



ACCELERATED UNDERWRITING AND EVALUATING THE RISKS
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OBJECTIVES

- Provide a brief background on Accelerated Underwriting (AUW)
- Provide results from the Society of Actuaries' 2018 Delphi study regarding AUW programs
- Outline risks associated with AUW programs
- Discuss how such risks might be evaluated as part of the regulatory review process

UNDERWRITING METHODS

Traditional

- Collection of fluids (blood, urine, and saliva)
- Attending Physician Statement (APS)
- Long-form application
- Relatively extensive medical information

UNDERWRITING METHODS

Accelerated Underwriting (AUW)

- rrc Reduction in the requirements of traditional underwriting if certain minimum demographic or health-related requirements are met by the applicant
- rrc Alternative approaches and data used to segregate applicants by risk, and those with anticipated lower risk can be underwritten with a lesser amount of medical information
- rrc Price may be higher than under the traditional approach, but many programs are designed to enable similar pricing using alternative approaches and data

UNDERWRITING METHODS

Simplified (SI)

- Limited approach to underwriting
- Information only, without the collection of fluids
- Assumption is that mortality will, therefore, be higher, and the price reflects that mortality

EFFICACY OF AUW

The question is not ...

how **well** statistical algorithms or underwriting rules engines are able to predict mortality outcomes

but ...

how well a specific implementation performs at predicting mortality outcomes

EFFICACY OF AUW

For some applicants ...

one or more of these approaches may provide the underwriting information needed ...

while for another applicant ...

another avenue may provide the information needed

DATA ELEMENTS EMPLOYED

- Rx Data
- Credit Based Scores
- Consumer Marketing Data
- APS
- Facial Recognition
- Other Data Elements (voice recognition technology, social media checks, and data from wearable devices)

QUALIFICATION PERCENTAGE

The responses from the panelists regarding the **percentage of applicants that would meet the necessary criteria to be considered “accelerated”** had the following statistics:

1. Minimum of 10%
2. Maximum of 80%
3. Average of 42%

QUALIFICATION PERCENTAGE

Examples of factors that impact the percentage :

- rrc Age
- rrc Face Amount
- rrc Mix of business
- rrc Target Market
- rrc Distribution Channel
- rrc Socioeconomics

APPLICATIONS PERCENTAGE FOR AUW

According to the panelist responses, **the percentage of applications that will be submitted through accelerated underwriting** will be as follows:

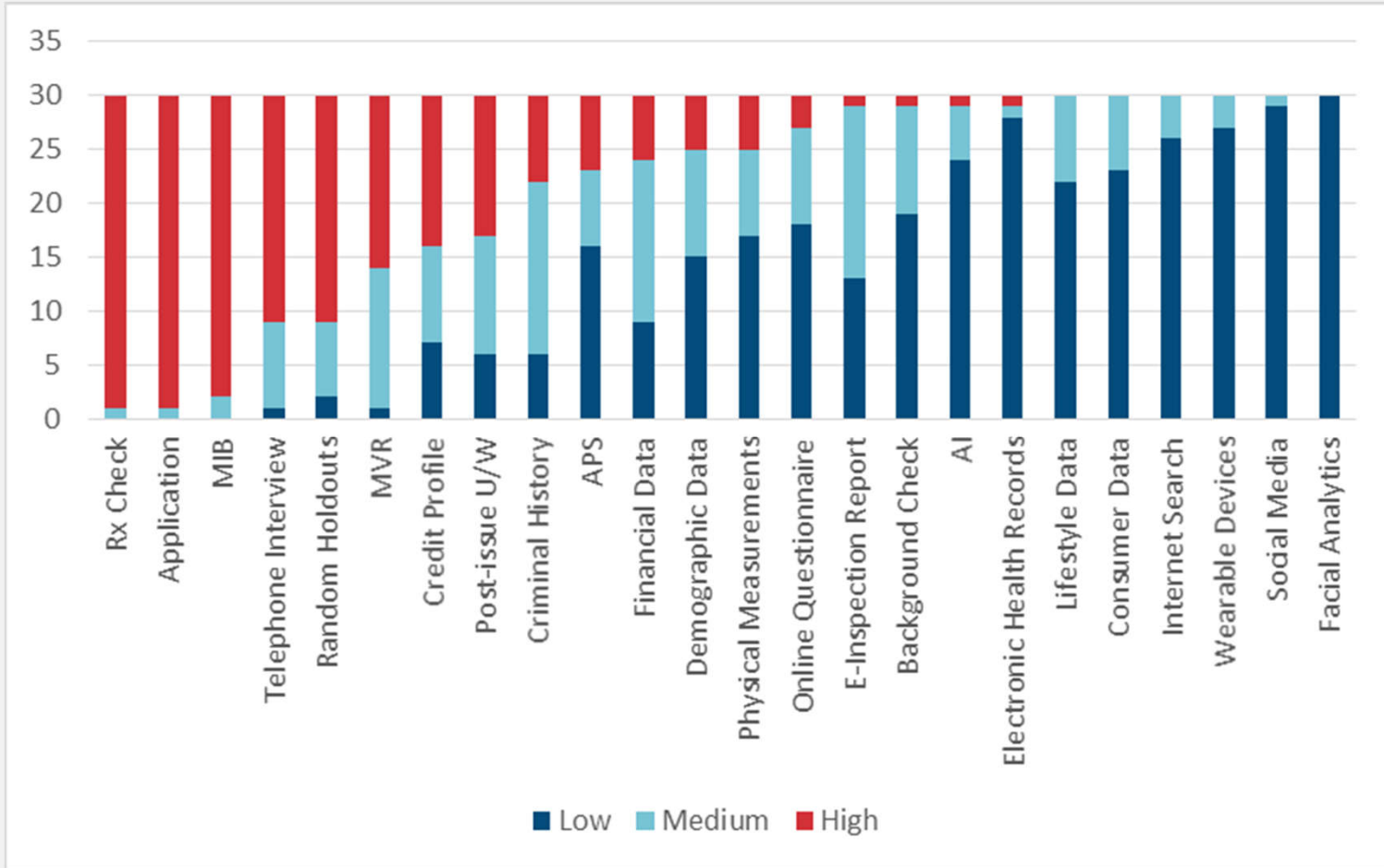
- In 5 years – min 20%, max 95%, average 57%
- In 10 years – min 40%, max 100%, average 79%

WHERE AUW MAY FAIL

- Older ages (and perhaps the very young)
- Higher face amounts
- Foreign nationals
- Complex or unusual medical history
- Target markets with high misrepresentation
- Substandard or impaired risks

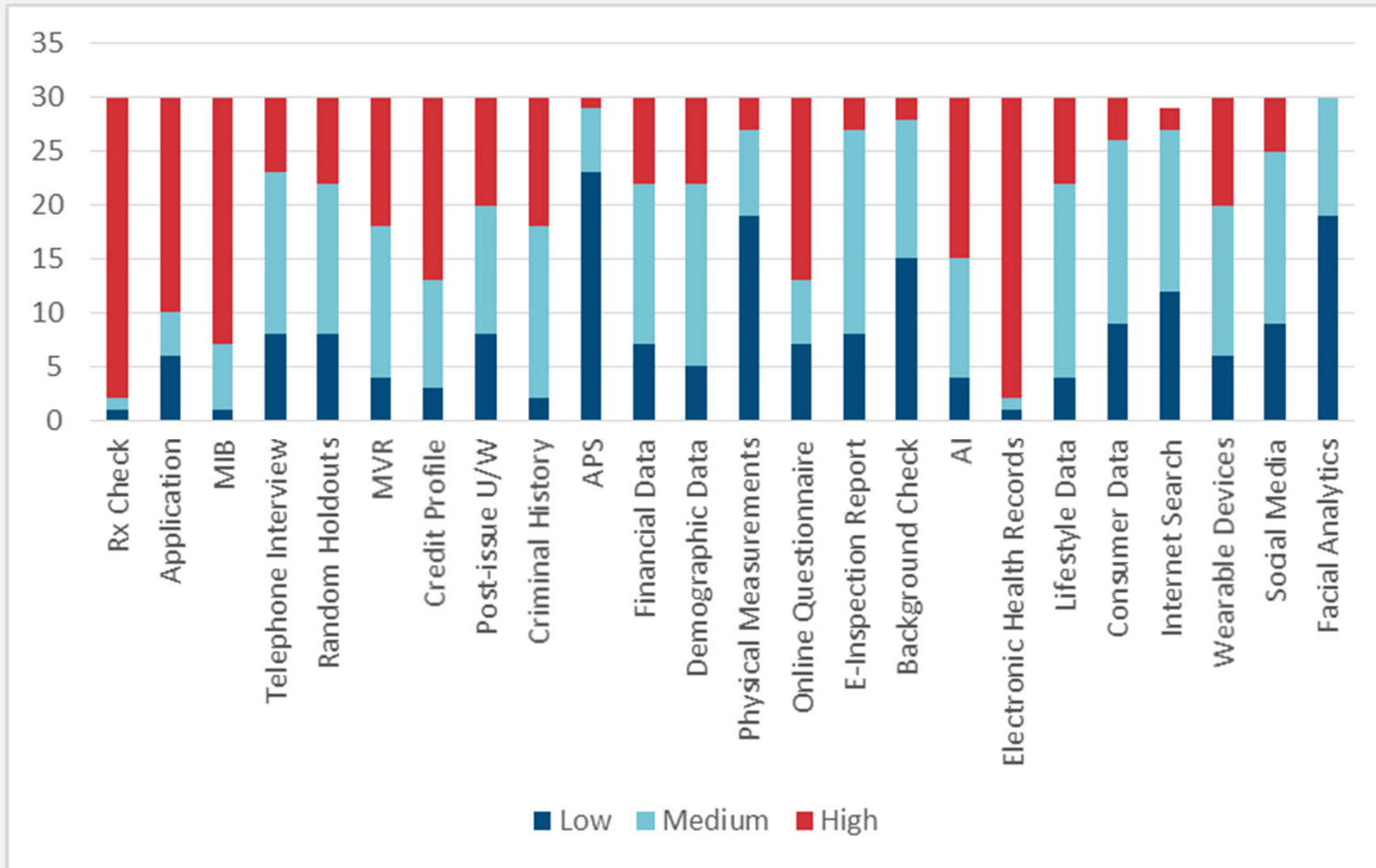
AUW DATA ELEMENTS NOW

study panelists



AUW DATA ELEMENTS IN 10 YEARS

study panelists



RISK INDICATORS FOR AN AUW PROGRAM

- Uses few data sources, and does not consider electronic health records
- Failure to consider “sentinel effect”
- Uses data sources/vendors without internal verification or evaluation and controls
- Insufficient procedures to ensure compliance with HIPAA or FCRA
- Uses paramedical or paper application for medical data
- Relies on one or two pieces of information to make the acceleration pathway decision
- Has a short application (no drill downs, limited databases)
- Does not use random holdouts or post-issue checking
- Very significant focus on achieving cost savings
- Very high acceptance rate
- Low/no agent training
- Limited feedback loop/not incrementally changing with experience
- Significant difference in U/W class distribution vs traditional U/W

SUBSTANDARD RISKS

Percentage of applicants that are accepted that would have been declined under full UW, and the associated increase in mortality (for various “quality” AUW programs).

ACCELERATED PROGRAM	PERCENT (MIN, MAX) AVERAGE	INCREASE IN MORTALITY (MIN, MAX) AVERAGE
Above Average	(0,15) 3	(200%, 600%) 375%
Average	(0.75,20) 5	(250%, 600%) 386%
Below Average	(2,40) 10	(250%, 600%) 395%

MORTALITY RISK INDICATORS MORE DIFFICULT TO CAPTURE BY AUW

- Tobacco and non-prescription marijuana use
- Undiagnosed hypertension, hyperlipidemia, and/or diabetes/pre-diabetes
- Alcohol/substance abuse and illicit drugs
- Kidney and liver function problems; Proteinuria
- HIV
- Coronary Artery Disease markers
- Basically, any misrepresented or undiagnosed condition that can be routinely discovered on labs or in a routine APS, including cholesterol and liver enzyme tests, weight and other vital statistics currently gathered by paramedical examiners. Anything related to non-disclosure that takes considerable time to test or determine.

MORTALITY RELATIVE TO TRADITIONAL UNDERWRITING

On accelerated business only, based on panelist responses, it is anticipated that the overall increase in mortality rates will be:

- rrc Minimum -5%
- rrc Maximum 25%
- rrc Average 4%

IMPACT ON MORTALITY CURVE & GRADING

For those who believe that accelerated underwriting mortality will grade into traditional underwriting mortality, the expected timeframes are as follows:

- rrc Minimum 0 years
- rrc Maximum 50 years
- rrc Average 14 years

EMERGING MORTALITY EXPERIENCE

- One panelist pointed out that, if poor mortality emerges immediately after issue, then the program was deeply flawed
- The long term is where the true impact will be accurately measured for a well-constructed program

SENTINEL EFFECT





The Sentinel effect is the tendency for people to behave differently when they know they are being watched

Offsetting Factors:

- rrc Addition of other tools, such as Rx histories, non-medical credit, and lifestyle models could offset this a bit
- rrc Random holdouts
- rrc Post-issue APS auditing program
- rrc Agent monitoring

MEASURING PERFORMANCE

Approaches to measuring performance include:

-  Random holdouts
-  Post-issue monitoring
-  Review of mortality experience
-  Review of acceptance percentages

MEASURING PERFORMANCE

- rrc Early lapse rates
- rrc Early claims
- rrc Speed to issue, including comparison of speed to expectations for the program
- rrc Distribution monitoring and, in particular, looking at the prior distributions of the business (i.e., by risk class, smoking status, BMI, etc.) and comparing to the new distribution with accelerated underwriting.
- rrc Cost and efficiency savings, including comparison to expectations

IMPACT OF NEW CUSTOMERS

Panelists' views on the percent of the AUW program customers that are new from a previously underinsured market, and what their mortality is as a percentage of the historic traditional underwriting customers' mortality.

	(MIN, MAX) AVERAGE
Percent of New Customers	(3%,39%) 14%
Relative Mortality	(100%,190%) 114%

SAMPLE INHERENT RISKS

Risk Statement	Likelihood	Severity	Inherent Risk
The Company's pricing assumptions for AUW business are aggressive, resulting in financial loss	M-H	S	H
The Company does not have sufficient in-house expertise to evaluate the external data used, resulting in U/W errors and financial loss	M-L	S	M
The Company's mortality assumptions for AUW business are unreasonable, resulting in understated reserves	M-L	M	M
The Company's reinsurance program does not adequately cover AUW business, resulting in capital strain	M-L	I	L
Errors in the AUW algorithms result in poor risk selection and financial loss	H	M	H

SAMPLE CONTROLS AND RESIDUAL RISK

Risk	Control	Residual Risk
The Company's pricing assumptions for AUW business are aggressive, resulting in financial loss	An external expert in AUW reviews the AUW program and the pricing assumptions and provides a formal opinion (Strong)	M
The Company does not have sufficient in-house expertise to evaluate the external data used, resulting in U/W errors and financial loss	The Company performs random holdouts to test the AUW relative to traditional UW (Moderate)	M
The Company's mortality assumptions for AUW business are unreasonable, resulting in understated reserves	The Company includes a margin on mortality assumptions in cash flow testing (Weak)	M
Errors in the AUW algorithms result in poor risk selection and financial loss	The models are subject to an annual formal validation process by ERM (Moderate)	H

SAMPLE TESTING

Risk	Sample Substantive Test*
The Company's pricing assumptions for AUW business are aggressive, resulting in financial loss	Review pricing assumptions relative to experience, industry data, and the specifics of the program
The Company does not have sufficient in-house expertise to evaluate the external data used, resulting in U/W errors and financial loss	Review background/experience of internal and external AUW personnel and, if needed, evaluate the UW analysis and experience to date
The Company's mortality assumptions for AUW business are unreasonable, resulting in understated reserves	Review the reserve adequacy analysis mortality sensitivities and potential exposure to higher mortality
Errors in the AUW algorithms result in poor risk selection and financial loss	Test the algorithm using backtesting, code review, and/or replication on a sample basis

**assuming no ability to rely on external audit*

CONCLUDING REMARKS

- Underwriting is evolving with newer underwriting techniques that are reaching more potential applicants
- How well these practices are implemented, and the quality of data sources used, will go a long way to providing predictable mortality outcomes
- The quality of many currently available data sources is sound and will only improve with time
- The maturity and quality of an individual insurer's program varies widely, and careful monitoring is important to avoid unexpected loss

CONCLUDING REMARKS

- For the companies surveyed, accelerated underwriting appears to be leading the charge in today's current state of underwriting
- Traditional underwriting will still have its place for applicants who are not triaged into an accelerated underwriting process
- Most companies' goal is to maintain similar mortality outcomes and pricing with what is offered today, at a lower cost

CONCLUDING REMARKS

- It may, in fact, turn out that those who do not innovate may be subject to anti-selection due to a drawn out underwriting process
- They may end up experiencing higher mortality if all of the good risks tend toward products and companies that offer accelerated underwriting
- They are also more likely to lose market share

QUESTIONS AND CONTACT INFORMATION

Questions?

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