February 11, 2022

The Honorable Grace Arnold
Commissioner of Commerce, State of Minnesota
Vice Chair, NAIC Accelerated Underwriting (A) Working Group

Sent via email to: Jennifer R. Cook, Sr. Health & Life Policy Counsel, NAIC Government Relations

Re: Comments Regarding Draft Part 4 of the Accelerated Underwriting White Paper

Dear Ms. Arnold:

On behalf of the American Council of Life Insurers (ACLI), thank you for the opportunity to again comment on the Accelerated Underwriting (A) Working Group draft white paper on accelerated underwriting. We appreciate the thoughtful work that has gone into developing this paper. There is much useful information contained in the current draft that should be helpful to regulators and stakeholders as accelerated underwriting evolves. To that end, we want to highlight two recommendations for the Working Group to consider as it works toward completing its charge. We’ve also provided technical comments in an attached redline.

Discussion of Traditional Underwriting

The document leads with “What is Accelerated Underwriting”, defines it, describes predictive modeling, machine learning, etc. Our recommendation is to start by grounding the audience on traditional underwriting, then compare and contrast with accelerated underwriting. Doing so will highlight the differences effectively, but more importantly, highlight the similarities and existing DOI regulatory controls that cover each. The lack of understanding relative to what and how things have traditionally worked will provide context to how limited the differences truly are between today’s current process and Accelerated Underwriting.
11-8-2021 definition of Accelerated Underwriting

The revised definition (1-25-22 iteration) of “accelerated underwriting” is overly broad, and we’d request it be revised to how it was stated in the prior version of the educational paper, with a minor change in red (see below). The January 25 revised definition is also utilized throughout the paper in ways that confuse the accelerated underwriting process with specific methods that may (or may not be) used in accelerated underwriting cases.

11-8-21 Iteration

Accelerated underwriting in life insurance is a process to replace traditional underwriting and allow some applications to have certain medical requirements, e.g., paramedical exams and fluid collection, waived. The process generally uses predictive models or machine learning algorithms to analyze data pertaining to the applicant, which may includes both traditional and non-traditional underwriting data provided by the applicant directly, as well as data obtained through external sources.

Thank you again for the opportunity to comment on the White Paper. The drafting Subgroup has produced excellent work, and ACLI and our member companies look forward to assisting the group complete its charge. As always, please let us know if there is specific information we can provide in furtherance of this project.

Sincerely,

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DRAFT January 25, 2022

This draft was revised based on comments received on the Nov. 8, 2021 draft. All revision marks have been accepted. Comments should be sent to Jennifer Cook at jcook@naic.org by close of business February 11, 2022.

Accelerated Underwriting (A) Working Group
Ad Hoc Drafting Subgroup

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Introduction

In 2019, the National Association of Insurance Commissioners (NAIC) established the Accelerated Underwriting (A) Working Group to consider the use of external data and data analytics in accelerated life insurance underwriting, including consideration of the ongoing work of the Life Actuarial (A) Task Force on the issue and, if appropriate, draft guidance for the states. In addition, the 2021 charges of the Special Committee on Race and Insurance direct the working group to include an assessment of and recommendations, as necessary, regarding the impact of accelerated underwriting on minority populations. A more detailed procedural background can be found in the appendix. This paper is the output of over a year’s work by regulators to understand the current state of the industry and its use of accelerated underwriting. It summarizes what the Working Group has learned over the past year, contextualizes that learning and the topic of accelerated underwriting within other NAIC work and standard regulatory product evaluation processes, and makes recommendations for regulators and insurers when evaluating accelerated underwriting.

Accelerated underwriting in life insurance may provide potential benefits to both consumers and insurers, if applied in a fair and non-discriminatory manner. In order to fairly deliver the benefits of more convenient and cost-effective processes, regulators and insurers should be guided by current law related to fair trade practices and unfair discrimination. Regulators and insurers should continue to monitor accelerated underwriting practices as they develop to avoid unfairly discriminatory practices. Much of the discussion in this paper is framed in these general terms. The Working Group believes the charge to specifically address the impact on minority populations is included in these terms. Future work products of the Working Group may address the charge from the Special Committee on Race and Insurance in more detail.

What is Accelerated Underwriting?

Throughout this paper, we use the term accelerated underwriting in life insurance. We propose the following as a definition:

Accelerated underwriting is life insurers’ use of big data, artificial intelligence and machine learning to underwrite life insurance in an expedited manner. For example, a process to replace traditional underwriting and allow some applications to have certain medical requirements, e.g., paramedical exams and fluid collection, waived. What distinguishes accelerated underwriting from traditional life insurance underwriting is the use of non-traditional, non-medical data using predictive models or machine learning.

Predictive models examine data sets for patterns to predict and assign the risk category, e.g., a model developer enters data points (potentially hundreds of thousands), and the model finds patterns and identifies future predictions of risk and assigns an insured to a risk category. Machine learning algorithms are a process or set of rules executed to solve an equation, e.g., a life insurance underwriter uses a set of rules to place an individual.

1 For a more detailed discussion of predictive models in property and casualty insurance, see the Casualty Actuarial and Statistical (C) Task Force Regulatory Review of Predictive Models White Paper, Adopted by the Property and Casualty Insurance (C) Committee on Dec. 8, 2020.

2 The Big Data and Artificial Intelligence (EX) Working Group developed a survey to conduct analysis on private passenger automobile (PPA) insurers’ use and governance of big data, as used in an artificial intelligence (AI) and machine learning (ML) system. The survey is being conducted under the examination authority of Connecticut, Illinois, Iowa, Louisiana, Nevada, North Dakota, Pennsylvania, Rhode Island, and Wisconsin. This analysis will help inform the Working Group in completing its long-term goals of developing guidance and recommendations to update the existing regulatory framework for the use of big data and AI, including how to monitor and oversee the industry’s compliance with the NAIC’s AI principles. The survey work may be expanded to other lines of insurance as needed, such as life insurance and homeowners insurance.

Commented [GG1]: The revised definition (1-25-22 iteration) of “accelerated underwriting” is overly broad, and we’d request it be revised to how it was stated in the prior version of the educational paper. Please see note in comment letter.

Commented [GG2]: General Comment: While that is true of algorithms in general, Machine Learning (ML) is a new type of technology/process to generate algorithms - with their own set of characteristics above and beyond traditional algorithm development. In addition, predictive models and analytics predated the use of modern ML. There are plenty of models that do not use ML. We’d encourage a focus on the use of modern ML techniques and their opportunities and risks.
insured in a particular risk category. The ‘learning’ part of machine learning means that those programs change how they process data over time, much as humans change how they process data by learning. Machine learning often falls into two groups: supervised or unsupervised (even when self-automated, there are controls and some level of human supervision in place). The difference between the two is whether the program is directed to analyze patterns or is self-automated.

Predictive models or machine learning trains a system to make judgments when exposed to data that is unfamiliar. This process serves as a substitute for human-centric decision making. These are both subcategories of artificial intelligence, which should not be confused with a static rule-based algorithm.

Life insurance underwriting is the process of determining eligibility and classifying applicants into risk categories to determine the appropriate rate to charge for transferring the financial risk associated with insuring the applicant. Traditional life insurance underwriting involves, assessing the applicant’s physical health, along with other financial and behavioral elements, then determining whether an applicant is eligible for coverage and the risk class to which that individual belongs. Accelerated underwriting relies both on traditional and non-traditional, medical and non-medical data used within predictive models or machine learning algorithms to perform some of the tasks of an underwriter. The exact parameters of the application of accelerated underwriting vary by insurer.

Presentations made to the Working Group indicated that life insurers use accelerated underwriting in primarily but not exclusively, two ways: 1) to triage applicants, where unsuccessful applicants are re-routed to traditional underwriting, and successful ones continue through the accelerated underwriting process; or 2) to rate applicants based on risk categories.

Most predictive or machine learning algorithms used in life insurance underwriting are in their second or third generation. The COVID-19 pandemic sped up the adoption of accelerated underwriting in the industry as both consumers and insurers looked for options to purchase and write policies that relied more on technology and involved less in-person contact. This has highlighted the need for ongoing monitoring of the machine learning algorithms—both their development and their uses in the marketplace.

Presentations made to the Working Group indicated that adverse underwriting decisions are sometimes reviewed by human underwriters. Companies presenting to the Working Group stated that the accelerated underwriting process is less cumbersome, costs less than traditional underwriting, it expedites the process and requires less consumer involvement in the purchase, improves the underwriting experience for consumers, shortens issue times, and increases policy acceptance rates. 3 Accelerated Underwriting can also enable online sales, which increase consumer access.

**General Discussion of Issues and Recommendations**

Life insurers reliance on an increasingly automated underwriting process that uses non-traditional, non-medical data presents new regulatory challenges. Regulators must ensure that the process is fair, transparent, and secure. With regard to accelerated underwriting in life insurance, this concern pertains to input data, the predictive model or machine learning algorithm, and the results of the process. One particular challenge is the potential for unfair discrimination. Due to the fact accelerated underwriting relies on non-traditional, non-medical data and predictive models or machine learning algorithms, it may lead to unexpected or unfairly

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For the purposes of the survey only, AI/ML is defined as, “an automated process in which a system begins recognizing patterns without being specifically programmed to achieve a pre-determined result.” This is different from a standard algorithm that consists of a process or set of rules executed to solve an equation or problem in a pre-determined fashion, and evolving algorithms are considered a subset of AI/ML.


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discriminatory outcomes even though the input data may not be overtly discriminatory. It is critical to test the conclusions up front, on the back end, as well as, randomly, to ensure the machine learning algorithm does not produce unfairly discriminatory ratings or ones that are not actuarially sound. Testing can also be important in determining if a machine learning algorithm is accurate across demographic categories. Such scrutiny is especially important when behavioral data is utilized. Behavioral data may include gym membership, one’s profession, marital status, family size, grocery shopping habits, wearable technology, and credit attributes. Although medical data has a scientific linkage with mortality, behavioral data may lead to questionable conclusions without reasonable explanation.

Recommendations

Consistent with the Artificial Intelligence Principles approved by the NAIC in 2020, the use of accelerated underwriting in life insurance should be fair and transparent to regulators, consumers, and policymakers. Companies must operate in compliance with applicable laws, and the process and data companies use need to be secure. To accomplish these objectives, regulators should dialogue with consumers, life insurers, and third-party vendors to determine if consumer data is being used in problematic or unfair ways or generating unfair outcomes.

Insurers and other parties involved in accelerated underwriting in life insurance should:

- Take steps to ensure data inputs are transparent, accurate, reliable, and to identify and mitigate any unintentional unfair discrimination in the data itself.
- Ensure that the use of external data sources, algorithms or predictive models are based on sound actuarial principles with a valid explanation or rationale for any claimed correlation or causal connection.
- Take steps to ensure that the predictive models or machine learning algorithm within accelerated underwriting has an intended outcome and that outcome is being achieved.
- Ensure that the predictive models or machine learning algorithm achieve an outcome that is not unfairly discriminatory.
- Be able to provide the reason(s) for an adverse underwriting decision to the consumer and all relevant information upon which the insurer based its adverse underwriting decision.
- Have a mechanism in place to correct mistakes if found.
- Produce information upon request as part of regular rate and policy reviews or market conduct examinations.

Input data

Predictive models or machine learning algorithms within the accelerated underwriting process rely heavily on data and multiple variables. Examples of the variables used by some accelerated underwriting models include customer disclosures, prescription history, digital health records, credit attributes, medical information bureau data, public records, motor vehicle reports, smartphone apps, consumer activity wearables, claim acceleration tools, individual consumer risk development systems, purchasing history, behavior learned through cell phone usage, and social media. Because accelerated underwriting relies on predictive models or machine learning algorithms

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4 See National Association of Insurance Commissioners (NAIC) Principles on Artificial Intelligence (AI) – 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, rate making 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 remediate for such consequences when they occur.

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that use non-traditional, non-medical data, it may lead to unexpected or unfairly discriminatory outcomes, even though the input data may be facially neutral.

Traditional Data

Traditional data used in life insurance underwriting includes data collected through a traditional underwriting process. This data may include the following:

- Application data, e.g., medical records, prescription questions, vocation questions, financial profile
- Tele-interview
- Medical records (including digital medical records)
- Data from the MIB (formerly known as Medical Information Bureau) ⁵
- Data from Milliman
- Data from Motor Vehicle Records
- Prescription drug history
- Public records, e.g., court filings, criminal records, bankruptcy records, civil litigation, etc.
- Paramedical or medical exam, including EKG's in some instances
- Fluids, e.g., blood, urine, swab/saliva test to determine tobacco usage
- Financial and tax information
- Occupation

Considerations for use of Traditional Data

- Traditional data has a long and established history in the life insurance industry. Carriers, producers, and consumers are generally familiar with the process.
- Traditional data has a history of usage by insurance carriers. Trained underwriters and producers have years of experience and often understand the process well.
- The relationship of the traditional data elements to the risk is well established and consumers generally understand how most of the elements impact their risk classification or premium charged.
- State statutes and case laws were developed based on the use of traditional data containing consumer protections created under the assumption that this was the type of data collected or reviewed during an underwriting process.
- Presentations made to the Working Group represented that time and costs associated with obtaining and reviewing traditional data are significant.

Non-traditional Data

Non-traditional data used in life insurance underwriting may include the following:

- Public records, e.g., assessor data, genealogy records, voter information
- Property/casualty data from adjacent carrier(s)
- Marketing and social data, e.g., shopping habits, mortgage amount/lender, occupation and education, and social media, etc.
- Professional licenses
- Biometric data, e.g., voice analysis, facial analysis, and other analytics based on personal physical features and characteristics
- Wearable devices

⁵ This data is subject to the Fair Credit Reporting Act (FCRA).
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Considerations for use of Non-traditional Data

- Non-traditional data may be used to predict mortality, but the actual or reasonably anticipated experience may not correlate to risk of insurance loss.\(^6\)
- As additional rating factors are introduced via insurance scores or with specific data elements, across and between demographic groups may be introduced or amplified.
- Non-traditional data may not have the same consumer protections as FCRA and traditional data. For example:
  - There may not be a clear path for consumers to know how data affected their application and how inaccurate data may be corrected.
  - The type and purpose of data accessed are not required to be disclosed to the consumer.
  - There may be privacy concerns about the extent of the use of non-traditional data.

FCRA Data

Some data used in traditional and accelerated underwriting is subject to the federal Fair Credit Reporting Act (FCRA), which protects the privacy of consumer report information. If an insurer uses data subject to FCRA in its underwriting, applicants:

1. Have a right to be told if this information results in an adverse underwriting decision such as denial of insurance.
2. Have the ability to request the data a consumer reporting agency is providing to an insurer, and
3. Have the right to ask a consumer reporting agency to correct any errors in the data.

Considerations for use of data subject to FCRA:

- FCRA data is readily available.
- FCRA data is updated regularly.
- FCRA data is already used in life and property/casualty lines of business.
- There is existing regulation and oversight by the Federal Trade Commission (FTC) and Consumer Financial Protection Bureau (CFPB).
- Not all FCRA data is useful/relevant to life insurance underwriting.
- If there is a dispute about the accuracy of FCRA data, a consumer has the right to obtain additional information and formally dispute these findings.
- FCRA data is extensive and accessing such data may result in access to non-usable credit attributes. In other words, significantly more data may be collected than is needed to determine risk. However, insurers will likely take steps to avoid paying for unusable data as one of the main purposes of accelerated underwriting is to reduce costs.
- As additional rating factors are introduced via insurance scores or with specific data elements, unfair discrimination, including disparate impact, may be introduced or amplified.

Recommendations

Existing regulations apply to accelerated underwriting programs in the same way as traditional underwriting programs. State Departments of Insurance (DOIs) have broad regulatory authority to make inquiries into the processes and procedures of life insurers in order to investigate potential unfair trade practices. Complaints

\(^6\) See Actuarial Standards of Practice (ASOP) No. 12, Section 3.2.1 (“The actuary should select risk characteristics that are related to expected outcomes. A relationship between a risk characteristic and an expected outcome, such as cost, is demonstrated if it can be shown that the variation in actual or reasonably anticipated experience correlates to the risk characteristic.”)
about underwriting practices are opportunities for DOIs to review a life insurer’s use of accelerated underwriting and data collection methods. Additional DOI actions may include market conduct and on-site examinations as appropriate under existing authority.

Specifically, examiners may:

- Review the life insurer’s underwriting practices and underwriting guidelines during an examination or upon initial submission of the policy rates and forms and confirm the proper use of the data elements.
- Request that explanation provided to the consumer for any negative action taken by the life insurer adequately informs the consumer as to why a particular action was taken without the consumer having to make additional inquiries.
- Request information about source data regardless of whether the data or score is provided by a third party.

Form and rate reviewers may:

- Request that the life insurer provides information about how a predictive model or machine learning algorithm will be used.
- Consider requiring the filing of models used to analyze data.
- Consider questioning the extent to which data elements correlate to applicant risk.
- Request information about source data regardless of whether the data or score is provided by a third party.

Life insurers and third-party vendors have a responsibility to understand the data they are using. To accomplish this, life insurers should conduct post-issue audits and data analysis and make these audits and analysis available to regulators upon request. For example, analyses such as evaluating claims and lapse rates may be helpful. Life insurers and third-party vendors should ensure data inputs are accurate and reliable.

Life insurers and third-party vendors should ensure that the external data sources, algorithms, or predictive models are developed with sufficient internal controls and oversight and based on sound actuarial principles with a valid explanation or rationale for any claimed correlation and causal connection.

Data Privacy

Data privacy—a consumer’s ability to retain control over what data can be shared about them and with whom—is not a concern unique to accelerated underwriting in life insurance. Protecting consumer privacy is an issue across all lines of insurance and is the subject of the NAIC Privacy Protections (D) Working Group, formed in 2019 under the parent committee of Market Regulation and Consumer Affairs (D) Committee.

The Working Group’s charge is to review the state insurance privacy protections regarding the collection, use, and disclosure of information gathered in connection with insurance transactions, and make recommended changes, as needed, to certain NAIC models and other existing federal or state statutes.

Commented [GS(7)]: The American Academy of Actuaries suggested that this paper include more detailed recommendations for practical implementation and to ensure that the recommendations support the Working Group’s charge. The Working Group encourages stakeholders to offer specific recommendations for life insurers and third-party vendors to include in this paper.

Commented [GGB]: Model 670 was created in the 80s, before GLBA existed.

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7 The Working Group has focused its reviews on the Insurance Information and Privacy Protection Model Act #670, and the Privacy of Consumer Financial and Health Information Regulation Model Act #672 — both drafted in response to the enactment of GLBA, and #668 – the Insurance Data Security Model Act, enacted in 2019/20. With a great deal of research assistance from NAIC Legal Staff, the Working Group prepared a gap analysis — upon which it continues to work. The Working Group is also reviewing the consumer data privacy protections other than those already in these models, such as the numerous provisions contained in federal acts such as the Fair Credit Reporting Act (FCRA), the Gramm-Leach Bliley Act (GLBA), the Health Insurance Portability and Affordability Act (HIPAA), Electronic Health Records (EHR), etc. The Working
The primary focus of the Working Group is on the six consumer data privacy rights or types of consumer data privacy protections identified in the NAIC’s Member adopted *Strategy for Consumer Data Privacy Protections* policy statement. The secondary focus is on issues such as notice requirements and standards, disclosure of information collected, disclosure of shared information, requirements to disclose sources of information, requirements to disclose business purposes, and a requirement to disclose third party involvement.

The current assignments for the Working Group are intended to create a framework for the policy statement: defining the parameters of these consumer rights by offering suggested definitions, examples of consumer risks, and what may not be protected in federal laws or not covered under NAIC Model laws.

The Privacy Protections Working Group’s policy statement will address the following consumer privacy rights:

1) Right to opt-out of data sharing
2) Right to opt-in of data sharing
3) Right to correct information
4) Right to delete information
5) Right to data portability
6) Right to restrict the use of data

The Accelerated Underwriting (A) Working Group will continue to watch the work of this group. If at any point issues unique to accelerated underwriting arise, we will endeavor to address them in a future work product.
Appendix A: Additional Procedural Background

At the 2019 NAIC Summer National Meeting, the Life Insurance and Annuities (A) Committee discussed a referral it had received from the Big Data (EX) Working Group. The Big Data Working Group had discussed the use of predictive models in accelerated underwriting in life insurance, instead of medical examinations and the collection of fluids. The Big Data Working Group agreed that the issue would be most appropriately addressed by the life insurance subject matter experts and voted to refer the issue of the use of external data and data analytics in accelerated underwriting in life insurance to the Life Insurance and Annuities (A) Committee (Committee).10

The Committee discussed the referral and acknowledged that there are a multitude of issues surrounding insurers’ use of data models and data analytics; issues that extend into many areas of insurance and overlap with the work of several groups at the NAIC. In addition to the Big Data (EX) Working Group, there is the Innovation and Technology (EX) Task Force, the Artificial Intelligence (EX) Working Group, the Casualty Actuarial and Statistical (C) Task Force, and the Privacy Protections (D) Working Group. The Life Actuarial Task Force was also looking at the use of accelerated underwriting in life insurance from an actuarial perspective, including looking at any potential impact on insurer solvency.

The Committee agreed that an effort to delve into accelerated underwriting in life insurance would need to be narrowly focused while taking into account the work of these other NAIC groups touching on the same topic.

Robert Muriel (IL) chaired the Working Group and Grace Arnold (MN) was the vice-chair. The following were Working Group members: Jason Lapham (CO); Russ Gibson (IA); Rich Piazza (LA); Cynthia Amann (MO); Rhonda Ahrens and Laura Arp (NE); Ross Hartley and Chris Aufenthie (ND); Lori Barron (OH); Elizabeth Kelleher Dwyer (RI); Lichiou Lee (WA); Mark Afable (WI). In January 2021, Commissioner Afable became chair of the Working Group and the rest of the membership remained the same.

The Working Group met for the first time on Oct 2, 2019, and developed a work plan to accomplish its charge. The work plan contemplated the Accelerated Underwriting (A) Working Group progressing through three phases with the goal of completing its charge by the 2020 Fall National Meeting. The first phase was focused on information-gathering. The second phase focused on identifying the issues and deciding on a work product, with the final phase devoted to drafting.

During the information gathering phase, the Working Group heard 15 presentations from varying stakeholders, including an academic (Professor Patrick Brockett11), insurance companies, consulting firms (Deloitte and Milliman), a consumer advocate (Birny Birnbaum—CEJ), the American Academy of Actuaries, lawyers from 2 Illinois law firms (Foley & Lardner and Edelson), a machine learning assurance company (Monitaur), and a data analytics company (Verisk). Several of the presentations were held in regulator-only meetings when requested by presenters in order to share proprietary and confidential company-specific information.

Regulators from the Working Group volunteered to participate in two ad hoc groups to tackle the second and third phases of its work plan: There was an ad hoc NAIC liaison group to ensure awareness of and coordination with any work, including guidelines or protocols, developed by other NAIC groups, past and present, that related to the Working Group. There was also an ad hoc drafting group that agreed to take the information gathered, identify issues, recommend and draft a work product for review and approval by the Working Group.

11 Gus Wortham Chair in Risk Management and Insurance at the University of Texas at Austin and Editor, North American Actuarial Journal.
In November 2020, the ad hoc drafting group shared with the Accelerated Underwriting (A) Working Group a proposed draft outline for an educational report exploring accelerated underwriting in life insurance to provide guidance to regulators, industry, and consumer advocates, and other stakeholders. In February 2021, the ad hoc groups merged.


Artificial Intelligence/Machine Learning (AI/ML)

AI/ML describes an automated process in which a system begins recognizing patterns without being specifically programmed to achieve a pre-determined result. This is different from a standard algorithm in that an algorithm is a process or set of rules executed to solve an equation or problem in a pre-determined fashion. Evolving algorithms are considered a subset of AI/ML.

Artificial Intelligence / Machine Learning Systems include:

- Systems that adapt and adjust to new data and experience without manual human intervention.
- Systems that arrive at results for which the outcomes and the stepwise approach toward the outcomes were not configured in advance by a human programmer.
- Systems that dynamically respond to conditions in the external environment without the specific nature of such responses being known in advance to the designers of the systems.
- Systems that utilize neural networks and/or deep-learning algorithms, such as supervised, semi-supervised, and unsupervised learning algorithms.
- Systems that engage in automatic speech recognition, facial recognition, image recognition, text recognition, natural language processing, generation of customer-specific recommendations, automated customer communications (e.g., chatbots with non-preprogrammed prompts), autonomous or semi-autonomous vehicle operation or data gathering, or any other approach that does not require either preprogramming or a manual human intervention in every instance of an action or decision.
- Systems that automatically generate adaptive responses based on interactions with a consumer or third party.
- Systems that determine which data elements to rely upon, in a non-preprogrammed fashion, among a variety of possible alternatives.

Artificial Intelligence / Machine Learning Systems are not:

- Static “scorecards” that deterministically map consumer or other risk characteristics to treatments or decisions. (However, an AI/ML system may use the output of such static “scorecards” as input data for the AI/ML system to consider.)
- Systems with solely preprogrammed decision rules (e.g., “If A, then B” applied invariably in all situations).
- Tables of point or factor assignments in rating plans.
- Static rate making and/or predictive modeling methodologies, including linear regression, generalized linear modeling (GLM), or generalized additive modeling (GAM). Purely informational static databases, such as databases used to obtain reference amounts for claim settlements, or static databases pertaining to consumer characteristics or experience, regardless of the amount of information in the database. However, if AI/ML is used to create a static predictive model, that AI/ML system is considered within the scope of this survey.
- Deterministic “phone trees” that navigate consumers through pre-recorded voice prompts.
- Any approach that an insurer could have realistically utilized in the year 2000 or prior.
AI/ML Use Descriptions and/or Explanations

- **Underwriting: AI/ML Uses**
  - Automated Approval: Approving an application without human intervention on that particular application.
  - Automated Denial: Denying an application without human intervention on that particular application.
  - Underwriting Tier Determination: Decisions regarding the criteria to use to establish specific named or numbered categories (called tiers) which utilize combinations of attributes that affect an insurer’s underwriting decision.
  - Company Placement: Decisions regarding which of several affiliated companies within an insurance group will accept an individual risk.
  - Input into Non-Automated Approval Decision: Providing data, analysis, or recommendations regarding a decision to approve an application in a situation where a human decision-maker still has the ability and responsibility to affirmatively consider this information and make a decision independently of the AI/ML system. In this situation, the AI/ML system cannot automatically approve the application, and protocols exist that ensure that each recommendation from the AI/ML system is actively reviewed and not adopted by default.
  - Input into Non-Automated Denial Decision: Providing data, analysis, or recommendations regarding a decision to deny an application in a situation where a human decision-maker still has the ability and responsibility to affirmatively consider this information and make a decision independently of the AI/ML system. In this situation, the AI/ML system cannot automatically deny the application, and protocols exist that ensure that each recommendation from the AI/ML system is actively reviewed and not adopted by default.
  - Automate Processing Thru the Agency Channel: Enabling agencies to receive certain information about applicants automatically without specifically requesting that information and/or to provide quotes to the applicants and/or recommend a decision regarding the application to the agent without being based on preprogrammed decision rules.