BULLETIN 24-04

To: All Insurance Companies Writing In the State of Iowa
From: Doug Ommen, Iowa Insurance Commissioner
Re: The Use of Artificial Intelligence Systems in Insurance
Date: November 7, 2024

The purpose of this Bulletin is to remind all Insurers that hold certificates of authority to do business in Iowa that decisions or actions impacting consumers that are made or supported by advanced analytical and computational technologies, including Artificial Intelligence (AI) Systems (as defined below), must comply with all applicable Iowa insurance laws and regulations. This includes those laws that address unfair trade practices and unfair discrimination. This bulletin sets forth the Iowa Insurance Division's expectations as to how Insurers will govern the development/acquisition and use of certain AI technologies, including the AI Systems described herein. This bulletin also advises Insurers of the type of information and documentation that the Division may request during an investigation or examination of any Insurer regarding its use of such technologies and AI Systems.

SECTION I. BACKGROUND

AI is transforming the insurance industry. AI techniques are deployed across all stages of the insurance life cycle, including product development, marketing, sales and distribution, underwriting and pricing, policy serving, claim management, and fraud detection.

AI may facilitate the development of innovative products, improve consumer interface and service, simplify and automate processes, and promote efficiency and accuracy. However, AI, including AI Systems, can present unique risks to consumers, including the potential for inaccuracy, unfair discrimination, data vulnerability, and lack of transparency and explainability. Insurers should take actions to minimize these risks.

The Division encourages the development and use of innovation and AI Systems that contribute to safe and stable insurance markets. However, the Division expects that decisions made and actions taken by Insurers using AI Systems will comply with all federal and state laws and regulations.

The Division recognizes the *Principles of Artificial Intelligence* that the NAIC adopted in 2020 as an appropriate source of guidance for Insurers as they develop and use AI Systems. Those principles emphasize the importance of fairness and ethical use of AI; accountability; compliance with state laws and regulations; transparency; and a safe, secure, fair, and robust system. These fundamental principles should guide Insurers in their development and use of AI Systems and underlie the expectations set forth in this Bulletin.

SECTION II. LEGISLATIVE AUTHORITY

The regulatory expectations and oversight considerations set forth in the AIS Program requirements in this Bulletin rely on the following laws and regulations.

1. Iowa Code Chapter 507B, Insurance Trade Practices.

Chapter 507B regulates trade practices in insurance by a) defining practices that constitute unfair methods of competition or unfair or deceptive acts or practices; b) prohibiting the trade practices so defined or determined; c) setting forth standards for the investigation and disposition of claims arising under policies or certificates of insurance issued to residents of Iowa.

Actions taken by Insurers in this State must not violate Chapter 507B regardless of the methods the Insurer used to determine or support its actions. As discussed below, Insurers are expected to adopt practices, including governance frameworks and risk management protocols, that are designed to ensure that the use of AI Systems does not result in: a) unfair trade practices or b) unfair claims settlement practices, as defined in Iowa Code section 507B.4 and Iowa Administrative Code chapter 191-15.

2. Iowa Code Chapter 521H, Corporate Governance Annual Disclosure.

Chapter 521H requires Insurers to report on governance practices and to provide a summary of the Insurer's corporate governance structure, policies, and practices. The content, form, and filing requirements for Corporate Governance Annual Disclosure information are set forth in Iowa Code chapter 521H and Iowa Administrative Code chapter 191- 111.

The requirements of Chapter 521H and Iowa Administrative Code chapter 191-111 apply to elements of the Insurer's corporate governance framework that address the Insurer's use of AI Systems to support actions and decisions that impact consumers.

3. Iowa Code Chapter 515F, Casualty Insurance, sections 1-19, Regulation of Rates.

Iowa Code sections 515F.1 – 515F.19 require that property and casualty insurance (P/C) rates not be excessive, inadequate, or unfairly discriminatory.

The requirements of Iowa Code sections 515F.1 through 515F.19 apply regardless of the methodology that the Insurer used to develop rates, rating rules, and rating plans subject to those provisions. That means that an Insurer is responsible for assuring that rates, rating rules, and rating plans that are developed using AI techniques and Predictive Models that rely on data and Machine Learning do not result in excessive, inadequate, or unfairly discriminatory insurance rates with respect to all forms of casualty insurance—including fidelity, surety, and guaranty

bond—and to all forms of property insurance—including fire, marine, and inland marine insurance, and any combination of the foregoing.

4. Iowa Code Chapter 507, Examination of Insurance Companies.

Pursuant to its authority to examine insurance companies doing business in Iowa, the Division conducts market conduct actions. These are comprised of the full range of activities that the Division may initiate to assess and address the market practices of Insurers, beginning with market analysis and extending to targeted examinations. Market conduct actions are separate from, but may result from, individual complaints made by consumers alleging illegal practices by Insurers.

An Insurer's conduct in this State, including its use of AI Systems to make or support actions and decisions that impact consumers, is subject to investigation, including market conduct actions. Section V of this Bulletin, Regulatory Oversight and Examination Considerations, provides guidance on the kinds of information and documents that the Division may request in the context of an AI-focused investigation, including a market conduct action.

SECTION III. DEFINITIONS

For the purposes of this Bulletin, the following terms are defined as follows, consistent with Iowa law.

"Adverse Consumer Outcome" refers to a decision by an Insurer that is subject to insurance regulatory standards enforced by the Division that adversely impacts the consumer in a manner that violates those standards.

"Algorithm" means a clearly specified mathematical process for computation; a set of rules that, if followed, will give a prescribed result.

"AI System" is a machine-based system that can, for a given set of objectives, generate outputs such as predictions, recommendations, content (such as text, images, videos, or sounds) or other output influencing decisions made in real or virtual environments. AI Systems are designed to operate with varying levels of autonomy.

"Artificial Intelligence (AI)" refers to a branch of computer science that uses data processing systems that perform functions normally associated with human intelligence, such as reasoning, learning, and self-improvement, or the capability of a device to perform functions that are normally associated with human intelligence such as reasoning, learning, and self-improvement. This definition considers machine learning to be a subset of artificial intelligence.

"Degree of Potential Harm to Consumers" refers to the severity of adverse economic impact that a consumer may experience as a result of an Adverse Consumer Outcome.

"Generative Artificial Intelligence (Generative AI)" refers to a class of AI Systems that generate content in the form of data, text, images, sounds, or video, that is similar to, but not a direct copy of, pre-existing data or content.

"Machine Learning (ML" refers to a field within artificial intelligence that focuses on the ability of computers to learn from provided data without being explicitly programmed.

"Model Drift" refers to the decay of a model's performance over time arising from underlying changes such as the definitions, distributions, and/or statistical properties between the data used to train the model and the data on which it is deployed.

"Predictive Model" refers to the mining of historic data using algorithms and/or machine learning to identify patterns and predict outcomes that can be used to make or support the making of decisions.

"Third Party" for purposes of this Bulletin means an organization other than the Insurer that provides services, data, or other resources related to AI.

SECTION IV. REGULATORY GUIDANCE AND EXPECTATIONS FOR INSURERS

Decisions subject to regulatory oversight that are made by Insurers using AI Systems must comply with the legal and regulatory standards that apply to those decisions, including unfair trade practice laws. These standards require, at a minimum, that decisions made by Insurers are not inaccurate, arbitrary, capricious, or unfairly discriminatory. Compliance with these standards is required regardless of the tools and methods Insurers use to make such decisions. However, because in the absence of proper controls, AI has the potential to increase the risk of inaccurate, arbitrary, capricious, or unfairly discriminatory outcomes for consumers, it is important that Insurers adopt and implement controls specifically related to their use of AI that are designed to mitigate the risk of Adverse Consumer Outcomes.

Consistent therewith, all Insurers authorized to do business in Iowa are expected to develop, implement, and maintain a written program (an "AIS Program") for the responsible use of AI Systems that make, or support, decisions related to regulated insurance practices. The AIS Program should be designed to mitigate the risk of Adverse Consumer Outcomes, including, at a minimum, the statutory provisions set forth in Section II of this Bulletin.

The Division recognizes that robust governance, risk management controls, and internal audit functions play a core role in mitigating the risk that decisions driven by AI Systems will violate unfair trade practice laws and other applicable existing legal standards. The Division also encourages the development and use of verification and testing methods to identify errors and

bias[1] in Predictive Models and AI Systems, as well as the potential for unfair discrimination in the decisions and outcomes[2] resulting from the use of Predictive Models and AI Systems.

The controls and processes that an Insurer adopts and implements as part of its AIS Program should be reflective of, and commensurate with, the Insurer's own assessment of the degree and nature of the risk posed to consumers by the AI Systems that it uses, considering: a) the nature of the decisions being made, informed, or supported using the AI System; b) the type and Degree of Potential Harm to Consumers resulting from the use of AI Systems; c) the extent to which humans are involved in the final decision-making process; d) the transparency and explainability of outcomes to the impacted consumer; and e) the extent and scope of the insurer's use and reliance on data, Predictive Models, and AI Systems from third parties. Similarly, controls and processes should be commensurate with both the risk of Adverse Consumer Outcomes and the Degree of Potential Harm to Consumers.

As discussed in Section VI below, the decisions made as a result of the Insurer's use of AI Systems are subject to the Division's examination to determine that the reliance on AI Systems are compliant with all applicable existing legal standards governing the conduct of the insurer.

SECTION V. AIS PROGRAM GUIDELINES

1. General Guidelines.

1.1 The AIS Program should be designed to mitigate the risk that the Insurer's use of an AI System will result in Adverse Consumer Outcomes.

1.2 The AIS Program should address governance, risk management controls, and internal audit functions.

1.3 The AIS Program should vest responsibility for the development, implementation, monitoring, and oversight of the AIS Program and setting the Insurer's strategy for AI Systems with senior management accountable to the board or an appropriate committee of the board.

1.4 The AIS Program should be tailored to and proportionate with the Insurer's use and reliance on AI and AI Systems. Controls and procedures should be focused on the mitigation of Adverse Consumer Outcomes and the scope of the controls and procedures applicable to a given AI System use case should reflect and align with the Degree of Potential Harm to Consumers with respect to that use case.

[1] The term "bias" as used in this Bulletin means a distortion or error in statistical analysis that produces inaccurate results. An AI System may be said to be biased when it exhibits systematically inaccurate behavior.

[2] For references to "outcomes" and outcomes testing in this Bulletin, the Division interprets those references as meaning validating that a model or AI system is working as intended and does not produce unfairly discriminatory outcomes.

1.5 The AIS Program may be independent of or part of the Insurer's existing Enterprise Risk Management (ERM) program. The AIS Program may adopt, incorporate, or rely upon, in whole or in part, a framework or standards developed by an official third-party standard organization, such as the National Institute of Standards and Technology (NIST) Artificial Intelligence Risk Management Framework, Version 1.0.

1.6 The AIS Program should address the use of AI Systems across the insurance life cycle, including areas such as product development and design, marketing, use, underwriting, rating and pricing, case management, claim administration and payment, and fraud detection.

1.7 The AIS Program should address all phases of an AI System's life cycle, including design, development, validation, implementation (both systems and business), use, on-going monitoring, updating, and retirement.

1.8 The AIS Program should address the AI Systems used with respect to regulated insurance practices whether developed by the Insurer or a third-party vendor.

1.9 The AIS Program should include processes and procedures providing notice to impacted consumers that AI Systems are in use and provide access to appropriate levels of information based on the phase of the insurance life cycle in which the AI Systems are being used.

2. Governance.

The AIS Program should include a governance framework for the oversight of AI Systems used by the Insurer. Governance should prioritize transparency, fairness, and accountability int eh design and implementation of the AI Systems, recognizing that proprietary and trade secret information must be protected. An Insurer may consider adopting new internal governance structures or rely on the Insurer's existing governance structures; however, in developing a new governance framework, the Insurer should consider addressing the following items.

2.1 The policies, processes, and procedures, including risk management and internal controls, to be followed at each state of an AI System life cycle, from proposed development to retirement.

2.2 The requirements adopted by the Insurer to document compliance with the AIS Program policies, processes, procedures, and standards. Documentation requirements should be developed with Section VI, Regulatory Oversight and Examination Considerations, in mind.

2.3 The Insurer's internal AI System governance accountability structure, such as:

a) The formation of centralized, federated, or otherwise constituted committees comprised of representatives from appropriate disciplines and units within the Insurer, such as business units, product specialists, actuarial, data science and analytics, underwriting, claims, compliance, and legal.

b) Scope of responsibility and authority, chains of command, and decisional hierarchies.

c) The independence of decision-makers and lines of defense at successive stages of the AI System life cycle.

d) Monitoring, auditing, escalation, and reporting protocols and requirements.

e) Development and implementation of ongoing training and supervision of personnel.

2.4 Specifically with respect to Predictive Models: the Insurer's processes and procedures for designing, developing, verifying, deploying, using, updating, and monitoring Predictive Models, including a description of methods used to detect and address errors, performance issues, outliers, or unfair discrimination in the insurance practices resulting from the use of the Predictive Model.

3. Risk Management and Internal Controls.

The AIS Program should document the Insurer's risk identification, mitigation, and management framework and internal controls for AI Systems generally and at each stage of the AI System life cycle. Risk management and internal controls should address the following items.

3.1 The oversight and approval process for the development, adoption, or acquisition of AI Systems, as well as the identification of constraints and controls on automation and design to align and balance function with risk.

3.2 Data practices and accountability procedures, including data currency, lineage, quality, integrity, bias analysis and minimization, and suitability.

3.3 Management and oversight of predictive models (including algorithms used therein) including:

a) Inventories and descriptions of Predictive Models.

b) Detailed documentation of the development and use of the Predictive Models.

c) Assessments such as interpretability, repeatability, robustness, regulator tuning, reproducibility, traceability, model drift, and the auditability of these measurements where appropriate.

3.4 Validating, testing, and retesting as necessary to assess the generalization of AI System outputs upon implementation, including the suitability of the data used to develop, train, validate and audit the model. Validation can take the form of comparing model performance on unseen data available at the time of model development to the performance observed on data post-implementation, measuring performance against expert review, or other methods.

3.5 The protection of non-public information, particularly consumer information, including unauthorized access to the Predictive Models themselves.

3.6 Data and record retention.

3.7 Specifically with respect to Predictive Models: a narrative description of the model's intended goals and objectives and how the model is developed and validated to ensure that the AI Systems that rely on such models correctly and efficiently predict or implement those goals and objectives.

4. Third-Party AI Systems and Data.

Each AI Program should address the Insurer's process for acquiring, using, or relying on a) third-party data to develop AI Systems; b) AI Systems developed by a third party, which may include, as appropriate, the establishment of standards, policies, procedures, and protocols related to the following considerations.[3]

4.1 Due diligence and the methods employed by the Insurer to assess the third party and its data or AI Systems acquired from the third party to ensure that decisions made or supported from such AI Systems that could lead to Adverse Consumer Outcomes will meet the legal standards imposed on the Insurer itself.

4.2 Where appropriate and available, the inclusion of terms in contracts with third parties that:

a) Provide audit rights and/or entitle the Insurer to receive audit reports by qualified auditing entities.

b) Require the third party to cooperate with the Insurer with regard to regulatory inquiries and investigations related to the Insurer's use of the third party's product or services.

[3] The Division anticipates providing supplementary guidance on the governance of third-party AI Systems.

4.3 The performance of contractual rights regarding audits or other activities to confirm the third party's compliance with contractual and, where applicable, regulatory requirements.

SECTION VI. REGULATORY OVERSIGHT AND EXAMINATION CONSIDERATIONS

The Division's regulatory oversight of Insurers includes oversight of an Insurer's conduct in this State, including its use of AI Systems to make or support decisions that impact consumers. Regardless of the existence or scope of a written AIS Program, in the context of an investigation or market conduct action an Insurer can expect to be asked about its development, deployment, and use of AI Systems, or any specific Predictive Model, AI System or application and its outcomes (including Adverse Consumer Outcomes) from the use of those AI Systems, as well as any other information or documentation deemed relevant by the Division.

Insurers should expect those inquiries to include (but not be limited to) the Insurer's governance framework, risk management, and internal controls (including the considerations identified in Section IV, Regulatory Guidance and Expectation for Insurers). In addition to conducting a review of any of the items listed in this Bulletin, a regulator may also ask questions regarding any specific model, AI System, or its application, including requests for the following types of information and/or documentation.

1. Information and Documentation Relating To AI System Governance, Risk Management, and Use Protocols.

1.1 Information and documentation related to or evidencing the Insurer's AIS Program, including:

a) The written AIS Program.
b) Information and documentation relating to or evidencing the adoption of the AIS Program.

c) The scope of the Insurer's AIS Program, including any AI Systems and technologies not included in or addressed by the AIS Program.

d) How the AIS Program is tailored to and proportionate with the Insurer's use and reliance on AI Systems, the risk of Adverse Consumer Outcomes, and the Degree of Potential Harm to Consumers.

e) The policies, procedures, guidance, training materials, and other information relating to the adoption, implementation, maintenance, monitoring, and oversight of the Insurer's AIS Program, including:

i) Processes and procedures for the development, adoption, or acquisition of AI Systems, such as identification of constraints and controls on automation and design; data governance and controls; and any practices related to data lineage, quality, integrity, bias analysis and minimization; and Data Currency.

ii) Processes and procedures related to the management and oversight of Predictive Models, including measurements, standards, or thresholds adopted or used by the Insurer in the development, validation, and oversight of models and AI Systems.

iii) Protection of non-public information, particularly consumer information, including unauthorized access to Predictive Models themselves.

1.2 Information and documentation relating to the Insurer's pre-acquisition/pre-use diligence, monitoring, oversight, and auditing of data or AI Systems developed by a third party.

1.3 Information and documentation relating to or evidencing the Insurer's implementation and compliance with its AIS Program, including documents relating to the Insurer's monitoring and audit activities respecting compliance, such as:

a) Documentation relating to or evidencing the formation and ongoing operation of the Insurer's coordinating bodies for the development, use, and oversight of AI Systems.

b) Documentation related to the data practices and accountability procedures, including data lineage, quality, integrity, bias analysis and minimization, suitability, and Data Currency.

c) Management and oversight of Predictive Models and AI Systems, including:

i) The Insurer's inventories and descriptions of Predictive Models, and AI Systems used by the Insurer to make or support decisions that can result in Adverse Consumer Outcomes.

ii) As to any specific Predictive Model or AI System that is the subject of investigation or examination:

1) Documentation of compliance with all applicable AI Program policies, protocols, and procedures in the development, use, and oversight of Predictive Models and AI Systems deployed by the Insurer.

2) Information about data used in the development and oversight of the specific model or AI System, including the data source, provenance, data lineage, quality, integrity, bias analysis and minimization, suitability, and Data Currency.

3) Information related to the techniques, measurements, thresholds, and similar controls used by the Insurer.

d) Documentation related to validation, testing, and auditing, including evaluation of Model Drift to assess the reliability of outputs that influence the decisions made based on Predictive Models. Note that the nature of validation, testing, and auditing should be reflective of the underlying components of the AI System, whether based on Predictive Models or Generative AI.

2. Third-Party AI Systems and Data.

In addition, if the investigation or examination concerns data, Predictive Models, or AI Systems collected or developed in whole or in part by third parties, the Insurer should also expect the Division to request the following additional types of information and documentation.

2.1 Due diligence conducted on third parties and their data, models, or AI Systems.

2.2 Contracts with third-party AI System, model, or data vendors, including terms related to representations, warranties, data security and privacy, data sourcing, intellectual property rights, confidentiality and disclosures, and/or cooperation with regulators.

2.3 Audits and/or confirmation processes performed regarding third-party compliance with contractual and, where applicable, regulatory obligations.

2.4 Documentation pertaining to validation, testing, and auditing, including evaluation of Model Drift.

The Division recognizes that Insurers may demonstrate their compliance with the laws that regulate their conduct in the State in their use of AI Systems through alternative means, including through practices that differ from those described in this Bulletin. The goal of the Bulletin is not to prescribe specific practices or to prescribe specific documentation requirements. Rather, the goal is to ensure that Insurers in this State are aware of the Division's expectations as to how AI Systems will be governed and managed and of the kind of information and documents about an Insurer's AI Systems that the Division expects an insurer to produce when requested.

As in all cases, investigations and market conduct actions may be performed using procedures that vary in nature, extent, and timing in accordance with regulatory judgment. Work performed may include inquiry, examination of company documentation, or any of the continuum of market actions described in the NAIC's Market Regulation Handbook. These activities may involve the

use of contracted specialists with relevant subject matter expertise. Nothing in this Bulletin limits the authority of the Division to conduct any regulatory investigation, examination, or enforcement action relative to any act or omission of any Insurer that the Division is authorized to perform.

The Iowa Insurance Division will continue to review AI-related issues and changes in the marketplace. For questions or clarifications regarding this Bulletin, please contact Jordan Esbrook at Jordan.esbrook@iid.iowa.gov.