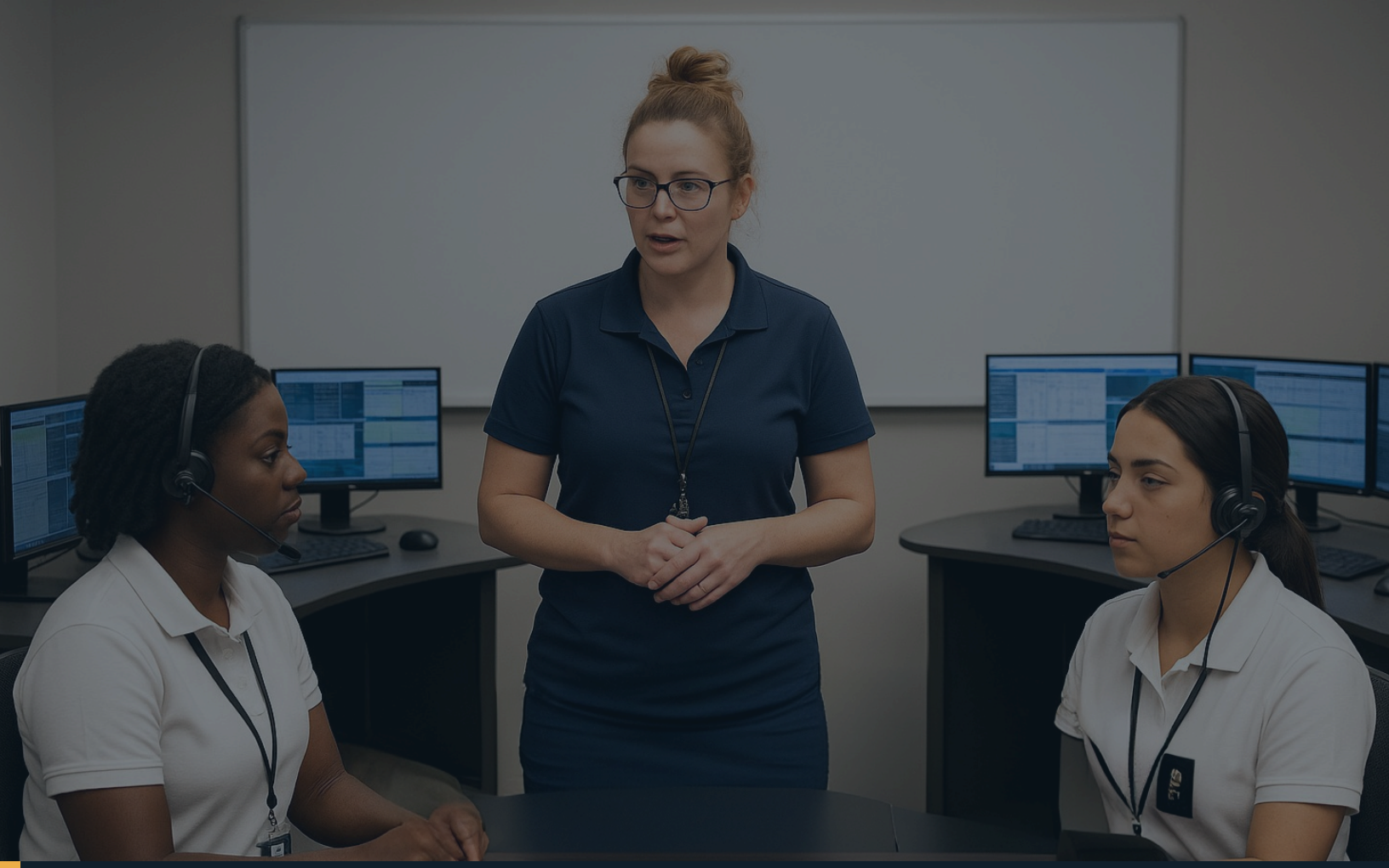


Table of **Contents**

Executive **Summary**

Do ECCs Really Need High-Volume QA?

In today's emergency communications landscape, both data science and cultural momentum point toward the need for high-volume quality assurance (QA).

Statistically, relying on small sets of random sampling, which has long been the industry standard, no longer provides a complete or accurate view of performance in a modern Emergency Communications Center (ECC). The logic behind traditional random sampling reveals serious limitations, especially with the call diversity that is common in most centers today. A larger, more comprehensive sample is essential for generating valid performance insights.

At the same time, ECCs across the country are striving to elevate the telecommunicator profession, recognizing these individuals as essential links in the public safety chain. This cultural shift requires a matching operational shift: comprehensive training and evaluation systems grounded in complete, verifiable records of performance.

High-volume QA makes this possible. It allows ECCs to move beyond reactive, fragmented feedback and into a future defined by proactive coaching, data-driven recognition and targeted training. These capabilities not only reduce bias and uncover blind spots, they transform QA from a punitive task into a platform for professional growth.

Additionally, implementing a combined macro and micro QA approach significantly enhances risk management by proactively identifying systemic trends and ensuring timely interventions, **thus reducing the likelihood leaders are surprised by possible mishandling of critical incidents** and strengthening community safety and the relationship of the center with the public.

Ultimately, high-volume QA is more than just a technical improvement. It represents a strategic evolution for ECCs that support the professional development of its telecommunicators by creating a culture of learning, accountability and sustained excellence. The centers that embrace this approach are positioning themselves, and their teams, for long-term success.

Introduction

Elevating the emergency telecommunicator profession is essential, given the immense responsibility they bear each day and the direct impact their decisions have on community, officer and firefighter safety. Similar to professions like aviation, healthcare, and law enforcement, where continuous evaluations ensure high standards and career sustainability, emergency telecommunicators deserve comprehensive, data-driven feedback and professional recognition. Enhancing their professional stature through high-volume, constructive evaluations not only acknowledges their critical role but also strengthens retention by fostering growth, fairness, and fulfillment in their careers.

Traditionally, Quality Assurance in 9-1-1 has meant reviewing a random sampling of calls, often in the range of 1-5%. But advances in AI-based evaluation now allow for the possibility of reviewing 100% of eligible calls and radio transmissions. This shift has raised valid questions within the industry:
Will evaluating more calls simply uncover more problems?
Will it overwhelm supervisors or demoralize staff?

While these cultural concerns are important, the move toward high-volume QA is also supported by strong statistical reasoning. Random sampling, especially at low percentages, cannot reliably capture performance across diverse call types or rare, high-impact scenarios. In many cases, it provides a skewed or incomplete view that limits accountability, obscures trends, and undermines confidence in the evaluation process. A larger sample size significantly improves data accuracy, reduces the risk of false conclusions, and ensures a more equitable and actionable feedback loop.

High-volume QA is possible, necessary and desirable. High-volume QA is critical to elevating performance, enhancing training, and ensuring the long-term success of public safety ECCs and telecommunicator retention. When implemented correctly, high-volume QA coverage increases visibility while reducing QA-dedicated effort and time and offers more than just risk management; it becomes a tool for improvement, equity, and retention.

Statistical **Requirements**

Evaluating only 1-5% of calls presents serious statistical limitations. ECCs typically handle hundreds or even thousands of distinct call types. In this context, a small, generalized sample fails to provide a representative view of overall performance.

Random sampling is only statistically valid when it is applied to a single, uniform data set. If the goal is to understand performance across multiple call types, then each call type must be sampled independently. A single holistic sample, regardless of size, does not account for the variation in protocols, complexity and frequency among different types of incidents. This means that even a 5% sample drawn uniformly from the overall call pool is unlikely to capture enough data points from low-frequency but high-risk call types to draw any meaningful conclusions.

In practical terms, achieving statistically relevant sampling would require random sampling within each call category, not across the system as a whole. As the number of call types increases, so does the complexity and volume required to produce statistically valid insights. At a certain point, the effort to design and execute such a sampling becomes more cumbersome than reviewing all eligible calls.

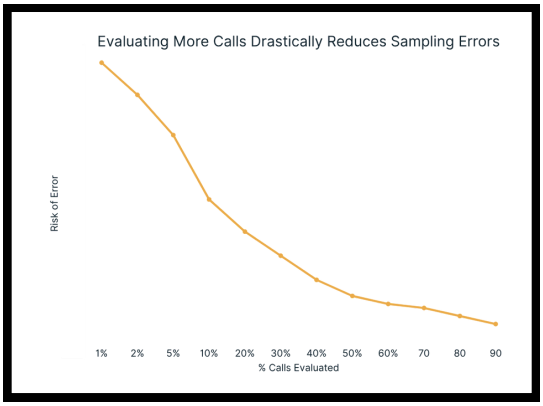
And luckily, with solutions like CommsCoach, the data is organized to be easily consumable and actionable, not overwhelming.

What is an Adequate Sample Size?

This raises a critical question:
What percentage of data is needed to gain a reliable picture of performance? Statistically, the answer is simple. The more data you evaluate, the lower your margin of error. At 1%, the margin for error is extremely high. At 10%, it improves. At 50% or more, confidence increases significantly. And at 100%, you eliminate sampling error entirely.

In data environments as varied and high-stakes as emergency communications, where full visibility can now be achieved through AI-based tools, partial sampling no longer meets the threshold for accurate performance evaluation.

Margin of Error vs Sample Size



2% Sample Risk

When you only review a small number of calls, your data can be misleading. It's easy to either **see problems that aren't really there or miss problems that actually exist,** just because your sample is too small.

There are two common mistakes that can happen:

Type I Error (False Positive)

This happens when you think there's a problem, but it's actually just a fluke.

Example: You review two calls where a dispatcher misses a step and assume it's a pattern, but in reality they handled hundreds of other calls without missing that step that month.

Type II Error (False Negative)

This is the opposite, when there is a real issue, but you don't catch it.

Example: A dispatcher regularly struggles with complex calls, but you only review easy calls, so the real issue never comes to light.

When you only look at 1–5% of calls, you are more likely to make these mistakes. That's why reviewing a larger portion of calls gives you a clearer, more accurate picture of what's really happening.

A Real Life Example

What exactly are the risks? **Risk originates from lacking full data.**

The following real-life customer data explains the advantage and requirements of having high volume QA.
Here is high-level data from a mid-size center that adopted CommsCoach:

Details on the center....

Staffing and Volume

- 26 Telecommunicators
- 1200 Calls per person, per month
- Approximately 31,200 calls per month

Evaluation Scope

- 300 Event types
- 15-20 criteria per event type

Prior QA Approach

- 2% audit rate → ~624 calls per month
- No reliable compliance percentages by event type
- Audits used for 1-off corrections

With 624 calls, the probability of sampling even one instance of the 300 event types is essentially zero(7×10^{-16} %). That means more rare, and often critical, events ***never enter the QA process.***

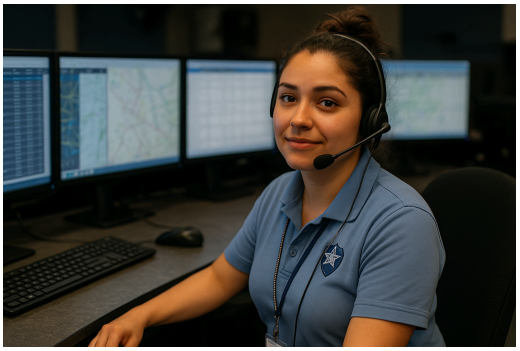
The city and its police department had been tasked with achieving 90% compliance on all call events. Prior to CommsCoach, the ECC had *no valid overall data of their performance*. When the ECC initially launched CommsCoach, compliance ranged from as low as 2% on rare calls to around 70% on common calls.

After rolling out structured feedback and targeted coaching, the center hit 94% compliance across every eligible call type within one year.

A **2% audit rate is woefully insufficient**, especially when QA staff or supervisors hand-pick those calls. It leaves your ECC and telecommunicators at unnecessary risk of not addressing the needs of your community members.

Addressing the Fear: More QA Means More Problems

It's true: the more you look, the more you'll see. But that's not a flaw, it's an opportunity for growth. Just like regular maintenance checks prevent engine failures, regular reviews prevent skill erosion and burnout. Great leaders don't only ask 'What do I know?', but more often ask 'What don't I know?'.



Rather than triggering disciplinary action, a high volume QA program can build a culture of feedback and growth. By focusing on patterns instead of one-off errors, QA becomes a coaching platform, strengthening telecommunicators through meaningful and actionable feedback, not scrutinizing and criticizing them.

A different question might be, would you prefer to catch an error before it becomes a crisis?

Lessons from Other **High-Stakes Industries**

Aviation provides a strong parallel. Pilots and air traffic controllers are subject to continuous, ongoing review, followed by simulation-based retraining. These evaluations are not about punishment, they're about precision and safety. In healthcare and EMS, high volumes of clinical documentation and every patient care report are audited to ensure quality care and accountability. In both sectors, high-volume QA is the norm, not the exception. In law enforcement, every single report an officer writes is reviewed by a supervisor, providing insight into where an officer excels in their documentation and where improvement is needed to ensure legality and compliance with the law.

Emergency Communications should be no different. Like pilots, police, doctors and paramedics, 9-1-1 Professionals operate in life-or-death environments where judgment, timing, and communication are critical. Reviewing more simply raises the profession to the standard already set by other high-performance fields. More communities are also starting to highlight standards for 9-1-1 quality and performance and this trend will likely continue.

In the past, this was not an option available to most ECC due to staffing, however with the advent of AI-assisted evaluation tools like CommsCoach, the ability to provide a higher level of quality assurance is now available and should be leveraged.

Macro and Micro QA: Balancing **Volume and Depth**

Importantly, increasing the percentage of evaluated calls doesn't mean every call needs a 120-point checklist.

In QA practices within ECCs, there is a crucial distinction between macro QA and micro QA, each serving unique, complementary roles. Macro QA involves high-volume reviews designed to assess broader trends such as overall call-handling practices, policy adherence, and the relationship between call management and incident outcomes. Micro QA, in contrast, involves in-depth analysis of specific interactions, typically over smaller samples, focusing intensively on the nuances of each triage question, call handling accuracy, and protocol compliance to enhance targeted training.

A dual approach works best:

Macro QA:

- High-volume trend analysis (skills, policy, outcomes)
- Systemic-risk detection (rare events, compliance gaps)

Micro QA:

- Granular protocol reviews (triage, accuracy, nuance)
- Targeted coaching on specific behaviors

MACRO QA DETAILS

Macro QA becomes especially critical when aiming for comprehensive risk management. Reviewing extensive call volumes uncovers significant patterns that may go unnoticed in traditional low-volume QA methodologies. For instance, evaluating performance across thousands of calls can quickly highlight systemic issues such as repeated policy misunderstandings or communication breakdowns. By identifying these broad trends, leadership can rapidly deploy corrective actions, reduce systemic risk, and reinforce proper practices across the entire center.

The strength of macro QA lies in its ability to detect rare yet high-impact events that sporadic, low-volume sampling would likely miss. Even a single missed or mishandled call can have severe, sometimes tragic, consequences for community members and ECC credibility. Macro QA thus becomes a preventative strategy, leveraging statistical certainty and data-driven insights to proactively identify and address these risks.

MICRO QA DETAILS

Micro QA complements this broader review by providing detailed insights into individual call-handling behaviors. It pinpoints specific moments within interactions where additional training could significantly improve performance. For instance, it might examine how effectively a telecommunicator navigates complex medical or criminal scenarios, ensuring precise question adherence and accurate caller instructions.

Integrating macro and micro QA delivers the best of both worlds: broad, systemic visibility alongside detailed, actionable feedback. Macro evaluations provide supervisors with confidence in overall operational integrity, while micro evaluations furnish trainers with precise examples for individualized coaching.

The combination of macro and micro QA ensures ECCs do not only respond reactively to mistakes but proactively foster continuous improvement. This comprehensive approach significantly reduces operational risks and enhances community safety through timely, informed interventions.

> **I was spending so much time doing 7 to 10% of our calls, but it wasn't giving me the full perspective of what my team was doing every day. Now, with 100% QA and 50% less time spent, I can focus on my people, not just the paperwork.**
>
> **Rhonda Braudis**
> 911 Communications Director, Marshall County, Iowa

Recap

Supervisors gain better tools. Trainers gain real-world examples. Telecommunicators gain clarity on expectations and progress. And, agencies gain confidence that their teams are improving, not only guessing.

High-volume QA also helps ensure fairness. When only a small sample is reviewed, biases, conscious or not, can influence who is evaluated and how.

It's simply unfair to evaluate a telecommunicator's performance based on one or two calls a month when they're handling thousands. Basing feedback on such a small random sample not only misrepresents their overall performance, it fosters mistrust in the QA process and those administering it. It creates a culture where one-off evaluations feel punitive rather than constructive, and gives space for disagreement instead of reflection.

With broader QA, performance is measured based on facts, trends and data, not assumptions.

Why It Works for ECCs: A Recap

Benefit	Description
Scales QA, Not Staff	Leverages AI to eliminate the need for contractors or added headcount
Drives Accountability	Ensures consistent, unbiased evaluations across all shifts and roles
Improves Retention	Provides employees with proactive, constructive feedback that fosters growth
Elevates Quality	Empowers supervisors to coach effectively, not just correct errors
Builds Readiness	Informs training and hiring decisions with real performance data
Statistically Valid	With hundreds of call types, high-volume QA is the only valid way to track, assess and improve performance

Conclusion:
Raising the Standard, Together

9-1-1 professionals are among the most critical first responders in the public safety chain. They and the profession deserve evaluation systems that match the complexity and criticality of their work. Expanding QA coverage is not about catching mistakes, it’s about unlocking potential. It's about moving from judgment to growth, from oversight to insight.

By embracing broader, smarter QA practices, centers can improve training, performance, and retention, while delivering more consistent, professional service to the communities they serve.

To find out more about high-volume QA, visit us at www.gov-worx.com.