



Emerging Issues in Underwriting Survey Report





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& Underwriting Surveys

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Emerging Issues in Underwriting Survey Report

Introduction

The underwriting landscape is constantly changing due to new and emerging risks and regulations. For this reason, it is crucial for insurance companies to stay on the leading edge regarding new underwriting tests, procedures and processes. The Committee on Life Insurance Mortality and Underwriting Surveys of the Society of Actuaries undertook a survey in July of 2019 to give insight into emerging issues in underwriting and their impact on processes and practices. While this survey was completed prior to the onset of COVID-19, the impacts of the pandemic have only accelerated many companies thinking in regard to these emerging risks.

The Emerging Issues in Underwriting Survey, henceforth referred to as the “Survey,” was intended for direct life writing insurance companies in the U.S. and Canada. The Survey looked at various trends that could have a significant impact on the process and practices of life insurance underwriting in the future and includes sections on:

- Impact of Genetic Testing
- Sex and Gender
- Marijuana
- E-Cigarettes
- Financial Underwriting
- Advances in Medical Technology
- Communication and Education
- Behavioral Economics
- New Data Sources and Social Media

Survey Scope

The Survey was completed between July 22 and September 6, 2019. We received responses from 33 companies, and a complete list of participating companies is shown in Appendix A.

The questions for this Survey can be found in Appendix B.

Note that the following life product types were NOT considered within the scope of this Survey:

- Final Expense products
- Guaranteed Issue products
- Preneed products
- Those product forms where death benefits are payable only upon death(s) by accidental means.
- Group life policies unless they are fully underwritten for each individual life.

For the purpose of completing this Emerging Issues in Underwriting Survey the definitions pertaining to the sections can be found at the beginning of each as appropriate.

The Survey Subcommittee would like to thank all of the respondents who participated in this Survey. We also thank those who helped us review this document and offered helpful suggestions and thoughtful comments. Finally, the Survey Subcommittee thanks the Society of Actuaries staff for their help in completing this project, especially Korrel Crawford, without whose help this could not have been completed.

Emerging Risks in Underwriting Survey Subcommittee

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Executive Summary

The Emerging Issues in Underwriting Survey, henceforth referred to as the “Survey,” was designed to gather industry information about various trends that could have a significant impact on the process and practices of life insurance underwriting in the future. It was conducted between July 2019 and September 2019 and we received 33 responses (22 U.S. and 11 Canadian) from direct life insurance carriers in the U.S. and Canada.

Listed below are some of the highlights from this Survey:

- Sixty-four percent of U.S. respondents and 45% of Canadian respondents had an automated underwriting rules engine (URE). The majority of respondents changed their rules on an ad hoc basis.
- Eighty-seven percent of respondents indicated Product development as the most common area of collaboration between actuaries and underwriters. Collaboration between U.S. and Canada differed substantially when working on Mortality studies and Claims experience where, in the U.S., they were two times more likely to collaborate.
- Canadian respondents were more likely to implement behavioral economics in the application process.
- The U.S. considered improved mortality much more important to a successful behavioral economics program than in Canada.
- Both countries incorporated social media or internet searches in their underwriting processes, with Google being the most common method.
- In Canada, it was more prevalent than in the U.S. to use new data source and social media information at time of claim to identify fraud.
- Eighty-one percent of U.S. respondents said they used public data sources in making underwriting decisions, but only 25% of Canadian respondents said they did.
- At the time of this survey, only 16% of respondents made any adjustments due to New York Circular Letter #1, regarding the use of external consumer data and information sources in underwriting for life insurance.
- With the recent legislation in Canada, the use of acceptable sources of genetic testing varied by country.
- No respondents considered an at-home testing kit as an acceptable source of genetic testing to be used for underwriting purposes.
- The vast majority of respondents indicated that their Underwriting Departments were actively monitoring regulatory changes related to genetic testing.
- Respondents varied on their companies’ handling of sex and gender, some based on state or provincial legislation.
- Eighty-eight percent of respondents were actively monitoring regulatory changes relative to sex and gender.
- Seventy-three percent of respondents did not adjust underwriting classification based on sex at birth vs current gender.

- Sixty-eight percent of U.S. respondents and 82% of Canadian respondents did not differentiate between smoked or oral marijuana uses. The biggest difference between countries was how they differentiated smoker rates.
- The highest percentage of respondents in both countries indicated that they have not considered testing for marijuana, with nine (41%) U.S. respondents and seven (64%) Canadian respondents selecting this option.
- The majority of U.S. and Canadian respondents specifically asked about e-cigarettes, vaping, etc. on their application, and considered e-cigarette use as a smoker.
- Eighty-six percent of the respondents in the U.S. and 100% in Canada had not changed financial underwriting guidelines based on mortality experience.
- Financial underwriting guidelines were most commonly reviewed on an ad hoc basis.
- Input from reinsurers was the top reason for changing financial underwriting guidelines.
- Half of the respondents are monitoring medical advances, with some more active than others.
- Seventy-eight percent of respondents indicated their company's underwriting department was monitoring legislative changes.

Section 1: Demographics and Background Underwriting Information

This section focused on some of the details surrounding the company responding to the survey and whether the company has an automated underwriting rules engine.

1. For which country will you be filling out this survey? If you operate in both countries, please fill out a separate survey for each.

Country	# of Responses
U.S.	22
Canada	11
Total # of Respondents	33

2. Please state the amount of new life insurance face amount issued in 2018.

Size	U.S.	Canada	# of Responses
Less than \$1B	11	5	16
Between \$1B - \$50B	11	6	17
More than \$50B	0	0	0
Total # of Respondents	22	11	33

3. Please indicate your company's structure.

Due to confidentiality reasons, we were not able to summarize this information.

4. Through what distribution channels do you issue business? (check all that apply)

Distribution Channel	U.S.	Canada	# of Responses
Independent Brokerage	15	10	25
Career Agent/PPGA	12	7	19
Direct Marketing	4	4	8
Bank/Stockbroker	2	4	6
Other*	3	0	3
Total # of Respondents	22	11	33

*Other: (2 of 3 provided detail)

- *Independent Marketing Organizations*
- *Multi Level Marketing Organizations*

5a. How often does your company review its underwriting requirements and/or guidelines to keep up with changes?

Frequency	U.S.	Canada	# of Responses
Annually	6	4	10
Twice per year	4	2	6
Quarterly	1	0	1
Monthly	1	1	2
Ad hoc	10	4	14
Total # of Respondents	22	11	33

The top two selections overall were Ad hoc or Annually. Of the 22 respondents in the U.S., ten (45%) chose Ad hoc and six (27%) chose Annually as the frequency at which they review their underwriting guidelines. In Canada, the results were slightly different with four (36%) of the 11 respondents choosing Annually and four (36%) choosing Ad hoc.

5b. If ad hoc, provide the date of last review.

Of the 14 respondents who chose Ad hoc for the frequency, five (36%) were in 2019, five (36%) were in 2018, three (21%) were in 2017, and the other (7%) was continually.

6. Does your company use an automated underwriting rules engine (URE)?

Response	U.S.	Canada	# of Responses
Yes	14	6	20
No	8	5	13
Total # of Respondents	22	11	33

In the U.S., 14 (64%) of 22 respondents had an automated underwriting rules engine, while in Canada it was five (45%) of 11.

7a. If yes, how often does your company make regularly scheduled changes to its URE?

Frequency	U.S.	Canada	# of Responses
Annually	1	0	1
Twice per year	2	0	2
Quarterly	1	2	3
Monthly	2	0	2
Ad hoc	8	4	12
Total # of Respondents	14	6	20

Twelve (60%) of the 20 respondents made changes on an Ad hoc basis.

7b. If Ad hoc, provide the date of last change.

Of the 12 who responded Ad hoc, seven (58%) were in 2019, with five (42%) within the last two months as of the date of the survey. For the others, one (8%) was over ten years ago, one (8%) was just getting started, and three (25%) were in 2018.

8. Including, but not limited to, your last changes to the URE, which of the following reasons impacted your decision? (Choose and rank your top 3)

Reason	U.S.			Canadian			Total
	1st	2nd	3rd	1st	2nd	3rd	Top 3 Chosen
New Data Source	5	3	4	1	1	2	16
Changes in algorithm	3	3	3	1	2	0	12
New Risk Class	1	4	1	0	0	3	9
Changes in risk class	2	1	1	2	1	1	8
Regulatory changes	0	2	2	0	1	0	5
Changes in face amount	0	1	1	0	0	0	2
Changes in issue ages	1	0	0	0	0	0	1
Other*	2	0	2	2	1	0	7
Total # of Respondents	14			6			20

*Other: (6 of 7 provided detail)

- *change in guidelines (2)*
- *customer experience on questions in URE*
- *new lab range changes*
- *rule improvements/effectiveness*
- *none of the above, we're phasing our URE in favour of AI*

The most common reason for the change was due to New Data Source received, with 16 (80%) of 20 respondents choosing this reason amongst their top three. Changes in algorithm was the next most

common reason, with 12 (60%) choosing this amongst their top three, and another three (15%) choosing Other with reason of changes to underwriting guidelines or new lab range changes. Other common reasons amongst the respondents included New Risk Class with nine (45%) and eight (40%) indicating Changes in risk class.

9. Which of the following impacts your company in making changes to its URE? (choose and rank all that apply)

Impact	U.S.			Canadian			Total
	1st	2nd	3rd	1st	2nd	3rd	Top 3 Chosen
Financial (cost of changes)	3	7	2	2	3	0	17
IT staff resources	4	2	5	1	3	1	16
Underwriting resources	2	5	3	2	0	3	15
Competition	3	0	4	0	0	2	9
Other*	2	0	0	1	0	0	3
Total # of Respondents	14			6			20

*Other:

- *Client Focus*
- *Limited integrations*
- *We use a 3rd party U/W platform and they are responsible for the URE.*

The top three reasons for changes to the URE are very clear, with 17 (85%) of 20 respondents selecting Financial, 16 (80%) selecting IT staff resources, and 15 (75%) choosing Underwriting resources. The primary reason varied significantly.

Additional Comments:

Three respondents provided the following additional comments regarding this section:

- *Improved/additional data integrations are needed to fully utilize rulebook.*
- *Looking at implementing a top underwriting engine.*
- *Only using on simplified issue products at this point in time.*

Section 2: Impact of Genetic Testing

For the purposes of this survey, genetic test means a test that analyzes DNA, RNA, or chromosomes for purposes such as the prediction of disease or vertical transmission risks, or monitoring, diagnosis, or prognosis. Where we reference below that genetic testing in Canada is prohibited by law, that law currently states that “It is prohibited for any person to require an individual to undergo a genetic test as a condition of:

- (a) providing goods or services to that individual;
- (b) entering into or continuing a contract or agreement with that individual; or
- (c) offering or continuing specific terms or conditions in a contract or agreement with that individual.”

1. How does your company’s underwriting department handle a predictive genetic test (offered to asymptomatic individuals with a family history of a genetic disorder to predict future risk of disease) where not prohibited by law? (check all that apply)

Underwriting Actions	U.S.	Canada	# of Responses
Refer to Medical Director	13	2	15
Follow company underwriting guidelines without referring	6	4	10
Refer to Chief Underwriter	8	2	10
Refer to specialized underwriting unit	1	1	2
Other*	3	3	6
Total # of Respondents	22	10	32

*Other:

- *Follow reinsurer’s guidelines (2)*
- *Prohibited by law (2)*
- *Do not offer*
- *Not applicable*

Of the 32 respondents, 15 (47%) referred predictive genetic tests to the Medical Director and ten (31%) referred to the Chief Underwriter.

Ten (31%) of the total respondents Follow company underwriting guidelines without referring for additional review. In Canada, where the use of genetic tests is prohibited by law, four (40%) of ten respondents Follow company underwriting guidelines without referring for additional review and three (30%) indicated it was prohibited by law or not applicable.

Respondents were allowed to choose more than one option. In the U.S., five (83%) of the six who Follow company underwriting guidelines also selected Refer to Medical Director.

2. How does your company’s underwriting department handle a diagnostic genetic test (to confirm or rule out a known or suspected genetic disorder) where not prohibited by law? (check all that apply)

Underwriting Actions	U.S.	Canada	# of Responses
Follow company underwriting guidelines without referring	8	5	13
Refer to Medical Director	10	2	12
Refer to Chief Underwriter	7	2	9
Refer to specialized underwriting unit	1	1	2
Other*	3	2	5
Total # of Respondents	22	10	32

*Other:

- *Follow reinsurer’s guidelines (2)*
- *Prohibited by law*
- *Do not offer*
- *Not applicable*

Of the 32 respondents, 13 (41%) Follow company underwriting guidelines without referring, 12 (38%) Refer to Medical Director, and nine (28%) Refer to Chief Underwriter.

3. How does your company handle genetic test information that is received when use in underwriting is prohibited by law?

Handling of Genetic Test Information	U.S.	Canada	# of Responses
Don’t redact, but document that it’s not to be used for underwriting purposes	19	8	27
Redact information from file	1	3	4
Other*	2	0	2
Total # of Respondents	22	11	33

*Other:

- *Don’t redact, document as needed*
- *Do not offer*

Twenty-seven (82%) of 33 respondents don’t redact genetic test information from their files, but document that it’s not to be used for underwriting purposes, with one (3%) other company also not redacting the information and documenting their file as needed.

In Canada, three (27%) of 11 respondents redact genetic test information from their files. In the U.S., only one (5%) of 22 respondents redact information from their files.

4a. Which of these would your company consider as an acceptable source of genetic testing to be used in underwriting where not prohibited by law? (check all that apply)

Acceptable Source of Genetic Testing	U.S.	Canada	# of Responses
Information in a doctor’s report	21	3	24
Information provided by the client (application, paramed, tele-interview)	12	2	14
At-home testing kit, such as 23 and me, Ancestry.com, etc.	0	0	0
None	0	5	5
Other*	1	2	3
Total # of Respondents	22	10	33

*Other:

- *Prohibited by law*
- *Do not offer*
- *Not applicable*

Twenty-four (73%) of 33 respondents indicated the Information in a doctor’s report was an acceptable source of genetic testing to be used in underwriting. The results varied significantly by country, where 21 (95%) of 22 U.S. respondents indicated this as an acceptable source of information, while in Canada only three (30%) of ten respondents considered it acceptable.

Genetic testing Information provided by the client was answered as acceptable by 14 (42%) of 33 overall respondents. Twelve (55%) of 22 U.S. respondents and two (20%) of ten respondents in Canada indicated it was acceptable to use genetic testing Information provided by the client in underwriting.

Five (50%) of ten respondents in Canada indicated None of these sources of genetic testing were acceptable to be used in underwriting, with another two (20%) answering that it was prohibited by law or not applicable.

No respondents in either country considered an At-home testing kit acceptable for underwriting purposes.

4b. If an at-home testing kit is used, does your company have rules in place to restrict the use of discriminatory information such as race, ethnic origin, etc.? If yes, please describe.

Response	U.S.	Canada	# of Responses
No	11	5	16
Yes	5	4	9
Total # of Respondents	16	9	25

If Yes, please describe:

- *At-home testing is not considered (4)*
- *At-home testing kits are not accurate/reliable & not used in underwriting (2)*
- *We follow existing anti-discrimination statutes and regulations*
- *We do not discriminate such as race, ethnic origin, etc.*
- *Not applicable*

In the previous question, no respondents considered an at-home testing kit as an acceptable source of genetic testing to be used for underwriting purposes. In this follow-up question, 16 (64%) of 25 respondents indicated they didn't have rules in place to restrict the use of discriminatory information in such tests.

5a. Which of the following best describes your company's reactions to possible future regulations prohibiting the use of genetic information? Choose one for each row.

Reason	U.S. Respondents				
	Significant Impact	Mild Impact	Minimal to No Impact	Unknown	# of Respondents
Pricing Impact	3	8	4	6	21
Operational impact (new business)	3	6	6	5	20
Operational impact (in-force)	2	1	12	6	21
Reputational Risk	5	5	7	4	21

Reason	Canadian Respondents				
	Significant Impact	Mild Impact	Minimal to No Impact	Unknown	# of Respondents
Pricing Impact	1	3	4	2	10
Operational impact (new business)	1	4	5	0	10
Operational impact (in-force)	1	2	6	1	10
Reputational Risk	5	1	4	0	10

The Pricing Impact of possible future regulations prohibiting the use of genetic information was considered significant by three (14%) of 21 U.S. respondents and one (10%) of ten Canadian respondents.

In the U.S., three (14%) of 21 respondents indicated there would be a significant Operational impact on new business, while six (29%) indicated the impact would be mild. In Canada, one (10%) of ten respondents indicated there would be a significant impact and another four (40%) indicated the impact would be mild.

The impact of possible future regulations prohibiting the use of genetic information on in-force operations was mostly minimal to no impact, with 12 (57%) of 21 U.S. respondents and six (60%) of ten Canadian respondents selecting this option.

Of the 21 U.S. respondents, five (24%) indicated the Reputational Risk would be significant, five (24%) indicated it would be mild, seven (33%) indicated there would be minimal to no impact, and four (19%) indicated the impact was unknown. In Canada, five (50%) of ten respondents indicated Reputational Risk would be significant, one (10%) indicated it would be mild, and four (40%) indicated there would be minimal to no impact.

5b. Level of Underwriting Department’s monitoring regulatory changes:

Response	U.S.	Canada	# of Responses
Actively monitoring	20	9	29
Not actively monitoring	1	2	3
Total # of Respondents	21	11	32

The majority, 29 (91%) of 32 respondents, indicated their Underwriting Departments were Actively monitoring regulatory changes related to genetic testing.

6. In response to the increasing focus on genetics and its impact on underwriting, which of the following best describes the changes your company is contemplating?

Reason	U.S. Respondents				
	Implemented	In Process	Thinking About It	Not Actively Considering	# of Respondents
Application questions	1	0	8	12	21
Family history criteria	1	0	8	12	21
Financial underwriting guidelines	1	0	3	17	21
Medical underwriting guidelines	3	2	10	6	21

Additional comment:

- One **U.S. respondent** noted that they considered changes to application questions, but that they are not currently allowed by the **Interstate Insurance Compact**.

Reason	Canadian Respondents				
	Implemented	In Process	Thinking About It	Not Actively Considering	# of Respondents
Application questions	7	2	0	2	11
Family history criteria	4	1	2	4	11
Financial underwriting guidelines	2	1	0	8	11
Medical underwriting guidelines	4	2	1	4	11

Additional comment:

- One **Canadian respondent** noted that they removed any reference to genetic testing from the tele-interview.

With the increased focus on genetic testing, only one (5%) of 21 U.S. respondents implemented changes to their Application questions, Family history criteria, and Financial underwriting guidelines. For Family history criteria and Application questions, eight (38%) of the 21 U.S. respondents were thinking about making changes, with 12 (57%) not actively considering changes.

Three (14%) U.S. respondents had implemented changes to their Medical underwriting guidelines, with another two (10%) in the process of making changes.

With the use of genetic tests prohibited by law in Canada, seven (64%) of 11 respondents implemented changes to their Application questions, with another two (18%) in the process of making changes. Four (36%) respondents indicated they have implemented and another four (36%) said they are not actively considering changes to their Family history criteria and Medical underwriting guidelines. Eight (73%) of the Canadian respondents said they were not actively considering changes to their Financial underwriting guidelines.

Section 3: Sex and Gender

For the purposes of this survey, we are using the following definitions:

- Sex: biological and physiological characteristics
- Gender: self-perceived roles, behaviors, activities, and attributes

1. Does your company differentiate between sex and gender?

Response	U.S.	Canada	# of Responses
Yes, we treat them differently	7	5	12
No, we use them interchangeably	8	3	11
Yes, we treat them differently based on state/province regulation	6	0	6
No, but we plan to	1	3	4
Total # of Respondents	22	11	33

Of the 33 respondents, 12 (36%) indicated their company treated sex and gender differently and another six (18%) treated them differently based on state or provincial legislation.

Eleven (33%) respondents used sex and gender interchangeably, with the remaining four (12%) also using them interchangeably but planning to differentiate them in the future.

2. What does your company ask in its application?

Response	U.S.	Canada	# of Responses
Sex	12	6	18
Gender	10	3	13
Sex at birth	0	2	2
Both sex and gender	0	0	0
Total # of Respondents	22	11	33

In the U.S., 12 (55%) of 22 respondents asked for the client’s Sex and ten (45%) asked for Gender.

In Canada, six (55%) of 11 respondents asked for the client’s Sex, three (27%) asked for Gender, and two (18%) asked for Sex at birth.

No respondents indicated asking for Both sex and gender in its application.

3a. Which of the following best describes your company’s reactions to regulations regarding sex and gender? Choose one for each row.

Reason	U.S. Respondents				
	Significant Impact	Mild Impact	Minimal to No Impact	Unknown	# of Respondents
Pricing Impact	3	8	6	4	21
Operational impact (new business)	2	9	7	3	21
Operational impact (in-force)	2	5	10	4	21
Reputational Risk	3	7	6	5	21

Reason	Canadian Respondents				
	Significant Impact	Mild Impact	Minimal to No Impact	Unknown	# of Respondents
Pricing Impact	3	1	3	3	10
Operational impact (new business)	1	6	3	0	10
Operational impact (in-force)	1	4	5	0	10
Reputational Risk	6	2	2	0	10

In the U.S., eight (38%) of 21 respondents indicated there would be a mild Pricing Impact to regulations regarding sex and gender. Six (29%) indicated there would be minimal to no impact and three (14%) responded the impact would be significant. In Canada, one (10%) of ten respondents said the Pricing Impact would be mild, three (30%) indicated minimal to no impact, and three (30%) said the impact would be significant.

In the U.S. and Canada, respondents indicated the Operational impact (both new business and in-force) was mild, minimal, or no impact at all.

Responses from the 21 U.S. respondents varied, where seven (33%) indicated the Reputational Risk would be mild, six (29%) indicated there would be minimal to no impact, three (14%) indicated a significant impact, and five (24%) indicated it was unknown.

In Canada, responses were more definite, with significant Reputational Risk impact selected by six (60%) of the ten respondents, mild impact selected by two (20%), and minimal to no impact selected by two (20%).

3b. Level of Underwriting Department's monitoring regulatory changes.

Response	U.S.	Canada	# of Responses
Actively monitoring	20	9	29
Not actively monitoring	2	2	4
Total # of Respondents	22	11	33

Twenty-nine (88%) of 33 respondents were Actively monitoring regulatory changes in their Underwriting Departments.

4. How does your company handle changes to enforce business when sex is changed?

Response	U.S.	Canada	# of Responses
Change without underwriting	6	9	15
Change with underwriting	10	1	11
Don't allow changes	4	1	5
Total # of Respondents	20	11	31

The responses to this question varied significantly by country. In the U.S., ten (50%) of 20 respondents indicated they require underwriting to process a change to enforce business when the client's sex is changed. Six (30%) would process the Change without underwriting and four (20%) would not allow changes at all to their enforce business.

In Canada, nine (82%) of 11 respondents would allow changes to enforce business without underwriting, one (9%) would allow the Change with underwriting, and one (9%) would not allow changes.

5. How does your company handle changes to enforce business when gender is changed?

Response	U.S.	Canada	# of Responses
Change without underwriting	8	9	17
Change with underwriting	7	1	8
Don't allow changes	5	1	6
Total # of Respondents	20	11	31

Overall, 17 (55%) of 31 respondents would allow gender changes to enforce business without underwriting, compared to the 15 (48%) who would allow sex changes to enforce business without underwriting in the previous question.

Otherwise, the trends and differences by country were similar for handling changes to enforce business when gender is changed.

One U.S. respondent noted they left questions 4 and 5 blank, as they had never encountered those situations before and would need to refer to their Legal department before doing anything.

6. What is your company philosophy relative to sex and gender?

Response	U.S.	Canada	# of Responses
Underwrite, rate, and correspond with client based on current gender	10	6	16
Underwrite and rate based on sex at birth, but correspond with client based on current gender	10	5	15
Underwrite, rate, and correspond with client based on sex or gender at birth	2	0	2
Total # of Respondents	22	11	33

In the U.S., ten (45%) of 22 respondents indicated they Underwrite, rate, and correspond with client based on current gender and ten (45%) indicated they would Underwrite and rate based on sex at birth, but correspond with client based on current gender. An additional two (9%) respondents indicated they Underwrite, rate, and correspond with client based on sex or gender at birth.

There were similar results in Canada, where six (55%) of 11 respondents indicated they would Underwrite, rate and correspond with client based on current gender, while the other five (45%) indicated they would Underwrite and rate based on sex at birth, but correspond with client based on current gender.

7a. Does your company adjust underwriting classification based on sex at birth vs current gender?

Response	U.S.	Canada	# of Responses
No	15	9	24
Yes	7	2	9
Total # of Respondents	22	11	33

Twenty-four (73%) of 33 respondents did not adjust underwriting classification based on sex at birth vs current gender.

7b. If yes, please provide details.

The following details were provided by eight of the nine respondents who answered that their company did adjust underwriting classification based on sex at birth vs current gender:

- *Confirm date medical/surgical change, then change gender*
- *Depending on the medical condition*
- *Family history would be viewed differently as well as PSA values (if obtained)*
- *If risk factors exist that are more relevant to one sex or the other, we apply to sex at birth*
- *Rate based upon gender that they identify themselves as*
- *Sex at birth rate used*
- *Underwrite based on current gender*
- *Underwrite based on sex at birth and correspond based on identified gender*

Section 4: Marijuana

1. For marijuana, does your company differentiate by delivery type (smoked or taken orally)?

Response	U.S.	Canada	# of Responses
No	15	9	24
Yes	7	2	9
Total # of Respondents	22	11	33

Fifteen (68%) of 22 U.S. respondents and nine (82%) of 11 Canadian respondents did not differentiate between smoked or oral marijuana use.

2. If yes, how do you differentiate?

Underwriting Actions	U.S.		Canada		# of Responses
	Smoker	Non-smoker	Smoker	Non-smoker	
Joints	6	1	0	2	9
Vaping, juuling, or any other inhalation	6	1	0	2	9
Edibles	0	7	0	2	9
Pills or capsules	0	7	0	2	9
Other non-smoker*	0	5	0	2	7
Total # of Respondents	7		2		9

*Other: (3 of 7 provided detail)

- *Smoker only if mixed with cotinine for joints*
- *CBD oil*
- *Any that are identified*

The biggest difference between countries was in how they differentiated smoker rates for marijuana Joints and Vaping, juuling and other inhalation. In the U.S., six (86%) of seven respondents considered them smokers, while both Canadian respondents (100%) considered them to be non-smokers.

All other forms of marijuana use were considered non-smoker by survey respondents.

3. For marijuana, does your company differentiate by amount and frequency of use?

Response	U.S.	Canada	# of Responses
Both	9	8	17
Frequency only	12	3	15
Neither	1	0	1
Amount only	0	0	0
Total # of Respondents	22	11	33

Nine (41%) U.S. respondents and eight (73%) Canadian respondents differentiate their marijuana use based on Both frequency and amount. In the U.S., the majority of respondents differentiate based on Frequency only, with 12 (55%) selecting this option. Only one (5%) U.S. company indicated they use Neither option to differentiate, while no respondents in either country said they differentiate based on Amount only.

4. Does your company differentiate between medicinal and recreational marijuana use?

Response	U.S.	Canada	# of Responses
Yes	16	8	24
No	4	3	7
Considering	2	0	2
Total # of Respondents	22	11	33

There were similar results in both countries, with 16 (73%) U.S. respondents and eight (73%) Canadian respondents differentiating between medicinal and recreational marijuana use. Two (9%) U.S. respondents noted they were Considering differentiating between medicinal and recreational marijuana use.

5. How does your company ask about marijuana on the application?

Response	U.S.	Canada	# of Responses
Amongst listing of other illicit drugs	13	1	14
As a standalone question	5	7	12
Combined with the smoking questions	2	1	3
Other*	2	2	4
Total # of Respondents	22	11	33

*Other:

- *Marijuana is combined with the smoking question and amongst the list of other illicit drugs (2)*
- *And for a medicinal use*
- *Only on reinstatement applications, not new business*

The responses to this question varied significantly by country. In the U.S., 13 (59%) respondents indicated that they ask about marijuana Amongst listing of other illicit drugs. Five (23%) indicated that they ask about marijuana As a standalone question and two (9%) indicated that they Combined with the smoking question.

In Canada, where marijuana use has been legalized, seven (64%) respondents indicated that they ask about marijuana As a standalone question, while only one each (9%) indicated that they Combined with the smoking questions or ask Amongst listing of other illicit drugs.

6. Does your company have age-related marijuana guidelines?

Response	U.S.	Canada	# of Responses
Yes	10	7	17
No	12	4	16
Total # of Respondents	22	11	33

While respondents in both countries were split on whether their companies had age-related marijuana guidelines, 12 (55%) U.S. respondents indicated that they did not while only four (36%) Canadian respondents indicated they did not.

7. If yes, what is your company’s typical marijuana cut-off age below which it may decline, limit exposure or be more conservative?

Response	U.S.	Canada	# of Responses
18	7	6	13
21	2	0	2
25	0	1	1
Other	0	0	0
Total # of Respondents	9	7	16

The majority of respondents to this follow-up question indicated age 18 as the typical cut-off age, with 13 (81%) selecting this option. Another two (13%) respondents indicated age 21 and one (6%) respondent indicated age 25.

8. Do you test for marijuana?

Response	U.S.	Canada	# of Responses
No, we have not considered doing this	9	7	15
Yes, as a reflexive test in some context	4	2	6
Yes, as an age and amount screening test on some basis	4	1	5
No, but we are considering doing so on some basis	2	0	2
No, we considered doing this and decided against it	1	1	2
Yes, both	2	0	2
Total # of Respondents	22	11	33

The responses to this question varied slightly by country. The highest percentage of respondents in both countries indicated that they have not considered testing for marijuana, with nine (41%) U.S. respondents and seven (64%) Canadian respondents selecting this option.

In the U.S., ten (45%) respondents indicated that they tested for marijuana, with four (18%) doing so as a reflexive test, four (18%) as an age and amount screening test, and another two (9%) doing both.

In Canada, three (27%) respondents indicated that they tested for marijuana, with two (18%) doing so as a reflexive test and one (9%) as an age and amount screening test.

9. If yes, and they test positive for marijuana, how would you handle non-disclosure?

Response	U.S.	Canada	# of Responses
Continue underwriting, but request additional details/evidence to address the client's non-disclosure (i.e. questionnaire in addition to an APS, etc.)	9	3	12
Decline due to nondisclosure	1	0	1
Continue underwriting without specifically requesting additional details/evidence to address the client's non-disclosure	0	0	0
Total # of Respondents	10	3	13

The majority of respondents, 12 (92%) of 13, to this follow-up question indicated they would Continue underwriting, but request additional details/evidence to address the client’s non-disclosure. One (8%) respondent indicated they would simply Decline due to non-disclosure if a client tested positive for marijuana.

Section 5: E-Cigarettes

1. Does your company specifically ask about e-cigarettes, vaping, etc. on its application?

Response	U.S.	Canada	# of Responses
Yes	13	9	22
No	9	2	11
Total # of Respondents	22	11	33

Thirteen (59%) of 22 U.S. respondents and nine (82%) of 11 Canadian respondents specifically asked about e-cigarettes, vaping, etc. on their application.

2. Does your company consider e-cigarette use as non-smoker?

Response	U.S.	Canada	# of Responses
No	18	9	27
Yes	4	2	6
Total # of Respondents	22	11	33

Eighteen (82%) U.S. respondents and nine (82%) Canadian respondents considered e-cigarette use as a smoker (answered no to considering e-cigarette use as a non-smoker).

3. Does your company distinguish between different delivery systems, such as vaping, hookah, juuling?

Response	U.S.	Canada	# of Responses
No	20	8	28
Yes	2	3	5
Total # of Respondents	22	11	33

U.S. respondents to this question were more definite, as 20 (91%) indicated their company did not distinguish between different delivery systems. The majority of respondents in Canada also did not distinguish between different delivery systems, although three (27%) indicated their company did so.

4. Does your company have age-related e-cigarette guidelines?

Response	U.S.	Canada	# of Responses
No	22	10	32
Yes	0	1	1
Total # of Respondents	22	11	33

Only one (9%) respondent in Canada indicated they have age-related e-cigarette guidelines.

5. If yes, what is your company’s typical e-cigarette cut-off age below which your guidelines would be more conservative?

Response	U.S.	Canada	# of Responses
18	0	1	1
21	0	0	0
25	0	0	0
Other	0	0	0
Total # of Respondents	0	1	1

The one Canadian respondent that indicated having age-related e-cigarette guidelines in the previous question noted age 18 as their typical cut-off below which their guidelines would be more conservative.

Section 6: Financial Underwriting

1. Has mortality experience caused any changes in your financial guidelines?

Response Options	U.S.	Canada	# of Responses
No Changes	18	11	29
No, we have increased our income multiples	2	0	2
Yes, we have maintained and avoided increasing our income multiples	1	0	1
Total # of Respondents	21	11	32

The majority of respondents, 18 (86%) of 21 in the U.S. and all 11 (100%) in Canada, have not changed financial underwriting guidelines based on mortality experience. In the U.S., two (10%) respondents indicated they have increased their income multiples, while only one (5%) indicated that mortality experience has resulted in a change in financial underwriting guidelines.

2. How often does your company review its financial guidelines? If Ad Hoc, please provide date of last change.

Response Options	U.S.	Canada	# of Responses
Annually	6	3	9
Twice per year	2	0	2
Ad Hoc*	13	8	21
Total # of Respondents	21	11	32

**Ad Hoc responses for date of last change:*

- *2019: 4*
- *2018: 5*
- *2017: 2*
- *2016: 1*
- *2015: 1*
- *Do Not Remember*
- *As The Reinsurer Makes Changes*
- *As Needed*
- *Unknown*
- *Never*
- *Currently Underway*
- *Last Year. Financial underwriting is highly dependent on many factors including product, sales concept including deposits and these get reviewed regularly*

The majority of respondents indicated that financial underwriting guidelines are reviewed on an Ad Hoc basis, with 13 (62%) in the U.S. and eight (73%) in Canada, or 21 (66%) overall reviewing on an Ad Hoc

basis. The details surrounding dates and Ad Hoc changes are included below the table. Six (29%) respondents in the U.S. review their financial guidelines annually, while three (27%) in Canada do so.

3. Other than mortality, what factors does your company consider when reviewing its financial guidelines? List in order of importance from 1-4.
- a. Competition
 - b. Recent Experience
 - c. Input From Reinsurers
 - d. Other

Competition Rank	Total	U.S.	Canada
1	9	8	1
2	9	5	4
3	9	6	3
4	1	0	1

Recent Experience Rank	Total	U.S.	Canada
1	7	4	3
2	9	6	3
3	12	9	3
4	0	0	0

Input From Reinsurers Rank	Total	U.S.	Canada
1	10	7	3
2	10	8	2
3	7	4	3
4	1	0	1

Other* Rank	Total	U.S.	Canada
1	2	0	2
2	0	0	0
3	0	0	0
4	26	19	7

*Other:

- Financial Underwriting changes made based off of client complaints
- Reasonableness based on market/economic conditions
- Companies should require that areas outside of underwriting should be the first line of defense with aggressive sales and tax concepts
- We do not do any financial underwriting or include any financial information with our underwriting, so these questions were unanswered, so these questions were left out.

Twenty-eight (85%) of the 33 companies that responded to the survey completed the portion regarding Financial Underwriting. Of the responses, Input From Reinsurers was the top reason for changing financial underwriting guidelines, with ten (36%) respondents placing this as number one, followed by Competition with nine (32%), Recent Experience with seven (25%), and Other, which was placed as the first option by two (7%) of the respondents.

However, the results differ when you break the responses down between the 19 respondents in the U.S. and the nine respondents in Canada. In the U.S., eight (42%) respondents listed Competition as the number one factor, while in Canada, only one (11%) respondent considered this their number one factor. Of the respondents located in Canada, the number one factor in determining changes in financial underwriting guidelines was evenly divided between Recent Experience and Input From Reinsurers, each with three (33%).

Section 7: Advances in Medical Technology

1. Is your company monitoring medical advances, such as Wearables and liquid biopsy? Choose the option that best applies.

Response Options	U.S.	Canada	# of Responses
Yes, we talk about it regularly	5	3	8
Yes, we are aware, but not actively discussing	6	2	8
We rely on Third Party Information	4	3	7
Under Consideration	3	1	4
No	3	2	5
Total # of Respondents	21	11	32

Of the 32 respondents, 16 (50%) answered that they were monitoring medical advances. Of those 16, eight (50%) indicated they talked about it regularly and eight (50%) indicated they were aware, but not actively discussing. Of the 16 respondents who answered yes, 11 (69%) were located in the U.S.

Seven (22%) respondents answered We rely on Third Party Information for monitoring medical advances and four (13%) stated the monitoring of medical advances was Under Consideration. Of those who relied on third party monitoring, four were located in the U.S. and three were in Canada. Of the four respondents who indicated that monitoring was Under Consideration, three were located in the U.S. and one was in Canada.

Five (16%) respondents indicated that their companies were not monitoring medical advances, with three in the U.S. and two in Canada.

2. Is your company's underwriting department monitoring legislative changes, such as Truvada, Naloxone, or privacy-related issues?

Response Options	U.S.	Canada	# of Responses
Yes, we talk about it regularly	16	3	19
Yes, we are aware, but not actively discussing	2	4	6
We rely on Third Party Information	3	1	4
No	0	3	3
Total # of Respondents	21	11	32

**Additional Comments:*

- *We have specific guidelines for Truvada. This Question is more focused for the U.S.*

Twenty-five (78%) of 32 respondents indicated their company's underwriting department was monitoring legislative changes. Of those who answered yes, 19 (59%) talked about it regularly and six (19%) were aware, but not actively discussing. The majority of the respondents who answered yes were in the U.S., with 18 (56%), while seven (22%) were in Canada.

Four (13%) respondents in the U.S. answered that We rely on Third Party Information. Three (9%) respondents in Canada answered that the underwriting department was not monitoring legislative changes.

Section 8: Communication/Education

This section focused on the communication between the underwriters and the actuaries within the company.

1. Within your company, do your underwriters and actuaries collaborate on the following: (Choose all that apply)

Collaboration	U.S.	Canada	# of Responses
Product development	17	10	27
Mortality studies	13	3	16
Claims experience	12	3	15
Industry training	2	4	6
Other*	4	3	7
Total # of Respondents	20	11	31

*Other: (6 of 7 responded)

- *age and amount underwriting changes, reinsurance, life earnings, tools and technology*
- *strategic planning and industry trends*
- *technology developments*
- *VP Operations and Chief Actuary collaborate on these items*
- *we use a 3rd party U/W platform, but communicate regularly*
- *no*

Product development was the most common area that underwriters and actuaries collaborated on, with 27 (87%) of 31 respondents identifying this. Mortality studies (52%) and Claims experience (48%) were the next most common disciplines.

Collaboration between underwriters and actuaries differed substantially when working on Mortality studies and Claims experience, where this was much more prevalent in the U.S. In Canada, three (27%) respondents collaborated on Mortality studies and Claims experience, whereas in the U.S., Mortality studies was 13 (65%) and Claims experience was 12 (60%).

- 2a. If your company doesn't currently, does it have plans to improve collaboration efforts between them?

Response	U.S.	Canada	# of Responses
Yes	11	6	17
No	3	3	6
Total # of Respondents	14	9	23

Seventeen (74%) of 23 respondents indicated they had plans to improve collaboration if they didn't currently. Nine respondents who answered question 1 did not answer this question, so it is likely they are currently collaborating between departments.

2b. If yes, how?

The respondents provided the following suggestions on how underwriters and actuaries could collaborate:

- *ad hoc meeting to keep each other informed of what we are working on*
- *cross functional groups and projects*
- *developing a triage process*
- *frequent communication with our 3rd party U/W platform administrators*
- *more active reinsurance collaboration*
- *provide more information on mortality experience*
- *underwriting requirements*
- *we are relocating so the UWs and actuaries will be on the same physical floor, more regular touch bases etc.*
- *we are trying to established some rules and procedures to follow in order to have those 2 departments working more closely and often together.*
- *we have strong collaboration*
- *we plan to create a Risk Management team (UW and actuaries) that will work together on evolution of our new Automated Rule Engine*

3. How do companies encourage communication & education between the actuarial and underwriting professions? (Check all that apply)

Collaboration	U.S.	Canada	# of Responses
Shared resources	13	6	19
Informal education	12	5	17
Joint education sessions	9	2	11
Formal education	4	0	4
Other*	2	4	6
None	2	2	4
Total # of Respondents	21	11	32

*Other:

- *Discussions occur on a case by case basis as needed*
- *Joint sponsorship of initiatives*
- *Joint Task Groups*
- *Product development, committee work and various projects*
- *Steering committees for most initiatives include actuaries and underwriters*
- *None*

Nineteen (59%) of 32 respondents used Shared resources to encourage communication and education between the two departments. Informal education was the next most common way of improving education between the departments, with 17 (53%).

Section 9: Behavioral Economics

This section focused on behavioral economics and its relationship to the application process.

1. Has your company implemented behavioral economics in your application process?

Implemented	U.S.	Canada	# of Responses
Yes	5	7	12
No, but we have discussed it and plan on implementing in the future	9	1	10
No, we have not discussed it	7	3	10
Total # of Respondents	21	11	32

Seven (64%) of 11 Canadian respondents had implemented behavioral economics in the application process, but only five (24%) of the 21 U.S. respondents had implemented it. Nine (43%) U.S. respondents are considering implementing it in the future.

2. If yes, how would your company rate its overall success with the use of behavioral economics?

Level of Success	U.S.	Canada	# of Responses
Very successful	0	0	0
Some success	2	2	4
Too soon to tell	3	5	8
Needs improvement	0	0	0
No impact whatsoever	0	0	0
Total # of Respondents	5	7	12

Of the 12 who had implemented behavioral economics in the application process, “Too soon to tell” was the most common response, with eight (67%) respondents selecting this, and the remaining four (33%) having Some success.

3. What does your company consider success with the use of behavioral economics?

Consideration for Success	U.S. Respondents			
	Reduced Fraud	Improved Mortality	Higher Quality of Responses	Improved Customer Service
Very Important	13	15	15	12
Somewhat Important	3	0	1	3
Still Looking into it	4	5	4	4
Not Important at all	0	0	0	1
Total # of U.S. Respondents	20			

Consideration for Success	Canadian Respondents			
	Reduced Fraud	Improved Mortality	Higher Quality of Responses	Improved Customer Service
Very Important	5	3	6	6
Somewhat Important	1	3	1	1
Still Looking into it	4	4	3	3
Not Important at all	0	0	0	0
Total # of Canadian Respondents	10			

The U.S. and Canadian data were separated for greater clarity. The most common response for both countries was Very Important for Reduced Fraud, Higher Quality of Responses, and Improved Customer Service. For the 20 U.S. respondents, Improved Mortality was still very high at 15 (75%), but for the Canadian respondents, only three (30%) of the ten chose this.

Section 10: New Data Sources and Social Media

This section focused on new data sources and social media, and its application within the underwriting process.

1a. Does your company incorporate social media or internet searches to any extent in its underwriting process?

Response	U.S.	Canada	# of Responses
Yes	17	10	27
No	4	1	5
Total # of Respondents	21	11	32

The vast majority of respondents, 27 (84%) of 32, implemented social media or internet searches in their underwriting process.

1b. If yes, which of the following does your company use regularly?

Sites	U.S.	Canada	# of Responses
Google searches	15	10	25
LinkedIn	5	3	8
FaceBook	4	2	6
Instagram	1	1	2
Twitter	1	1	2
Other*	1	1	2
Total # of Respondents	17	10	27

*Other:

- *Factiva*
- *real estate addresses and business information*

Google searches were the most common, with 25 (93%) of 27 respondents utilizing this search engine, and LinkedIn was the second most common with eight (30%).

1c. Are these used at time of claim to try to identify potential fraud?

Response	U.S.	Canada	# of Responses
Yes	10	8	18
No	7	1	8
Total # of Respondents	17	9	26

Eighteen (69%) of 26 total respondents stated they used the information at time of claim to identify fraud, but in Canada it was more prevalent at 89%.

2a. Which of the following circumstances might prompt your company to do a social media or internet search?

Prompt for searches	U.S.	Canada	# of Responses
Face amount	16	9	25
High profile person	16	7	23
Age	2	3	5
Lab scoring results	3	1	4
Other predictive score results	4	2	6
Other*	9	2	11
Total # of Respondents	21	10	31

*Other:

- *address verification*
- *Business Insurance*
- *Case Circumstances (financial/employment information, criminal history)*
- *Criminal activity, DUI, place of employment*
- *Criminal history, information mismatch between sources*
- *customer profile*
- *Financial underwriting (3)*
- *Inconsistencies*
- *medical conditions*
- *MIB*
- *Underwriting the agent*
- *We routinely screen for adverse media*

Face amount, with 25 (81%) of 31 respondents, and High profile person, with 23 (74%), were the most common responses. An additional three companies did not choose a response for the Other category, but then gave a description. Including these in the total above, the total number would be 14, with four in Canada and ten in the U.S.

2b. If yes to any of the above, how do you document your files?

Documentation	U.S.	Canada	# of Responses
General description	14	4	18
Screen capture	5	3	8
URL	0	1	1
Other*	1	2	3
Total # of Respondents	20	10	30

*Other:

- All three are possible, screen capture, URL, and/or general description
- File documentation outlining risk
- We reference the Website

General description was the most common way of documenting, with 18 (60%) of 30 respondents choosing this and an additional three choosing Other, which could have been in the General description category. Screen capture was the second most common, with eight (27%) choosing this and one mentioning this as a possibility.

3a. Does your company use public data sources to make an underwriting decision or prompt further underwriting investigation?

Response	U.S.	Canada	# of Responses
Yes	17	3	20
No	4	8	12
Total # of Respondents	21	11	32

Twenty (63%) of 32 respondents stated they used public data sources in making an underwriting decision, but it was drastically different between the U.S. and Canada. Seventeen (81%) of 21 U.S. respondents said they used public data sources, but only three (27%) of the 11 Canadian respondents said they did.

3b. If yes, which of the following sources does your company use? (Check all that apply)

Sources	U.S.	Canada	# of Responses
Rx database	16	0	16
Credit scoring attributes	8	1	9
Other*	5	2	7
Total # of Respondents	17	3	20

*Other:

- *criminal history search if the internet found something of concern*
- *Criminal Records*
- *Inspection Report*
- *Lab data, MVRs*
- *lab history, criminal records, court records*
- *None of the above*
- *Thought this included google searches*

Sixteen (80%) of 20 respondents used the Rx database, with nine (45%) using Credit score attributes and three (15%) indicating it was used to search criminal records. In Canada, none of the three respondents utilized the Rx database.

4. Has your company made any adjustments to underwriting in response to New York Circular Letter #1 or other such letter taking aim at accelerated underwriting (unlawful discrimination and transparency to consumers)? If Yes (please describe).

Response	U.S.	Canada	# of Responses
Yes	4	1	5
No	16	10	26
Total # of Respondents	20	11	31

If Yes, please describe:

- *didn't introduce in NY*
- *Even though the impact is minimal given availability in Canada we are actively monitoring the outcome for future strategic considerations when using or building models*
- *Our 3rd party U/W is aware of the letter and has made changes to their algorithms.*
- *Sending letter to applicants that are moved to full underwriting based on LexisNexis Risk Classifier.*
- *Sending Letters to those that are required to go through traditional underwriting*

Only five (16%) of 31 respondents had made any adjustments due to New York Circular Letter #1.

Additional Section Comments:

Six respondents provided the following additional comments regarding this section:

- *Does not apply to us as we do not use accelerated underwriting in NY*
- *waiting to hear outcome*
- *We already followed NY requirements*
- *We comply*
- *We did not have accelerated UW in place*
- *We do not sell any new business in New York*
- *We do not sell in NY*
- *n/a*

Appendix A: List of Participating Companies

Allstate
 American Family Life Insurance Company
 American National
 American-Amicable Life Ins Co of Texas
 Americo Financial Life
 Assumption Life
 BMO Insurance
 Catholic United Financial
 CNO Financial
 Co-operators Life Ins Co
 Desjardins
 EMC National Life Company
 F&G Annuities and Life
 Faithlife Financial
 Federal Life Insurance
 Foresters Financial
 Gleaner Life Insurance Society
 ivari
 Kilpatrick Life
 London Life Insurance Company
 Manulife
 Oxford Life Insurance Company
 Pacific Life Insurance
 Sagicor
 Sammons Financial Group
 Securian Financial
 Security Mutual Life Insurance Company of NY
 Southern Farm Bureau Life
 Sun Life
 Texas Life Ins Co
 Thrivent Financial
 UV Mutuelle
 Wawanesa Life

Appendix B: Emerging Issues in Underwriting Survey

Demographics and Background Underwriting Information

1. For which country will you be filling out this survey? If you operate in both countries, please fill out a separate survey for each.

United States
Canada

2. Please state the amount of new life insurance face amount issued in 2018.

Less than \$1B
Between \$1B - \$50B
More than \$50B

3. Please indicate your company's structure.

Stock
Mutual
Fraternal
Other (please describe)

4. Through which distribution channels do you issue business? (check all that apply)

Career Agent/PPGA
Independent Brokerage
Bank/Stockbroker
Direct Marketing
Other (please describe)

- 5a. How often does your company review its underwriting requirements and/or guidelines to keep up with changes?

Annually
Twice per year
Quarterly
Monthly
Ad hoc

- 5b. If ad hoc, provide the date of last review.

6. Does your company use an automated Underwriting Rules Engine (URE)?

- Yes
- No

7a. If yes, how often does your company make regularly scheduled changes to its URE?

- Annually
- Twice per year
- Quarterly
- Monthly
- Ad hoc

7b. If ad hoc, provide the date of last change.

8. Including, but not limited to, your last changes to the URE, which of the following reasons impacted your decision? (click and drag in order of importance)

- New data source
- New risk class
- Changes in algorithm
- Changes in issue ages
- Changes in face amount
- Changes in risk class
- Regulatory changes
- Other (please describe)

9. Which of the following impacts your company in making changes to its URE? (click and drag in order of importance)

- Financial (cost of changes)
- IT staff resources
- Underwriting resources
- Competition
- Other (please describe)

Additional comments:

Impact of Genetic Testing

For the purposes of this survey, genetic test means a test that analyzes DNA, RNA, or chromosomes for purposes such as the prediction of disease or vertical transmission risks, or monitoring, diagnosis, or prognosis.

1. How does your company’s underwriting department handle a predictive genetic test (offered to asymptomatic individuals with a family history of a genetic disorder to predict future risk of disease) where not prohibited by law? (check all that apply)

Refer to Medical Director
 Refer to Chief Underwriter
 Refer to specialized underwriting unit
 Follow company underwriting guidelines without referring
 Other (please describe)

2. How does your company’s underwriting department handle a diagnostic genetic test (to confirm or rule out a known or suspected genetic disorder) where not prohibited by law? (check all that apply)

Refer to Medical Director
 Refer to Chief Underwriter
 Refer to specialized underwriting unit
 Follow company underwriting guidelines without referring
 Other (please describe)

3. How does your company handle genetic test information that is received when uses by underwriting are prohibited by law?

Redact information from file
 Don’t redact, but document that it’s not to be used for underwriting purposes
 Other (please describe)

- 4a. Which of these would your company consider as an acceptable source of genetic testing to be used in underwriting where not prohibited by law? (check all that apply)

Information in a doctor's report
 Information provided by the client (application, paramed, tele-interview)
 At-home testing kit, such as 23 and me, Ancestry.com, etc.
 None
 Other (please describe)

4b. If an at-home testing kit is used, does your company have rules in place to restrict the use of discriminatory information such as race, ethnic origin, etc? If yes, please describe.

Yes (please describe)
 No

5a. Which of the following best describes your company’s reactions to possible future regulations prohibiting the use of genetic information? Choose one for each row.

	Significant Impact	Mild Impact	Minimal to No Impact	Unknown
Pricing impact				
Operational impact (new business)				
Operational impact (inforce)				
Reputational risk				

5b. Level of Underwriting Department's monitoring regulatory changes:

Actively monitoring
 Not actively monitoring

6. In response to the increasing focus on genetics and its impact on underwriting, which of the following best describes the changes your company is contemplating?

	Implemented	In Process	Thinking About It	Not Actively Considering
Application questions				
Family history criteria				
Financial underwriting guidelines				
Medical underwriting guidelines				

Additional comments:

Sex and Gender

For the purposes of this survey, we are using the following definitions:

- Sex: biological and physiological characteristics
- Gender: self-perceived roles, behaviors, activities, and attributes

1. Does your company differentiate between sex and gender?

- Yes, we treat them differently
- Yes, we treat them differently based on state/province regulation
- No, but we plan to
- No, we use them interchangeably

2. What does your company ask in its application?

- Sex
- Sex at birth
- Gender
- Both sex and gender

3a. Which of the following best describes your company’s reactions to regulations regarding sex and gender? Choose one for each row.

	Significant Impact	Mild Impact	Minimal to No Impact	Unknown
Pricing impact				
Operational impact (new business)				
Operational impact (inforce)				
Reputational risk				

3b. Level of Underwriting Department's monitoring regulatory changes:

- Actively monitoring
- Not actively monitoring

4. How does your company handle changes to inforce business when sex is changed?

- Change without underwriting
- Change with underwriting
- Don't allow changes

5. How does your company handle changes to enforce business when gender is changed?

- Change without underwriting
- Change with underwriting
- Don't allow changes

6. What is your company philosophy relative to sex and gender?

- Underwrite, rate, and correspond with client based on sex or gender at birth
- Underwrite and rate based on sex at birth, but correspond with client based on current gender
- Underwrite, rate, and correspond with client based on current gender

7a. Does your company adjust underwriting classification based on sex at birth vs current gender?

- Yes
- No

7b. If yes, please provide details.

Additional comments:

Marijuana

1. For marijuana, does your company differentiate by delivery type (smoked or taken orally)?

- Yes
- No

2. If yes, how do you differentiate?

	Smoker Rates	Non-Smoker Rates
Joints		
Vaping, juuling, or any other inhalation		
Edibles		
Pills or capsules		
Other non-smoking (please describe)		

3. For marijuana, does your company differentiate by amount and frequency of use?

- Frequency only
- Amount only
- Both
- Neither

4. Does your company differentiate between medicinal and recreational marijuana use?

- Yes
- No
- Considering

5. How does your company ask about marijuana on the application?

- Amongst listing of other illicit drugs
- Combined with the smoking questions
- As a standalone question
- Other (please describe)

6. Does your company have age-related marijuana guidelines?

- Yes
- No

7. If yes, what is your company's typical marijuana cut-off age below which it may decline, limit exposure or be more conservative?

- 18
- 21
- 25
- Other (please provide age)

8. Do you test for marijuana?

- Yes, as an age and amount screening test on some basis
- Yes, as a reflexive test in some context
- Yes, both
- No, but we are considering doing so on some basis
- No, we considered doing this and decided against it
- No, we have not considered doing this

9. If yes, and they test positive for marijuana, how would you handle non-disclosure?

- Continue underwriting, but request additional details/evidence to address the client's non-disclosure (i.e. questionnaire in addition to an APS, etc.)
- Continue underwriting without specifically requesting additional details/evidence to address the client's non-disclosure
- Decline due to nondisclosure

Additional comments:

E-Cigarettes

1. Does your company specifically ask about e-cigarettes, vaping, etc. on its application?

Yes
No

2. Does your company consider e-cigarette use as non-smoker?

Yes
No

3. Does your company distinguish between different delivery systems, such as vaping, hookah, juuling?

Yes
No

4. Does your company have age-related e-cigarette guidelines?

Yes
No

5. If yes, what is your company’s typical e-cigarette cut-off age below which your guidelines would be more conservative?

18
21
25
Other (please provide age)

Additional comments:

Financial Underwriting

1. Has mortality experience caused any changes in your financial guidelines?

Yes, we have lowered our income multiples
Yes, we have maintained and avoided increasing our income multiples
No, we have increased our income multiples
No changes

2a. How often does your company review its financial guidelines?

- Annually
- Twice per year
- Quarterly
- Ad hoc

2b. If ad hoc, provide the date of last change.

3. Other than mortality, what factors does your company consider when reviewing its financial guidelines?
(click and drag in order of importance)

- Competition
- Recent experience
- Input from reinsurers
- Other (please describe)

Additional comments:

Advances in Medical Technology

1. Is your company monitoring medical advances, such as Wearables and liquid biopsy?

- Yes, we talk about it regularly
- Yes, we are aware, but not actively discussing
- We rely on third party information
- Under consideration
- No

2. Is your company's underwriting department monitoring legislative changes, such as Truvada, Naloxone, or privacy- related issues?

- Yes, we talk about it regularly
- Yes, we are aware but not actively discussing
- No, we rely on our compliance department
- We rely on third party information
- Under consideration
- No

Additional comments:

Communication/Education

1. Within your company, do your underwriters and actuaries collaborate on the following: (check all that apply)

- Industry training
- Mortality studies
- Claims experience
- Product development
- Other (please describe)

2a. If your company doesn't currently, does it have plans to improve collaboration efforts between them?

- Yes
- No

2b. If yes, please provide details.

3. How do companies encourage communication & education between the actuarial and underwriting professions? (check all that apply)

- Shared resources
- Joint education sessions
- Formal education
- Informal education
- None
- Other (please describe)

Additional comments:

Behavioral Economics

1. Has your company implemented behavioral economics in your application process?

- Yes
- No, but we have discussed it and plan on implementing in the future
- No, but we have discussed it and decided against it
- No, we have not yet discussed it

2. If yes, how would your company rate its overall success with the use of behavioral economics?

- Very successful
- Some success
- Too soon to tell
- Needs improvement
- No impact whatsoever

3. What does your company consider success with the use of behavioral economics?

	Very Important	Somewhat Important	Not Important At All	Still Looking Into It
Reduced fraud				
Improved mortality				
Higher quality of responses				
Improved customer experience				

Additional comments:

New Data Sources and Social Media

1a. Does your company incorporate social media or internet searches to any extent in its underwriting process?

- Yes
- No

1b. If yes, which of the following does your company use regularly? (choose all that apply)

- Google searches
- FaceBook
- Twitter
- Instagram
- LinkedIn
- Other (please describe)

1c. Are these used at time of claim to try to identify potential fraud?

- Yes
- No

2a. Which of the following circumstances might prompt your company to do a social media or internet search?

	Yes	No
Age		
Face amount		
High profile person		
Lab scoring results		
Other predictive score results		
Other (please describe)		

2b. If yes to any of the above, how do you document your files?

- Screen capture
- URL
- General description
- Other (please describe)

3a. Does your company use public data sources to make an underwriting decision or prompt further underwriting investigation?

- Yes
- No

3b. If yes, which of the following sources does your company use? (check all that apply)

- Rx database
- Credit scoring attributes
- Other (please describe)

4. Has your company made any adjustments to underwriting in response to New York Circular Letter #1 (2019) or other such letter that would impact accelerated underwriting (unlawful discrimination and transparency to consumers)?

- Yes (please describe)
- No

Additional comments:

About The Society of Actuaries

The Society of Actuaries (SOA), formed in 1949, is one of the largest actuarial professional organizations in the world dedicated to serving more than 32,000 actuarial members and the public in the United States, Canada and worldwide. In line with the SOA Vision Statement, actuaries act as business leaders who develop and use mathematical models to measure and manage risk in support of financial security for individuals, organizations and the public.

The SOA supports actuaries and advances knowledge through research and education. As part of its work, the SOA seeks to inform public policy development and public understanding through research. The SOA aspires to be a trusted source of objective, data-driven research and analysis with an actuarial perspective for its members, industry, policymakers and the public. This distinct perspective comes from the SOA as an association of actuaries, who have a rigorous formal education and direct experience as practitioners as they perform applied research. The SOA also welcomes the opportunity to partner with other organizations in our work where appropriate.

The SOA has a history of working with public policymakers and regulators in developing historical experience studies and projection techniques as well as individual reports on health care, retirement and other topics. The SOA's research is intended to aid the work of policymakers and regulators and follow certain core principles:

Objectivity: The SOA's research informs and provides analysis that can be relied upon by other individuals or organizations involved in public policy discussions. The SOA does not take advocacy positions or lobby specific policy proposals.

Quality: The SOA aspires to the highest ethical and quality standards in all of its research and analysis. Our research process is overseen by experienced actuaries and nonactuaries from a range of industry sectors and organizations. A rigorous peer-review process ensures the quality and integrity of our work.

Relevance: The SOA provides timely research on public policy issues. Our research advances actuarial knowledge while providing critical insights on key policy issues, and thereby provides value to stakeholders and decision makers.

Quantification: The SOA leverages the diverse skill sets of actuaries to provide research and findings that are driven by the best available data and methods. Actuaries use detailed modeling to analyze financial risk and provide distinct insight and quantification. Further, actuarial standards require transparency and the disclosure of the assumptions and analytic approach underlying the work.

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