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Managing clinical risks with risk intelligence

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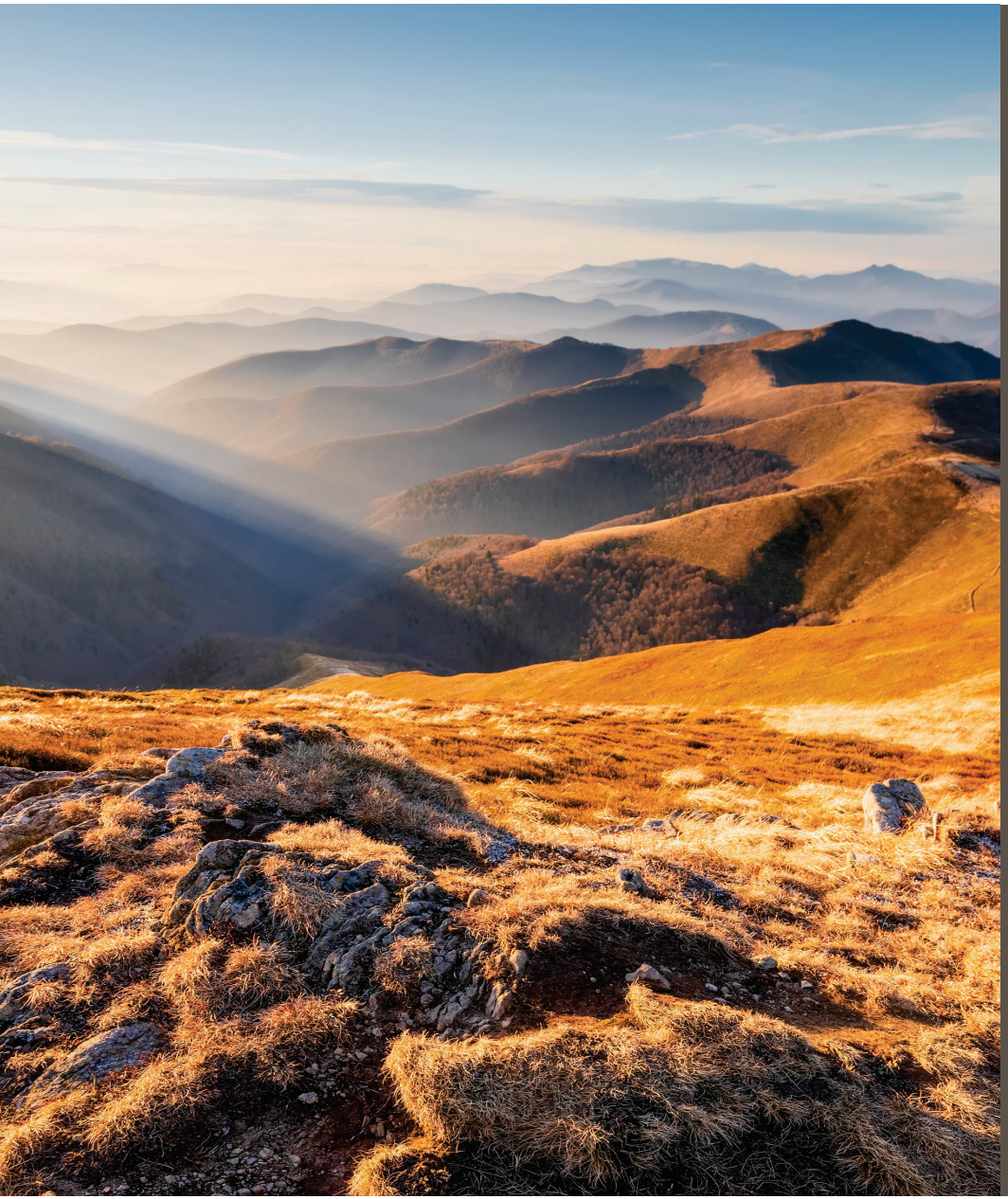

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Introduction

The risks healthcare organizations face—clinically, operationally, financially—are growing exponentially as the world and healthcare industry grow more complex. In such a fast-moving climate, healthcare organizations task their auditors with identifying and mitigating risks at breakneck speed, stretching already thin resources. Reducing clinical risk specifically is paramount for organizations and a key part of safely serving their patients and achieving delivery of care objectives.

For health systems, clinical audits are an essential patient safety tool. Traditional audit processes, however, often fall short of uncovering all the insights needed to address the ever-expanding clinical risk landscape. In this era, risk intelligence, gained from the use of data platforms, combined with subject matter expertise, shifts point-in-time auditing to the realization of continuous monitoring, giving auditors deeper insight into their organizations' most urgent risks.

This article will define risk intelligence and the importance of deploying a data monitoring approach to reduce clinical risks ongoing. Specifically, it will demonstrate the power of this approach in the high-risk area of obstetrical services.

Defining risk intelligence

Risk intelligence is a strategic and proactive process for gathering, analyzing, and interpreting data to identify, assess, prioritize, and mitigate potential threats, enabling informed decision-making and building resilience against uncertainty.

With risk intelligence, auditors can more quickly identify and mitigate the most important risks their organizations face, using key performance indicators to understand risk impact. Clinical benchmarks, along with measured outcomes and processes, are well-suited for this approach.

Risk intelligence leverages a mix of technology and expertise to continuously monitor a health system or hospital's biggest risks to stay ahead of those risks and improve velocity to action for mitigation of their potential negative impact. This multidimensional approach increases risk coverage and efficiency and reduces the burdens of an audit project.

Hallmarks of risk intelligence include:

- Use of complete datasets
- Automated error checking
- Testing 100% of a population versus sampling
- Performed continuously (a process that enables a shift from point-in-time auditing to consciously monitoring risks)
- Improved benchmarking
- Increased project velocity
- Enhanced risk prioritization
- Focus on continuous improvement

This article discusses the use of risk intelligence for clinical audits. It's worth noting, however, that there is an incredible opportunity to move from a point-in-time auditing approach to one where risks are continuously monitored via risk intelligence in many areas across the healthcare ecosystem. Risk intelligence can be particularly beneficial in areas such as:

- Payments (accounts payable, payroll, construction)
- Insurance/healthcare claims (835/837)
- Accounting/journal transactions
- Revenue cycle (charge capture, charge description master)
- IT

Leveraging a tech-enabled approach that promotes continuous monitoring of certain risk areas allows audit teams to shift their efforts and focus on new, emerging, or different risk areas. In a risk intelligence approach, auditors can securely ingest full datasets and analyze them in software tools, resulting in a more innovative audit workflow that measures materiality and supports auditors' validation and identification of the root causes of realized or potential risks.

In a risk intelligence approach, there is a potential for auditors to reimagine audit plans by transitioning previously completed audits into baselines that measure sustainability of interventions implemented via ongoing monitoring of KPIs and automated, ongoing testing. Such continuous monitoring and testing leaves behind risk program building blocks, or what could be referred to as "risk cubes."

These risk cubes include the KPIs and controls that were examined during the audit years and brings them into the future, allowing internal audit and compliance departments to focus on new risks while continuously monitoring prior risks. This greatly expands risk coverage after a few audit plan cycles.

How to get started with risk intelligence

Start where you are. Keep in mind that having a risk program built on a risk intelligence approach is a journey. Strive to capture the attributes to continuously measure risks while conducting current audits.

Leverage previous audits. Look at past audits, particularly those that used data analytics and for which you have results. Are the results of these audits ripe for establishing a baseline that can be monitored? These audits can be performed repeatedly to continuously look for issues and remediate them.

Work with department leaders. Engage leaders from across the organization to gather feedback about what KPIs and controls are important to the success of the organization—areas they think would make valuable candidates for a risk intelligence framework.

Benefits of a risk intelligence approach

Risk intelligence offers numerous benefits for healthcare provider organizations. Some of the most significant include:

Enhanced risk prioritization and management. Continuous monitoring of transactions and internal controls allows organizations to proactively identify and address risks and control deficiencies. This can help prevent financial missteps and fraud.

Improved quality. Risk intelligence incorporates ongoing detection and correction of errors that, in turn, improve quality in near real time.

Increased efficiency and cost savings. Employing technology and data, risk intelligence incorporates automation of routine audit tasks. With these tasks covered, auditors can focus on higher-risk areas, which affords them the capacity to operate at the top of their professional expertise. That leads to reduced operating expenses and expanded risk coverage.

Enhanced stakeholder confidence. Use of risk intelligence and its resulting benefits are another way to help internal audit make the case within its organization regarding its vital role in healthcare organizations' risk management and patient safety efforts. In addition, risk coverage that includes continuous monitoring approaches helps healthcare provider organizations demonstrate their commitment to ongoing risk oversight and management. That can boost stakeholder (including governing boards) and community trust in the organization and ensure that risks don't impede the accomplishment of the organization's business and strategic objectives.

Defining risk intelligence

Risk intelligence is a data-driven audit approach that:

- Analyzes trends to identify key risk areas
- Improves work plan development
- Uses full dataset testing
- Monitors corrective action plans
- Drives continuous improvement

Risk intelligence in action: An OB case study

Obstetrical services are historically one of the highest risk healthcare areas. Healthcare provider organizations can benefit greatly from identifying and mitigating risks such as postpartum hemorrhage (PPH), maternal birth trauma, maternal infection/sepsis, postpartum readmission, and more before issues arise that result in serious patient harm, financial loss for the institution, or reputational damage (see "14 top OB risk areas" on page 11). The following case study shares how auditors conducted an in-depth assessment of a large, nine-hospital health system's obstetrical care to identify its greatest risk areas and create a plan for continuous monitoring and risk mitigation.

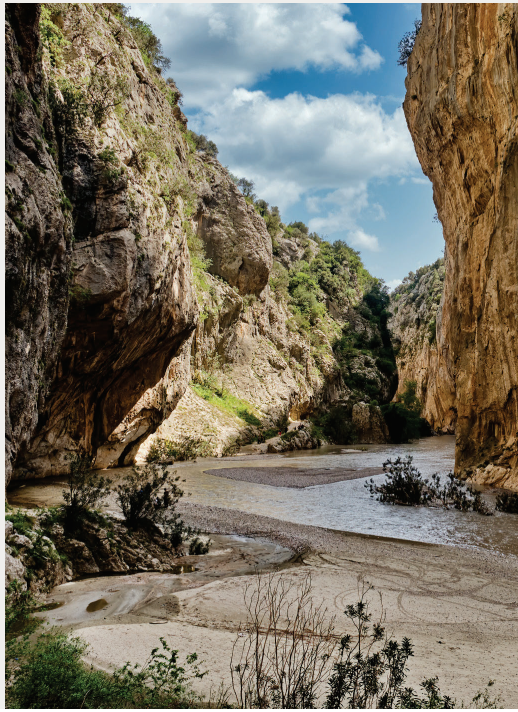
Background:

As part of its quality focus, a nine-hospital health system with nearly 16,000 annual deliveries per year wanted to prioritize patient safety initiatives in obstetrics to bolster its already highly rated safety practices, including minimizing early elective deliveries, cesarean sections, and episiotomies.

An internal audit team composed of perinatal subject matter experts first assessed the health system's risks in obstetrical care, using real-time data analytics paired with claims data in the 14 identified OB risk areas. The analysis identified significant liability exposure for the health system in two high-risk areas: maternal birth trauma and postpartum hemorrhage.

After surfacing the risks, the auditors took a deeper dive into the claims data in the areas identified as highest risk priorities for the health system. The audit team performed a comprehensive review of cases denoting maternal birth trauma and postpartum hemorrhage occurrences. It also conducted audits on a subset of regular cases in which the identified risks did not occur.

The following is a closer look at the audit steps taken to analyze these two priority risk areas.



Maternal birth trauma

The audit approach:

Taking a risk intelligence approach, auditors with clinical expertise (e.g., registered nurses and perinatal subject matter experts) performed a clinical review and assessment paired with an in-depth data analytics assessment to surface risk. Using data analytics software, the auditors conducted in-depth review of target records from the full population of maternal birth trauma cases, such as third- and fourth-degree lacerations and other trauma events, to assess contributing factors and severity identified.

The team assessed clinical practice variation and risk factors, identifying trends by provider, delivery method, e.g., operative, C-section, etc., birth position, episiotomy use, and infant size to uncover preventable patterns. Auditors also evaluated clinicians' adherence to evidence-based perineal protection strategies.

Sample audit areas:

- Trauma type and severity documented, e.g., third/fourth degree
- Repair techniques documented in line with guidelines
- Pain management and wound care plan documented
- Antibiotic prophylaxis provided when indicated

Results:

Auditors discovered significant maternal birth trauma risk exposure at two of the health system's nine hospitals. The data revealed that at Hospital A, the expected cases of maternal birth trauma per year by delivery volume was 0.6, but the actual case number was 1.35. At Hospital B, the expected cases of maternal birth trauma per year was 2.2, but the actual number of cases was nearly double at four. In addition, the analysis revealed the hospitals had annual malpractice exposures of $1.4 million and $4 million, respectively.[1]

Overall, the auditors determined that these two hospitals' risk exposure was 125% and 80%, respectively, above the national average for maternal birth trauma.[2] To mitigate this substantial risk exposure, the audit team worked with hospital leadership to implement ongoing data analysis, monitoring, and reporting on maternal birth trauma. In addition, analytics were designed to track birth trauma performance metrics compared with internal and national KPIs.

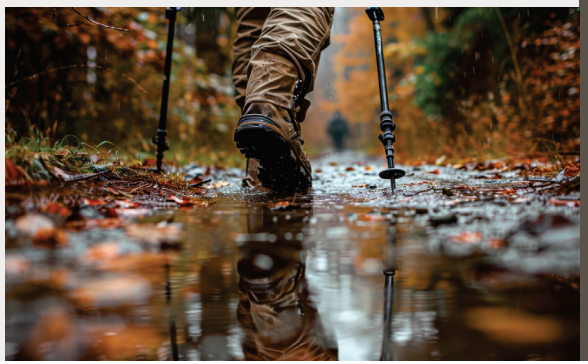
The team also developed action plans for sustained improvement, including implementing targeted education and training for clinical staff. Education initiatives now include simulation-based drills. Going forward, the organization can measure the effectiveness of education and training initiatives.

What is maternal birth trauma?

Maternal trauma during childbirth—such as third- and fourth-degree perineal lacerations or pelvic injuries—can lead to long-term complications, including incontinence, chronic pain, infection, and psychological distress. These events are often preventable and serve as key indicators of the quality and safety of a healthcare provider organization's obstetric care.

Why is monitoring maternal birth trauma rates so important?

Monitoring maternal birth trauma allows organizations to identify clinical practice variation, assess adherence to perineal protection strategies, and evaluate the impact of labor interventions such as vacuum or forceps-assisted delivery. Reducing maternal birth trauma not only improves patient outcomes but also mitigates risk exposure and enhances patient experience.



14 top OB risk areas

The following are 14 of the most common risk areas in obstetrical care.* The list was sourced from data from the American College of Obstetricians and Gynecologists and the Association of Women's Health, Obstetric and Neonatal Nurses.

- Maternal birth trauma
- Maternal demise
- VBAC
- Postpartum hemorrhage
- Maternal infection sepsis
- Elective deliveries
- C-sections
- Failure of timely medical screening exam
- Delay of care
- Transfer to higher level of care
- Provider variability
- Postpartum readmission
- Eclampsia/pregnancy-induced hypertension
- Mechanical assisted delivery

*Risks not in order of frequency.
Source: Kodiak Solutions

Postpartum hemorrhage

The audit approach:

To identify incidents of PPH at the health system's hospitals, auditors with clinical expertise (RNs), using data analytics software, conducted comprehensive case reviews. They performed targeted medical record audits of all PPH cases identified, including conducting root cause analysis and analyzation of factors such as provider variation and compliance with systemwide protocols for postpartum hemorrhage prevention.

Auditors evaluated clinician documentation and adherence to clinical protocols for PPH prevention, assessing areas such as accuracy of clinical documentation; adherence to interventions; escalation triggers; quantified blood loss practices; and timeliness of multidisciplinary response to PPH.

Sample audit areas:

- Quantification of blood loss (quantified vs. estimated) documented
- Stage-based PPH protocol followed and documented
- Timing and appropriateness of medication administration
- Timely escalation to advanced support or transfer
- Post-intervention monitoring and lab reassessment documented

Results:

After using data analytics to analyze claims data related to postpartum hemorrhage, auditors discovered that three of the health system's nine hospitals were well above the national average for number of annual PPH cases. The three hospitals had expected cases (by delivery volume) of 10, 35, and 17 per year, respectively. The auditors revealed, however, that their actual case numbers were 19, 69, and 26— 100%, 95%, and 50% above the national average.[3]

Perhaps most shocking to health system leadership, the claims data analysis also revealed an annual malpractice risk exposure for the three hospitals of $15.4 million, $54.9 million, and $20.5 million, underscoring not only the serious patient safety consequences but the potential for significant financial loss due to preventable PPH incidents.

Like the actions taken to address maternal birth trauma, the internal audit team, working with hospital leadership, implemented targeted education and training, including simulation-based drills. Auditors also implemented data analytics to track, monitor, and report on PPH performance metrics. Auditors will continue data analysis ongoing and, working with leadership, integrate findings into action plans for sustained improvement in maternal care.

What is postpartum hemorrhage?

Postpartum hemorrhage is one of the leading causes of maternal morbidity and mortality in the U.S. and globally. Early identification and timely intervention are critical to prevent life-threatening complications.

Why is monitoring postpartum hemorrhage rates so important?

Monitoring PPH rates helps organizations assess the effectiveness of clinical protocols, identify variation in provider practices, and ensure adherence to evidence-based interventions. Proactive surveillance supports targeted quality improvement efforts and reduces liability exposure associated with delayed recognition or inadequate response.

Conclusion

Clinical audits play a vital role in supporting healthcare provider organizations' core missions of delivering safe, quality patient care and improving the care experience for patients and clinicians. As the complexity of healthcare delivery and operations grows, organizations must be able to identify issues and cover more risk areas rapidly and more efficiently.

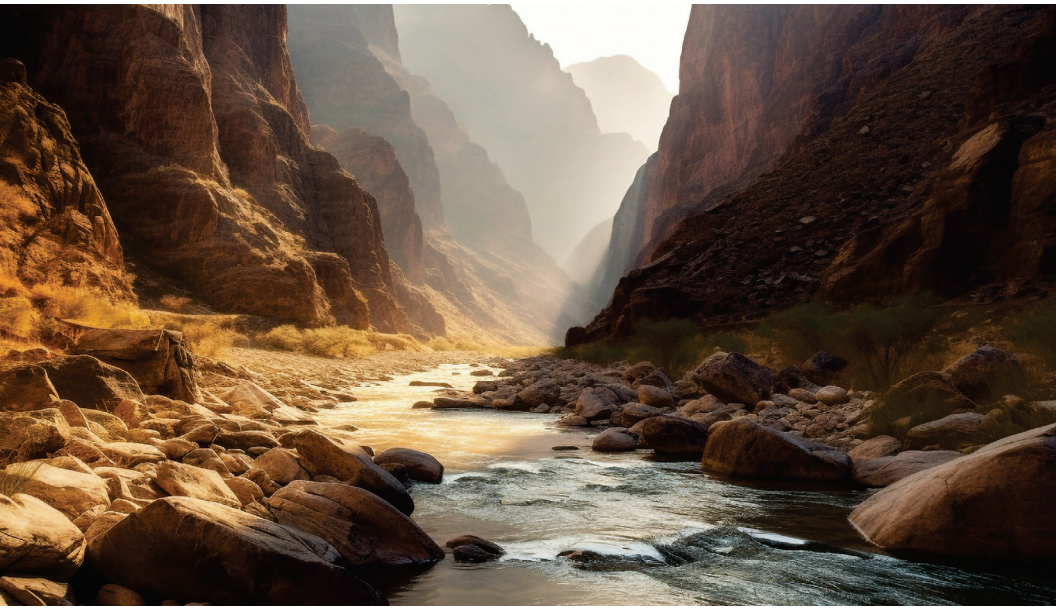
Zeroing in on an organization's most critical risks is more important than ever. Adopting a risk intelligence approach can allow today's auditors to quickly identify and mitigate their organizations' most crucial risk areas, assess their potential impacts, and keep a continuous eye on those key risks.

In essence, it can help organizations stay ahead of risks, which, in an industry like healthcare, will only escalate. With risk intelligence, healthcare organizations and their auditors can stay agile, informed, and prepared to face whatever risks the future holds.

[1] Malpractice financial exposure varies by state. However, brand, reputation, and patient safety risk associated with negative clinical events are high-risk exposures regardless of the state in which a hospital operates.

[2] Post-Partum Hemorrhage Benchmark: 2–3% nationally - based on 2020 California Maternal Quality Care Collaborative (CMQCC) and 2023 Joint Commission (PC-06)

[3] Maternal Trauma or Birth Injury Rate Benchmark: 1.9% based on AHRQ PSI-19 Obstetric Trauma (2021). Note - 2021 is the most recent published benchmark for this measure.



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The Association of Healthcare Internal Auditors (AHIA) is a network of experienced healthcare internal auditing professionals who come together to share tools, knowledge, and insight on how to assess and evaluate risk within a complex and dynamic healthcare environment. AHIA is an advocate for the profession, continuing to elevate and champion the strategic importance of healthcare internal auditors with executive management and the Board. If you have a stake in healthcare governance, risk management and internal controls, AHIA is your one-stop resource. Explore our website for more information. If you are not a member, please join our network, www.ahia.org. AHIA white papers provide healthcare internal audit practitioners with non-mandatory professional guidance on important topics. By providing healthcare specific information and education, white papers can help practitioners evaluate risks, develop priorities, and design audit approaches. It is meant to help readers understand an issue, solve a problem, or make a decision. AHIA welcomes papers aimed at beginner to expert level practitioners. This includes original content clearly related to healthcare internal auditing that does not promote commercial products or services. Interested? **Contact a member of the AHIA White Paper Subcommittee.**

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