



**White Paper**

# **Ethical Artificial Intelligence Use in the Self-Insurance Industry**

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## **Introduction**

As the self-insurance industry increasingly integrates artificial intelligence (AI) into its operations--from underwriting to claims processing--the imperative to establish robust ethical guidelines becomes ever more critical. The transformative potential of AI presents unprecedented opportunities for efficiency and innovation, yet it also introduces significant ethical challenges that must be addressed to protect consumer rights, ensure fairness, and maintain public trust.

To help address this challenge, the SIIA Artificial Intelligence Task Force has developed a collection of suggested guidelines contained in this document for companies operating in the self-insurance marketplace to consider. These guidelines establish the essential ethical principles for the development and deployment of AI technologies within the self-insurance sector, aiming to create a framework that balances technological advancement with the fundamental values of integrity, transparency, and accountability.

AI's ability to automate tasks such as claims processing, fraud detection, and risk assessment can greatly improve operational efficiency, reduce human error, and allow for more accurate predictions. AI integration into systems can streamline customer service through virtual assistants and personalized risk models, enhancing customer experience.

However, the risks include potential biases in AI algorithms, which could lead to unfair outcomes in claims handling and underwriting, along with challenges in ensuring transparency and accountability in AI decision-making. Additionally, data privacy and security concerns arise, as AI within the healthcare sector relies heavily on personal data, requiring strict measures to protect consumer information. Balancing these benefits and risks is essential to maintaining trust and ensuring fairness in the use of AI throughout the self-insurance industry.

*NOTE: Nothing in this document should be considered legal advice. Companies should consult their own legal counsel and/or other business advisors as may be needed.*

## **Core Principles Guiding Ethical AI Use**

### **TRANSPARENCY AND ACCOUNTABILITY**

For AI to truly be a force for good, its workings must be understood not only by technical experts, but by the broader community of stakeholders.

In addition to SIIA member companies, stakeholders affected by these developments include:

- Developers and engineers
- Data scientists
- Regulatory bodies and governmental agencies
- Ethics committees and advisory boards
- End users (employees and staff)
- Industry associations
- Legal experts
- Investors and financial stakeholders
- Medical providers
- Health plan participants

With respect to a self-insured health plan – which itself is an employee benefit plan providing health coverage – two foundational principles—transparency and accountability—are essential for building trust, fostering understanding, and mitigating risks associated with AI systems. By prioritizing these principles, organizations can ensure that AI systems are not only effective but also fair, compliant, and aligned with ethical standards.

One of the foundational principles of ethical AI use in self-insurance is transparency. This can be done through many different avenues including:

- White papers
- Technical manuals
- Case studies
- Notices on emails
- Websites
- Any other relevant channels

Such communications should include clear explanations of how algorithms make decisions, the data utilized, and the criteria they apply. This will help demystify AI processes and allow for better scrutiny and understanding of AI behavior.

Transparency in the development, testing, deployment, validation, and monitoring of AI systems is also essential to providing insights into how and why an AI system arrives at a particular decision or recommendation. Clear communication about how AI systems comply with relevant regulations, standards, and ethical guidelines will ensure that any potential conflicts of interest, biases, or ethical considerations have been addressed. Organizations should develop and enforce guidelines and protocols for how AI systems will be used, including constraints on their applications and mechanisms for handling misuse, incorporating feedback from stakeholders to address their concerns about the AI system’s impact.

Alongside transparency, there is a responsibility to ensure that there are clear lines of accountability for every AI system in place. This means designating and training specific individuals or teams that are answerable for the ethical outcomes of AI operations. These people should oversee the development and deployment of AI technologies, ensuring that systems are continually reviewed for potential biases, inaccuracies, and ethical concerns.

They should conduct regular audits and reviews of AI systems and their impact to evaluate their performance, adherence to ethical standards, and compliance with regulations. When contracting with third-party vendors that offer AI capabilities, organizations should require that such services be provided in accordance with ethical standards and regulatory requirements.

Above all, AI should never be left to operate unchecked; it should always include “human-in-the-loop” mechanisms, where humans have the final say in critical decision-making processes.

## **Data Protection and Bias Mitigation**

Since AI systems rely on vast amounts of data, much of it personal and sensitive, data security and privacy are paramount. Organizations must handle this data with care, ensuring that privacy is protected at all stages. This begins with informed consent at the time of collection—people must know how their data is being used—and continues with strict controls on who can access it, how it is stored, and how it is anonymized to protect individual identities.

Regular audits, secure data transmission, and incident response plans must be part of every organization's strategy to ensure data security. Protecting data storage systems with robust access controls and encryption can help prevent unauthorized access, breaches, and misuse of sensitive information. To ensure that AI systems meet legal requirements for data privacy and security, they must also comply with data protection regulations such as:

- The Health Insurance Portability and Accountability Act (HIPAA)
- The European Union's General Data Protection Regulation (GDPR)
- The California Consumer Privacy Act (CCPA)
- Any other relevant legal frameworks

To ensure fairness and avoid perpetuating existing biases, organizations should gather and utilize diverse and representative data sets to ensure AI systems reflect a wide range of perspectives. Algorithms should include fairness metrics to detect and assess potential biases. By following these guidelines, organizations can build AI systems that are ethical, fair, and reliable, reflecting diverse perspectives that maintain privacy and deliver accurate results:

- Gather and utilize data sets that include a wide range of perspectives to prevent perpetuating existing biases.
- Integrate fairness metrics into algorithms to detect and assess potential biases in AI systems.
- Limit data collection to only what is necessary for AI functionality, reducing risks associated with excessive or irrelevant information.
- Protect individuals' privacy by de-identifying data while ensuring it remains useful for analysis.
- Use accurate, up-to-date, and corruption-free data to maintain AI output quality and avoid misleading results.
- Mitigate risks of biased historical data, such as unfair premium pricing for specific demographic groups, by retraining models and updating fairness metrics regularly.

Finally, organizations should carefully manage and monitor third-party vendors or partners that handle data to ensure they comply with the same privacy and security standards and contractual obligations.

## **Operational Guidelines for Self-Insurance Applications of AI**

### **CLAIMS PROCESSING: REDUCING HUMAN ERROR AND IMPROVING SPEED**

In claims processing, AI can be used to automate repetitive, time-consuming tasks such as data entry, claim form validation, and eligibility verification. By using optical character recognition (OCR) technology, AI can automatically extract information from claims documents, reducing manual effort. This speeds up the process and minimizes human errors, ensuring accurate claims submission and processing. AI can also automate the adjudication process by analyzing claims data and applying business rules, policies, and coverage terms. AI can make real-time decisions about claim approval, denial, or escalation, while machine learning models can continuously improve based on past claims, ensuring that adjudication is both fast and accurate. AI can offer advanced decision support by analyzing claims against a range of data points, including medical records, treatment plans, and standard care guidelines. This allows adjusters to assess the appropriateness of treatments and whether they align with industry standards, reducing unnecessary claims and helping to contain costs.

However, the most relevant question that *must* be asked when determining whether ERISA preempts a State law is: Does the State law at issue “relate to” the ERISA-covered health plan? This question is of paramount importance because while ERISA sets forth a statutory structure for ERISA preemption, whether a State law is truly found to be preempted by ERISA has historically been determined in a court of law. In other words, to determine whether a State law is indeed preempted by ERISA, a court must ultimately make this determination. This has resulted in the formulation of decades worth of judicial prudence and precedential standards on which courts will rely to ultimately decide the question: Is a State law preempted because it “relates to” an ERISA-covered health plan?

### **FRAUD DETECTION: USING PREDICTIVE ANALYTICS TO FLAG ANOMALIES**

AI-powered algorithms can be invaluable in fraud detection. By cross-referencing current claims with historical data and industry norms, AI can detect anomalies such as inflated bills, duplicate claims, or suspicious provider behaviors. AI can also identify any payment inconsistencies to help detect if there has been a change in the way claims are being submitted or paid. This allows adjusters to flag and investigate potential fraud cases early, saving both time and money.

### **STOP-LOSS TRIGGERS AND UNDERWRITING**

AI can play a crucial role in alerting claims adjusters to potential stop-loss triggers by continuously monitoring claims data, identifying patterns, and issuing real-time alerts when costs approach certain thresholds, whether it be for a single claim in the case of a specific stop-loss, or a group’s total claims costs as they approach an aggregate stop-loss limit.

AI also can predict the likelihood that a particular claim will exceed a specific stop-loss threshold to forecast future expenses by incorporating such factors as:

- Patient diagnosis
- Treatment types
- Provider costs
- Past claims patterns

For example, if a patient with a chronic illness is undergoing a costly treatment plan, AI can anticipate the total cost trajectory and alert claims adjusters before the limit is reached. Similarly, if a plan’s aggregate stop-loss limit is set at \$100,000, AI could send a notification when claim costs reach 70% or 80% of that amount. These alerts give adjusters time to review the situation and explore options for managing costs.

When it comes to risk assessment and underwriting, AI can analyze historical data and spot patterns that human underwriters might miss. This allows for more accurate pricing and risk predictions. AI also can audit data sets used in underwriting to detect imbalances or biases. For example, AI might reveal that certain demographic groups are consistently charged higher premiums. By using metrics like equal opportunity and disparate impact analysis, AI can ensure that different demographic groups are treated equitably. AI can also create synthetic data to evaluate groups without adequate claims data that are transitioning from fully insured to self-insured.

## CARE MANAGEMENT

AI can be highly effective in care management to identify individual health risks and tailor recommendations by analyzing vast amounts of data from various sources, including:

- Medical records
- Claims data
- Wearable devices
- Lifestyle surveys
- Health apps

For example, if a person has a history of high cholesterol and a sedentary lifestyle, AI can predict an increased risk of heart disease and recommend a customized wellness program focused on heart health, including dietary changes, exercise plans, and regular health monitoring. AI can also use behavioral “nudging” techniques via wearable devices or email and text messages to encourage individuals to engage in wellness programs. For individuals already diagnosed with chronic conditions, AI can recommend ongoing medical management programs and monitor the effectiveness of these programs by tracking outcomes and suggesting adjustments as needed.

## PROVIDER PERFORMANCE MEASUREMENT

Third-party claims administrators can leverage AI to assess provider performance metrics, including treatment effectiveness, patient satisfaction, and adherence to evidence-based practices. By analyzing large volumes of claims and patient outcome data, AI can identify patterns that reveal the quality of care provided, highlighting providers who consistently deliver positive outcomes while flagging those who may be underperforming. AI also can use predictive analytics to assess the likelihood of certain outcomes based on a provider’s past performance.

AI algorithms can predict the probability of hospital readmissions, complications, or higher-than-expected costs for certain treatments to prompt adjusters to work more closely with providers, offering feedback and incentivizing improvements in care quality. Additionally, AI can help adjusters benchmark providers against industry standards and peers by comparing performance across various metrics, such as treatment costs, length of hospital stays, or patient recovery rates. This allows stakeholders to negotiate more effectively with providers, ensuring that self-insured companies and their employees receive high-quality, cost-efficient care. By incorporating AI into their performance analysis processes, stakeholders can make more informed decisions that benefit both providers and patients, while also controlling healthcare costs for employers.

## LEGAL AND REGULATORY COMPLIANCE

AI can assist in ensuring compliance with legal and regulatory frameworks by automating regulatory monitoring, auditing processes, and enhancing data protection. Among AI’s capabilities in compliance are:

- Automating the tracking of laws and regulations to alert compliance officers to necessary updates.
- Automating the auditing of compliance-related activities, ensuring that policies, procedures, and documentation meet regulatory standards.
- Generating reports for regulatory bodies, making compliance reporting more efficient and accurate.
- Enforcing data protection rules by anonymizing and de-identifying personal data, ensuring that it is handled securely.
- Monitoring data access, enforcing strict access controls, and detecting potential data breaches in real-time, preventing unauthorized access to sensitive information.

Organizations may consider establishing internal ethics boards to regularly review compliance with legal and regulatory frameworks and address potential ethical issues before deployment.

## CUSTOMER SERVICE

Customer service also benefits from AI-powered solutions, with chatbots and virtual assistants providing 24/7 support for routine inquiries. These AI tools improve the customer experience by offering quick responses, freeing up human agents to focus on more complex issues. AI also can proactively send status updates to patients and providers.

### Summary: Best Practices for AI Use

Continuous improvement is vital to maintaining ethical AI systems. Organizations must regularly monitor AI performance, using key performance indicators (KPIs) and other metrics to identify areas for improvement and make necessary adjustments to ensure that AI systems meet desired outcomes. They also should keep up with the latest advancements in AI technology, methodologies, and best practices, to continuously enhance AI capabilities. The following are some best practices for ethical AI use:

- Provide regular training sessions for employees on the use, implications, and best practices of AI technologies. This should include training on data privacy, bias mitigation, and the ethical implications of AI decisions.
- Establish a governance framework that defines clear roles, responsibilities, and accountability for all AI initiatives. This framework should outline policies, procedures, and oversight mechanisms to ensure responsible AI use.
- Conduct regular audits and reviews of AI systems to ensure compliance with ethical guidelines and regulatory requirements.
- Invite regular feedback from stakeholders, including employees, customers, regulators, and providers, to evaluate the impact of AI and make necessary adjustments.
- Support transparency, accountability, and regulatory compliance.
- Maintain detailed documentation of all AI systems, including data sources, algorithms, decision-making processes, and audit trails.
- Implement “human-in-the-loop” oversight mechanisms for critical decision-making processes.

By considering these guidelines and best practices that emphasize transparency, responsibility, fairness, and security, companies in the self-insurance industry will be better positioned to harness AI’s power to enhance operational efficiency and improve customer experience. Continuous monitoring, stakeholder collaboration, and a commitment to ethical practices will ensure that AI remains a tool for positive change, benefiting both organizations and the clients they serve.



**THIS** is where the business  
of self-insurance gets done.

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