The Use of AI in the Insurance Policy Lifecycle and Legal Implications

February 20, 2025

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Artificial Intelligence (AI) Definitions

AI: A branch of computer science that endeavors to replicate or simulate human intelligence in a machine, so machines can perform tasks that typically require human intelligence; can also refer to an AI system

AI system: A machine-based system – powered by algorithms and using techniques such as machine learning, deep learning, and rules – that can make predictions, recommendations, or decisions or solve problems

Artificial general intelligence (AGI): A theoretical type of AI system that matches or surpasses human cognitive capabilities across a wide range of tasks and domains; AGI would self-teach and solve problems for which it was never trained

Narrow artificial intelligence (narrow AI): The type of AI system currently existing, that replicates – and perhaps surpasses – human intelligence for a given set of human-defined objectives; whereas AGI could be applied to any task or problem, narrow AI is designed for a dedicated purpose

Generative AI (GenAI): An AI system that can produce from learned knowledge unique content that resembles human creations in response to human queries and prompts

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Artificial Intelligence (AI) Definitions

- **Algorithm**: A finite set of instructions used to solve a specific problem or to perform a computation
- **Predictive modeling algorithms**: A set of mathematical equations and statistical techniques used to predict an outcome or future behavior based on historical data. These algorithms are used to build predictive models that can forecast future trends, identify patterns in data, and make data-driven decisions *Compare, e.g.,* 54 Pa.B 1910 ("'Predictive Model' *The mining of historic data* using algorithms or machine learning, or both, to identify patterns and predict outcomes that can be used to make or support the making of decisions" emphasis added); *see* A. Prince and D. Schwarcz, Proxy Discrimination in the Age of Artificial Intelligence and Big Data, Iowa Law Rev. vol. 105:1157 (2020); *see generally* NAIC Casualty Actuarial (C) Task Force, Regulatory Review of Predictive Models White Paper (adopted Apr. 14, 2021), found at National Association of Insurance Commissioners
- **Automated decision-making (ADM)**: Use of a machine-based system that makes decisions without human involvement; need not be an AI system
- **Bias**: prejudice in favor of or against one thing, person, or group compared with another, usually in a way considered to be unfair or harmful
- **Statistical bias**: describes any instance that creates a difference between an expected value and the true value of a population parameter being estimated; Omitted variable bias stems from the absence of relevant variables in a machine learning or forecasting model.
- **Bias-Variance Tradeoff**: Equilibrium between a predictive model with high bias – such as a simple model suffering omitted variable bias – and a consequent inability to capture the complexity of the real-world problem and a predictive model with high variance – such as an excessively complex model – that consequently captures the noise in the training data and so struggles to generalize to new data

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Regulation of Artificial Intelligence

STATUTES AND REGULATIONS

NAIC PRINCIPLES ON ARTIFICIAL INTELLIGENCE

STATES ADOPTION OF THE NAIC MODEL BULLETIN

STATE SPECIFIC REGULATION

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Existing Laws and Regulations

State enactments and promulgations substantially similar to NAIC Models (located at https://content.naic.org/model-laws?combine=&field_ml_category_target_id=732) , *e.g.*:

- 880-Unfair Trade Practices Act
- 218-Producer Licensing Act
- 900-Unfair Claims Settlement Practices Act
- GDL 1224-Independent Adjuster Licensing Guideline
- 720-Property Insurance Declination, Termination and Disclosure Act
- 725-Automobile Insurance Declination, Termination, and Disclosure Act
- 305 and 306-Corporate Governance Annual Disclosure Act and Regulation
- 440 and 450-Insurance Holding Company System Act (§ 4L) and Regulation (§ 20 and Form F)
- 390-Examinations

And State enactments and promulgations that embody the requirement that insurance rates not be inadequate, excessive, or unfairly discriminatory. *E.g.*, NY Ins Law § 2303; *cf.*, Casualty Actuarial Society, Statement of Principles Regarding Property and Casualty Insurance Ratemaking (rescinded in 2020, but reinstated in 2021 for ratemaking subject to U.S. regulation) (Principle 4 states, "A rate is reasonable and not excessive, inadequate, or unfairly discriminatory if it is an actuarially sound estimate of the expected value of all future costs associated with an individual risk transfer.")

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Colorado's AI Act – "High Risk" Systems

The first comprehensive US risk-based AI legislation for companies that do business in Colorado

Similar approach to the EU's AI Act

Focus is on "high risk systems" – can result in the denial of important services to consumers

Educational and employment opportunities

Financial and lending services

Healthcare and insurance

AI developers and deployers must use reasonable care to protect consumers from known or reasonably foreseeable risks of algorithmic discrimination

Disclose use of high risk AI systems to consumers

Implement risk management policies that address AI

AI deployers must conduct AI impact assessments annually

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Algorithmic Discrimination –Common Legislative Themes

- Burden and potential liability on AI deployers, not just AI tool developers
- Implement written AI governance policies
- Conduct impact assessments or audits
- Disclose use of AI to potentially affected individuals
- Provide the right to opt out of AI ADM use
- Develop a formalized approach to managing AI risk!

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NAIC Big Data and Artificial Intelligence (H) Working Group 2025 adopted charges include:

Research, identify, and monitor the impacts of the use of AI systems by insurance companies to understand the potential benefits, value propositions, risks and adverse consumer outcomes related to the use of AI systems.

Facilitate discussion related to AI systems evaluation:

- Identify existing tools, resources, materials, and training that will assist and guide regulators in their review of AI systems used by licensees, including an insurer's AI program. This includes establishing a coordinated work plan and timeline for further development of those resources.

- Develop new regulatory tools or regulatory guidance to assist regulators in their review of AI systems used by licensees, including an insurer's AI program.

- Coordinate the development of review and enforcement tools, resources, guidelines, and training related to AI systems for regulators across the NAIC.

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NAIC Principles on AI – High Level Guiding Principles (2020)

Fair and Ethical

- Proactively engage in responsible stewardship of trustworthy AI in pursuit of beneficial outcomes
- Avoid proxy discrimination against protected classes, while remaining consistent with the risk-based foundation of insurance

Accountable

- Ensure that AI systems operate in compliance with these principles consistent with the actors' role

Compliant

- Have the knowledge and resources in place to comply with all applicable insurance laws and regulations

Transparent

- Commit to transparency and responsible disclosures regarding AI systems
- Stakeholders (regulators and consumers) should have a way to inquire about, review and seek recourse for AI-driven insurance decisions

Secure Safe and Robust

- Ensure a reasonable level of traceability in relation to datasets, processes and decisions made during the AI system life cycle
- Apply a systematic risk management approach to each phase of the AI system life cycle on a continuous basis to address risks related to AI systems, including privacy, digital security and unfair discrimination

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NAIC AI Model Bulletin (2023)

NAIC AI Model Bulletin: *USE OF ALGORITHMS, PREDICTIVE MODELS, AND ARTIFICIAL INTELLIGENCE SYSTEMS BY INSURERS*

On December 4, 2023 the NAIC adopted a revised version of the Model Bulletin. The Bulletin:

- Requires that decisions made by Insurers must not be arbitrary, capricious, or unfairly discriminatory (regardless of the tools used to make decision).
- Recognizes that regulators must also rely upon robust governance, risk management controls, and internal audit functions to mitigate the risk that decisions driven by AI Systems will violate unfair trade practice laws and other applicable legal standards.
- Discusses the expectation that insurers will develop, implement, and maintain a written program (an "AIS Program") and provides corresponding guidelines. Program should:
  - Address governance, risk management controls and internal audit functions;
  - Be tailored to and proportionate with the insurer's use and reliance on AI and AI systems; and
  - Address the use of AI systems across the insurance product life cycle.

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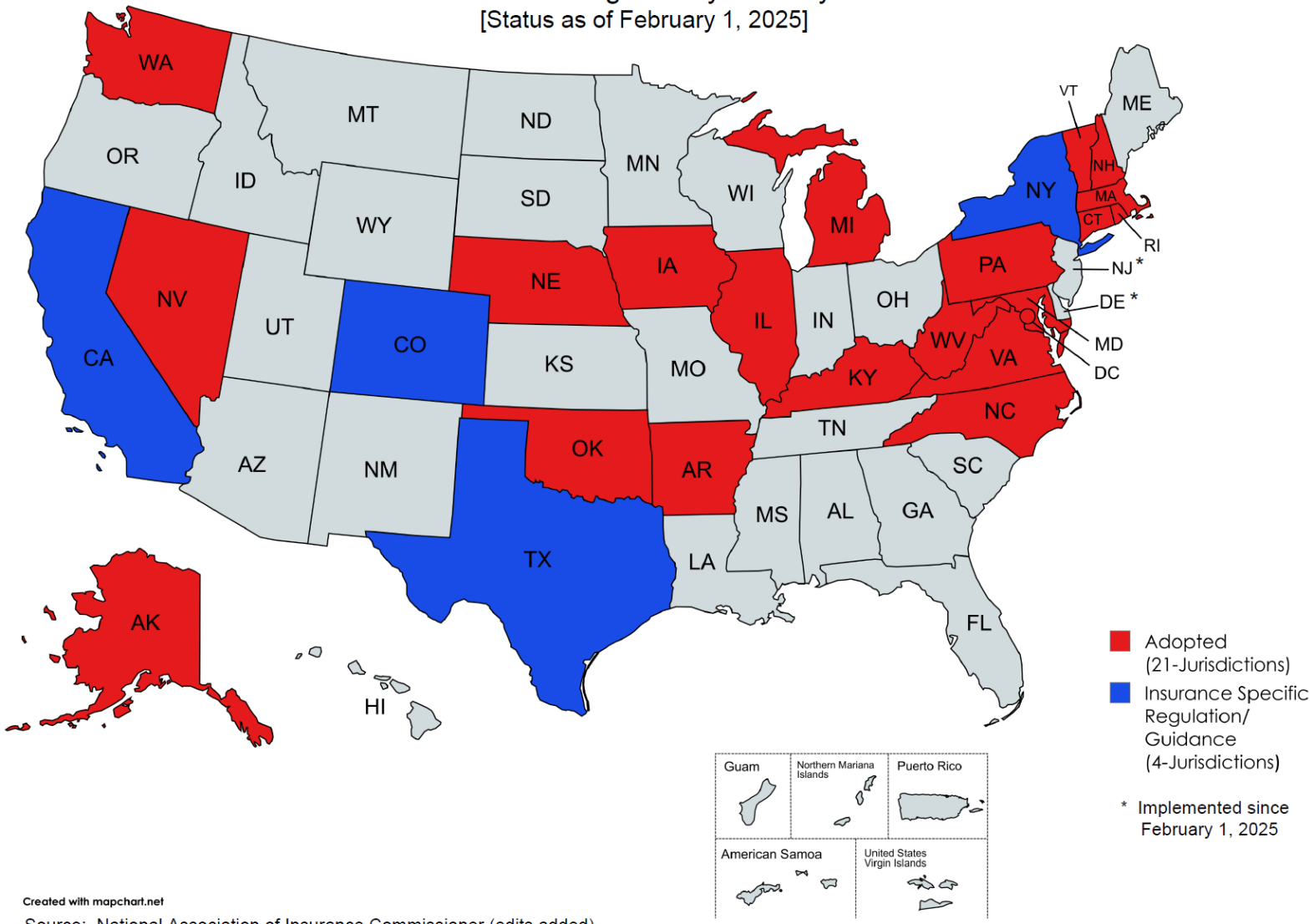
Implementation of NAIC Model Bulletin: Use of Artificial Intelligence Systems by Insurers

[Status as of February 1, 2025]



Source: National Association of Insurance Commissioner (edits added)

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NAIC Model Bulletin: Use of Artificial Intelligence Systems by Insurers –

NAIC Model Bulletin: Use of Artificial Intelligence Systems by Insurers – Adopted December 4, 2023

1. **Alaska**: Bulletin B 24-01 –February 1, 2024
2. **Arkansas**: Bulletin 13-2024 –July 31, 2024
3. **Connecticut**: Bulletin No. MC-25 –February 26, 2024
4. **Delaware**: Bulletin No. 148 – February 5, 2025
5. **District of Columbia**: Bulletin 24-IB-002-05/21 – May 21, 2024
6. **Illinois**: Company Bulletin 2024-08 – March 13, 2024
7. **Iowa**: Insurance Division Bulletin 24-04 – November 7, 2024
8. **Kentucky**: Bulletin No. 2024-02 – April 16, 2024
9. **Maryland**: Bulletin No. 24-11 – April 22, 2024
10. **Massachusetts**: Bulletin No. 2024-10 – December 9, 2024
11. **Michigan**: Bulletin 2024-20-INS – August 7, 2024
12. **Nebraska**: Insurance Guidance Document No. IGD - - H1 – June 11, 2024
13. **Nevada**: Bulletin 24-001 – February 23, 2024

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NAIC Model Bulletin (cont.)

14. **New Hampshire**: Bulletin Docket #INS 24-011-AB – February 20, 2024
15. **New Jersey**: Bulletin No. 25-03 – February 11, 2025
16. **North Carolina**: Bulletin No. 24-B-19 – December 18, 2024
17. **Oklahoma**: Bulletin No. 2024-11 – November 14, 2024
18. **Pennsylvania**: Insurance Notice 2024-04, 54 Pa.B. 1910 – April 6, 2024
19. **Rhode Island**: Insurance Bulletin No. 2024-03 – March 15, 2024
20. **Vermont**: Insurance Bulletin No. 229 – March 12, 2024
21. **Virginia**: Administrative Letter 2024-01 – July 22, 2024
22. **Washington**: Technical Assistance Advisory 2024-02 – April 22, 2024
23. **West Virginia**: Insurance Bulletin No. 24-06 – August 9, 2024

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Insurance Specific Regulation/Guidance

California: Bulletin 2022-5 – Issued June 30, 2022

Colorado: 3 CCR 702-10 – Effective November 13, 2023

New York: Insurance Circular Letter No. 7 – Issued July 22, 2024

Texas: Bulletin # B-0036-20 – Issued September 30, 2023

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Industry-Specific AI Law in the US

NY Insurance Circular Letter No. 7 (2024)

- Applies when an insurer uses AI or External Consumer Data and Information Sources (ECDIS) in underwriting or pricing
- Unfair and unlawful discrimination based on protected class
- AI system bias testing and validation is required
- Insurers must disclose and explain adverse underwriting or pricing decisions to applicants

Utah AI Policy Act (2024) – a consumer protection GenAI law

- "Regulated occupations" must "prominently" disclose that a customer is interacting with GenAI (i.e., a chatbot)
  - Broadly applies to accountants, healthcare professionals, cosmetologists, contractors, and other licensed occupations, as well as regulated activities, such as telemarketing
- Cannot avoid liability by blaming the GenAI system

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Insurance Industry - Emerging Issues with Ethical Considerations

Current Laws & Regulations: California – Bulletin 2022-5

"Allegations of Racial Bias and Unfair Discrimination in Marketing, Rating, Underwriting, and Claims Practices by the Insurance Industry"

1. Reminds insurance companies and licensees of obligations to treat all similarly-situated persons alike

2. Directs insurance companies and licensees to avoid "conscious and unconscious" discrimination that can result from the use of artificial intelligence and/or "big data"

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Insurance Industry - Emerging Issues with Ethical Considerations

California – Bulletin 2022-5

3. Notes that the Department is “aware of” and “investigating several” recent examples of potential discrimination

Noted Examples:
Insurers are using biometric data obtained through facial recognition technology to influence whether to pay or deny claims.

Allegations that insurers are unfairly flagging claims from certain inner-city ZIP Codes and referring these claims to their Special Investigative Unit (or SIU).

Collecting biometric and other personal information unrelated to risk in the marketing and underwriting of insurance policies. The use of these technologies and reliance on algorithms to decide whether to market and underwrite insurance products for a particular population creates a risk that eligibility could be denied based on protected classes.

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Insurance Industry - Emerging Issues with Ethical Considerations

- **Common Themes in Regulation:**
  - Regulators identify an **obligation of insurance companies to use new technologies responsibly and transparently**
  - **Internal testing (up front and on back end)** – i) a model's outputs must be reviewed to evaluate whether the performance of the model compares to the model's ground truth and (ii) loss ratios must be tracked over time across communities to understand whether there are any systematic gaps across models or products.
  - **Governance Frameworks**
  - **Risk Management Frameworks and Ongoing Monitoring**
  - **Written Policies and Procedures for Testing**
  - **Officer Certifications**
  - **Provide Regulator Access to Data** - provide the Department with access to data used to build models or algorithms included in all rate, form, and underwriting filings
  - **"Transparency" Requirements** —insurers and licensees must provide the "specific reason" for any adverse decisions

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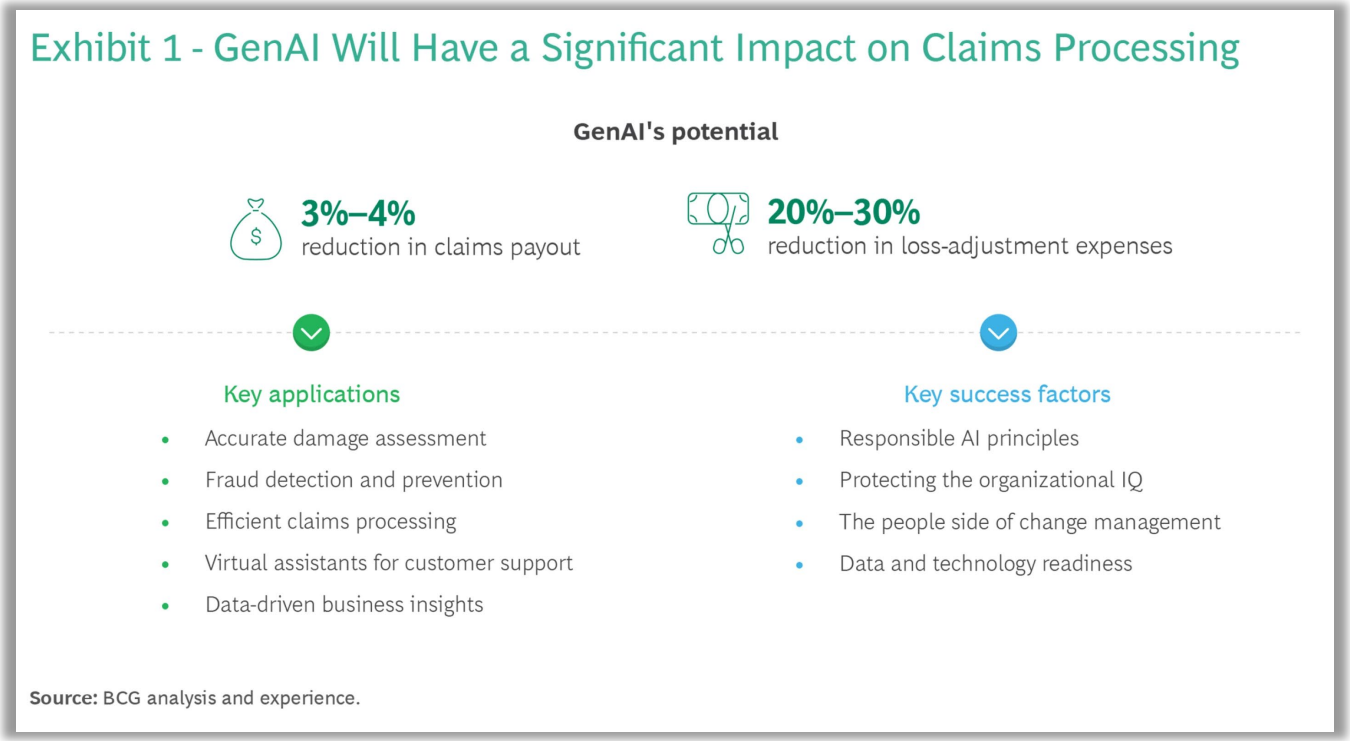
Use of AI in Claims Processing

- AI offers tools for insurance companies for adjusting claims



Costa, Emanuele and Moore, Nadine, "GenAI Will Write the Future of Insurance Claims," Boston Consulting Group (Dec. 13, 2023)

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AI Claims Against Insurers

- Use of AI could – however – subject insurance companies to claims-handling related claims (*i.e.,* bad faith) if there are not proper controls and oversight put into place
- NAIC Model Bulletin
  - Section 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." (underlining added).
  - "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: 1) unfair trade practices…or 2) unfair claims settlement practices[.]"

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UnitedHealth Litigation

Estate of Gene B. Lockton, et al. v. UnitedHealth Group, Inc., et al. (Case No. 0:23-cv-3514; D. Minn)

- Class action brought against UnitedHealth based on its use "nH Predict" AI model. Lawsuit alleges that the model determines how much post-acute care an elderly patient "should" require, overriding the actual determinations of the patients' doctors.
  - Alleges that UnitedHealth "utilize[s] the nH Predict AI Model to aggressively deny coverage[.]"
  - Claims model has a 90% error rate
- Lawsuit alleges that "Defendants wrongfully delegate their obligation to evaluate and investigate claims to the nH Predict AI Model."
  - Complaint alleges that UnitedHealth "intentionally limit[s]" employees' discretion to deviate from the model by setting targets, and disciplining/terminating employees that do not coverage meet their targets.
- Claims the use of the AI model "undermines the principles of fairness and meaningful claim evaluation, which insureds expect from their insurers."
  - Use of nH Predict alleged to be "covert[]"

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UnitedHealth Litigation (cont'd)

Estate of Gene B. Lockton, et al. v. UnitedHealth Group, Inc., et al. (Case No. 0:23-cv-3514; D. Minn)

- Causes of action:
  - Breach of contract (Count 1)
  - Breach of the Implied Covenant of Good Faith and Fair Dealing (Count 2)
  - Unjust enrichment (Count 3)
  - Violation of Wis. Adm. Ins. Code § 6.11 (Count 4)
  - Bad Faith (Counts 5 - 25) under the laws of the following states: Wisconsin, Arizona, California, Colorado, Delaware, Hawaii, Iowa, Kentucky, Massachusetts, Nebraska, North Carolina, North Dakota, Ohio, Oklahoma, Rhode Island, South Carolina, South Dakota, Vermont, Washington, West Virginia, and Wyoming
- Motion to Dismiss (based on failure to adhere to Medicare Act's exhaustion requirement) recently granted in part, but case will proceed on Plaintiffs' breach of contract breach of the implied covenant of good faith and fair dealing claims
  - Bad faith claims dismissed → "a finding of liability on the bad faith insurance claims would force the Court to evaluate whether the denial of coverage was reasonable and whether the use of nH Predict to make that denial decision was reasonable. The Medicare Act squarely regulates how coverage decisions are to be made and what services are covered."

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Cigna Litigation

Suzanne Kisting-Leung, et al., v. Cigna Corporation, et al., Case No. 2:23-cv-01477-DAD-CSK (E.D. California)

- Class action based on Cigna developed "PXDX" algorithm, which Plaintiffs claim allowed Cigna's doctors to batch-deny payments that do not meet pre-set criteria, effectively evading required physician review process.
- Complaint alleges that "[i]n violation of California law, the Cigna Defendants wrongfully delegated their obligation to evaluate and investigate claims to the PXDX system, including determining whether medical expenses are reasonable and medically necessary."

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Cigna Litigation (cont'd)

Suzanne Kisting-Leung, et al., v. Cigna Corporation, et al., Case No. 2:23-cv-01477-DAD-CSK (E.D. California)

- Causes of action:
  - Breach of the Implied Covenant of Good Faith and Fair Dealing (Count 1)
  - Violation of California Unfair Competition Law (Count 2)
  - Intentional Interference with Contractual Relations (Count 3)
  - Unjust Enrichment (Count 4)
- Cigna defendants have filed a motion to dismiss, which is pending

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State Farm Litigation

Jacqueline Huskey v. State Farm Fire & Casualty Company (Case No. 1:22-cv-07014; E.D. Illinois)

- Class action alleging that State Farm discriminates against Black policyholders by subjecting their claims to more scrutiny, including through the use of machine-learning algorithms, which, per the Complaint incorporate data tinged with racial biases and disparities
  - 2021 survey:
    - 30% Black policyholders had claim paid < 1 month from submission (versus 39% for white policyholders)
    - 64% of Black policyholders asked to submit additional materials post-claim (versus 34% for white policyholders)
    - 58% of Black policyholders interacted with State Farm employees 3+ times (versus 49% for white policyholders)
  - State Farm collects customer data, which it uses to create profiles, which, in turn are used for fraud prevention and claims processing
    - State Farm uses internal and third-party tools to leverage this data, including AI software (Duck Creek Technology, FRISS)
    - Used to process claims, assign handlers, and determine how much scrutiny claim receives
- Potential for bias resulting from algorithmic decision-making → "replacing human judgment with algorithms"
  - Complaint alleges that State Farm does not review its claim processing methods or "has refused to use less discriminatory alternatives"
- Takes aim at lack of transparency re: processing methods, lack of testing
- Results in substandard living conditions, devaluation of homes, and a "less valuable insurance product", among other things

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State Farm Litigation (cont'd)

Jacqueline Huskey v. State Farm Fire & Casualty Company (Case No. 1:22-cv-07014; E.D. Illinois)

- Causes of Action:
  - Violation of the Fair Housing Act, 42 U.S.C. § 3604(a) & (b) (Count 1)
  - Violation of the Fair Housing Act, 42 U.S.C. § 3605 (Count 2)
- State Farm filed a MTD, which was granted in part:
  - Plaintiffs failed to state a claim under 42 U.S.C. § 3604(a)
  - Plaintiff's 42 U.S.C. § 3604(b) claim survived
    - For purposes of motion to dismiss, disparate impact based on statistical disparity sufficiently alleged
  - Plaintiff's 42 U.S.C. § 3605 dismissed because inconsistent with Seventh Circuit caselaw
  - No McCarran-Ferguson Act Preemption → "Liability under the FHA for processing Black policyholders' claims differently aligns with State Farm's state-law obligation to 'effectuate prompt, fair and equitable settlement of claims' in good faith."
  - Injunctive relief claim dismissed because Plaintiff was no longer a policyholder

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Liberty Mutual Litigation

Stan Schiff v. Liberty Mutual Fire Ins. Co. (Case No. 101576-3, Washington Supreme Court)

- Class action alleging that Liberty Mutual's use of computer-generated calculations violated the Washington Consumer Protection Act → per Plaintiffs, "formulaic" review process violates obligation under the personal injury protection statutes to pay all reasonable and necessary expenses
- Washington Supreme Court: Liberty Mutual's use of FAIR Health database and 80th percentile practice to determine reasonableness of medical providers' bills was not an unfair trade practice

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AI Claims Against Insureds

For claims arising from an insured's use of AI, depending on the nature of the claim, different policies may respond:	Concern within industry that AI claims may become new "silent cyber" → industry developing exclusionary language, including sub-limited coverage
• Tech E&O • D&O • Cyber • CGL • EPLI • Property • Media liability • Professional lines • Crime/Fidelity	• Development of standalone AI insurance products • Cyber extensions

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Key Takeaways for Deploying AI in the US

- A robust AI governance plan is important
  - Cross-functional AI task force, working groups, committee, etc.
  - Technical involvement is key (CTO, IS/IT, Privacy)
  - Implement a risk management framework that fits your AI use
- Create and update written AI policies
  - Identify use cases, permitted and prohibited activities, stress IP and privacy rights and mitigating risk and harmful outcomes
- Importance of AI system diligence and management
  - Vendor questionnaires, impact assessments, and audits
- Maintain documentation for potential regulatory inquiries and lawsuits
- Be careful to preserve human oversight and not over-delegate
- Learn from silent cyber: review your policies to determine whether claim arising from AI could be covered.
- *Mitigation should be proportionate to the AI risks!*

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APPENDICES

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Adopted by the Executive (EX) Committee and Plenary, Aug. 14, 2020
Adopted by the Executive (EX) Committee, Aug. 13, 2020
Adopted by the Innovation and Technology (EX) Task Force, Aug. 7, 2020

National Association of Insurance Commissioners (NAIC) Principles on Artificial Intelligence (AI)

RECOMMENDS that insurance companies and all persons or entities facilitating the business of insurance that play an active role in the AI system life cycle, including third parties such as rating, data providers and advisory organizations (hereafter referred to as "AI actors") promote, consider, monitor and uphold the following principles according to their respective roles; and

THIS DOCUMENT is intended to establish consistent high-level guiding principles for AI actors. These principles are guidance and do not carry the weight of law or impose any legal liability. This guidance can serve to inform and establish general expectations for AI actors and systems emphasizing the importance of accountability, compliance, transparency, and safe, secure, fair and robust outputs.

Further, **THIS DOCUMENT**

Should be used to assist regulators and NAIC committees addressing insurance-specific AI applications. The level of regulatory oversight may vary based on the risk and impact to the consumer. These principles should be interpreted and applied in a manner that accommodates the nature and pace of change in the use of AI by the insurance industry and promotes innovation, while protecting the consumer.

Fair and Ethical

a. AI actors should respect the rule of law throughout the AI life cycle. This includes, but is not limited to, insurance laws and regulations, such as those relating to trade practices, unfair discrimination, access to insurance, underwriting, privacy, consumer protection and eligibility practices, ratemaking standards, advertising decisions, claims practices, and solvency.

b. Consistent with the risk-based foundation of insurance, AI actors should proactively engage in responsible stewardship of trustworthy AI in pursuit of beneficial outcomes for consumers and to avoid proxy discrimination against protected classes. AI systems should not be designed to harm or deceive people and should be implemented in a manner that avoids harmful or unintended consequences and corrects and remediates for such consequences when they occur.

Accountable

a. AI actors should be accountable for ensuring that AI systems operate in compliance with these principles consistent with the actors' roles, within the appropriate context and evolving technologies. Any AI system should be compliant with legal requirements governing its use of data and algorithms during its phase of the insurance life cycle. Data supporting the final outcome of an AI application should be retained and be able to be produced in accordance with applicable insurance laws and regulations in each jurisdiction. AI actors should be responsible for the creation, implementation and impacts of any AI system, even if the impacts are unintended. AI actors should implement mechanisms and safeguards consistent with the degree and nature of the risks posed by AI to ensure all applicable laws and regulations are followed, including ongoing (human or otherwise) monitoring and, when appropriate, human intervention.

Compliant

a. AI actors must have the knowledge and resources in place to comply with all applicable insurance laws and regulations. AI actors must recognize that insurance is primarily regulated by the individual states and territories of the United States as well as by the federal government, and that AI systems must comply with the insurance laws and regulations within each individual jurisdiction. Compliance is required whether the violation is intentional or unintentional. Compliance with legal requirements is an ongoing process. Thus, any AI system that is deployed must be consistent with applicable laws and safeguards against outcomes that are either unfairly discriminatory or otherwise violate legal standards, including privacy and data security laws and regulations.

Transparent

a. For the purpose of improving the public's confidence in AI, AI actors should commit to transparency and responsible disclosures regarding AI systems to relevant stakeholders. AI actors must have the ability to protect confidentiality of proprietary algorithms, provided adherence to individual state law and regulations in all states where AI is deployed can be demonstrated. These proactive disclosures include revealing the kind of data being used, the purpose of the data in the AI system and consequences for all stakeholders.

b. Consistent with applicable laws and regulations, stakeholders (which includes regulators and consumers) should have a way to inquire about, review and seek recourse for AI-driven insurance decisions. This information should be easy-to-understand and describe the factors that lead to the prediction, recommendation or decision. This information may be presented differently and should be appropriate for applicable stakeholders.

Secure, Safe and Robust

a. AI systems should be robust, secure and safe throughout the entire life cycle so that in conditions of normal or reasonably foreseeable use, or adverse conditions, they can function in compliance with applicable laws and regulations. To this end, AI actors should ensure a reasonable level of traceability in relation to datasets, processes and decisions made during the AI system life cycle. AI actors should enable analysis of the AI system's outcomes, responses and other insurance-related inquiries, as appropriate in keeping with applicable industry best practices and legal requirements.

b. AI actors should, based on their roles, the situational context and their ability to act, apply a systematic risk management approach to each phase of the AI system life cycle on a continuous basis to address risks related to AI systems, including privacy, digital security and unfair discrimination as defined by applicable laws and regulations.

Draft: 12/2/2023
Adopted by Executive (EX) Committee and Plenary, December 4, 2023
Adopted by the Innovation, Cybersecurity, and Technology (H) Committee, December 1, 2023

NAIC MODEL BULLETIN:

USE OF ARTIFICIAL INTELLIGENCE SYSTEMS BY INSURERS

TO: All Insurers Licensed to Do Business In (*Insert Name of Jurisdiction*) ("Insurers")

FROM: [Department/Commissioner]

DATE: [Insert]

RE: The Use of Artificial Intelligence Systems in Insurance

This bulletin is issued by the [] (Department) to remind all Insurers that hold certificates of authority to do business in the state 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 insurance laws and regulations. This includes those laws that address unfair trade practices and unfair discrimination. This bulletin sets forth the Department'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 Department may request during an investigation or examination of any Insurer regarding its use of such technologies and AI Systems.

SECTION 1: INTRODUCTION, BACKGROUND, AND LEGISLATIVE AUTHORITY

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

The Department 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 the 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.

Legislative Authority

The regulatory expectations and oversight considerations set forth in Section 3 and Section 4 of this bulletin rely on the following laws and regulations:

- ***Unfair Trade Practices Model Act* (#880)**: The *Unfair Trade Practices Act* [*insert citation to state statute or regulation corresponding to Model #880]* (UTPA)*,* regulates trade practices in insurance by: 1) defining practices that constitute unfair methods of competition or unfair or deceptive acts and practices; and 2) prohibiting the trade practices so defined or determined.

- ***Unfair Claims Settlement Practices Model Act* (#900)**: The *Unfair Claims Settlement Practices Act*, [*insert citation to state statute or regulation corresponding to Model #900*] (UCSPA)*,* sets forth standards for the investigation and disposition of claims arising under policies or certificates of insurance issued to residents of [insert state].

Actions taken by Insurers in the state must not violate the UTPA or the UCSPA, 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: 1) unfair trade practices, as defined in []; or 2) unfair claims settlement practices, as defined in [].

- ***Corporate Governance Annual Disclosure Model Act* (#305)**: The *Corporate Governance Annual Disclosure Act* [*insert citation to state statute or regulation corresponding to Model #305*] (CGAD), 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 CGAD information are set forth in the *Corporate Governance Annual Disclosure Model Regulation* (#306) [*insert citation to state statute or regulation corresponding to Model #306])* (CGAD-R).

The requirements of CGAD and CGAD-R 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.

- ***Property and Casualty Model Rating Law* (#1780)**: The *Property and Casualty Model Rating Law*, [*insert citation to state statute or regulation corresponding to the Model #1780]*, requires that property/casualty (P/C) insurance rates not be excessive, inadequate, or unfairly discriminatory.

The requirements of [] 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 any of the foregoing.

- ***Market Conduct Surveillance Model Law* (#693)**: The *Market Conduct Surveillance Model Law* [*insert citation to state statute or regulation corresponding to Model #693*] establishes the framework pursuant to which the Department conducts market conduct actions. These are comprised of the full range of activities that the Department 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 asserting illegal practices by Insurers.

An Insurer's conduct in the 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 4 of this bulletin provides guidance on the kinds of information and documents that the Department may request in the context of an AI-focused investigation, including a market conduct action.

SECTION 2: DEFINITIONS

For the purposes of this bulletin the following terms are defined[1]:

"Adverse Consumer Outcome" refers to a decision by an Insurer that is subject to insurance regulatory standards enforced by the Department 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 might 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.

[1] Drafting note: Individual states may have adopted definitions for terms that are included in the model bulletin that may be different from the definitions set forth herein.

SECTION 3: REGULATORY GUIDANCE AND EXPECTATIONS

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 this state 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 1 of this bulletin.

The Department 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 Department also encourages the development and use of verification and testing methods to identify errors and bias in Predictive Models and AI Systems, as well as the potential for unfair discrimination in the decisions and outcomes 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 risk posed to consumers by the AI Systems that it uses, considering: (i) the nature of the decisions being made, informed, or supported using the AI System; (ii) the type and Degree of Potential Harm to Consumers resulting from the use of AI Systems; (iii) the extent to which humans are involved in the final decision-making process; (iv) the transparency and explainability of outcomes to the impacted consumer; and (v) the extent and scope of the insurer's use or 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 4, the decisions made as a result of an Insurer's use of AI Systems are subject to the Department's examination to determine that the reliance on AI Systems are compliant with all applicable existing legal standards governing the conduct of the Insurer.

AIS Program Guidelines

1.0 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 for 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.

1.5 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.

2.0 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 in the 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 its 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 stage 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 4 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.

3.0 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 the Predictive Models.

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

c) Assessments such as interpretability, repeatability, robustness, regular 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.

4.0 Third-Party AI Systems and Data

Each AIS Program should address the Insurer's process for acquiring, using, or relying on (i) third-party data to develop AI Systems; and (ii) AI Systems developed by a third party, which may include, as appropriate, the establishment of standards, policies, procedures, and protocols relating to the following considerations:

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.

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

SECTION 4: REGULATORY OVERSIGHT AND EXAMINATION CONSIDERATIONS

The Department's regulatory oversight of Insurers includes oversight of an Insurer's conduct in the 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 Department.

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 3). 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:

(1) Identification of constraints and controls on automation and design.

(2) Data governance and controls, any practices related to data lineage, quality, integrity, bias analysis and minimization, suitability, 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 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 Department 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 relating 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 Department 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 the state are aware of the Department's expectations as to how AI Systems will be governed and managed and of the kinds of information and documents about an Insurer's AI Systems that the department 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 Department to conduct any regulatory investigation, examination, or enforcement action relative to any act or omission of any Insurer that the Department is authorized to perform.

