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Managing misrepresentation

Webinar Executive Summary
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Re|think the Future of Risk Assessment
A Munich Re North America Life Webinar Series

NOT IF, BUT HOW

Managing misrepresentation

How can life insurers use third-party data and predictive models to manage the increasing risk of misrepresentation in accelerated underwriting programs?

Presented by Clinton Innes, Senior Data Scientist, Integrated Analytics, Munich Re North America Life, and Anji Li, Assistant Actuary, Biometric Research and Accelerated Underwriting Services, Munich Re North America Life.

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Misrepresentation risk has increased with accelerated underwriting programs.

Nearly ten years ago, life insurance companies began introducing accelerated underwriting (AUW) programs meant to reduce the reliance on traditional underwriting requirements, such as fluid testing and medical exams. As these programs evolved and expanded, especially since the start of the COVID-19 pandemic, carriers have seen an increase in misrepresentation risk, that which arises when an applicant provides untrue or misleading answers on an application. While misrepresentation risk is not new to life insurance, insurers need to be vigilant in monitoring this exposure to prevent deteriorating mortality experience beyond expected levels.

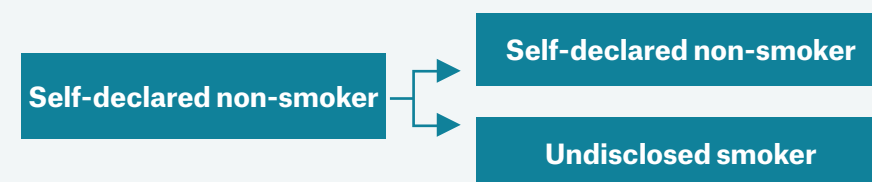## Smoker non-disclosure and BMI misrepresentation are two risks we often see.

With the reduced reliance on fluid testing and medical exams, smoking status, as well as build, are two areas that can easily be misrepresented. A smoker applicant can claim to be a nonsmoker, giving them access to lower premium rates meant for nonsmokers. Another example is when a person incorrectly states a lower weight on their application which would qualify them for a better rate class.

Predictive models using third-party data can help mitigate misrepresentation risk.
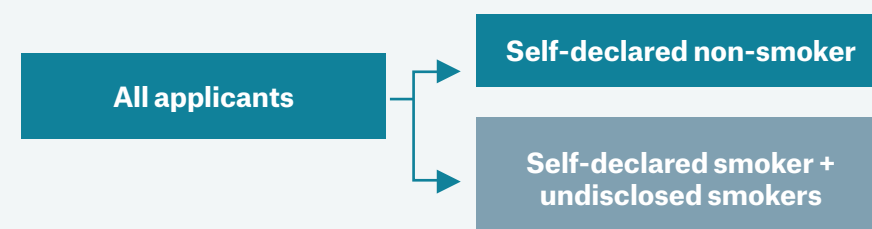
Without cotinine tests to confirm whether an applicant is a smoker, or a paramedical exam to confirm an applicant's build, insurers must look to other means to ensure that they are not taking undue risk. Insurers are increasingly exploring the use of third-party data such as prescription history, lifestyle, and demographics. This third-party data, combined with other key predictors such as age, gender, and policy details, can be used in predictive models to anticipate where misrepresentations might be happening. Of course, development and use of models should be done in compliance with regulatory guidance and applicable laws regarding risk classification.

Potential smoker model process:

Model smoker-nondisclosure

| Self-declared non-smoker | → | Self-declared non-smoker |
| | | Undisclosed smoker |

Model smoker-propensity

| All applicants | → | Self-declared non-smoker |
| | | Self-declared smoker + undisclosed smokers |

While predictive models can be used during the underwriting process to filter out potentially untrue or misleading statements, insurers should also look to random holdouts or post-issue audits to quantify and monitor misrepresentation risk.

Potential applications for misrepresentation predictive models:

- AUW expansion

- Triage

- Targeted post-issue APS's

- Ongoing monitoring

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About the authors

Clinton Innes, FSA, FCIA is a Senior Data Scientist at Munich Re North America Life's Integrated Analytics team. He specializes in building robust predictive models to address claims and underwriting challenges in the life and disability insurance environment. Clinton has worked with major primary carriers in the North American life market to develop and enhance various misrepresentation detection models. He has a Masters in Applied and Computational Mathematics from Simon Fraser University and is a Fellow of the Society of Actuaries.

Anji Li, FSA, CERA, MAAA is an Assistant Actuary, Biometric Research at Munich Re Life US. Her work focuses on the mortality impacts of accelerated underwriting (AUW) programs, both through monitoring of existing client programs and supporting new program launches. Anji has authored multiple white papers on third party data tool validations and AUW research. Prior to Munich Re, Anji began her career in life insurance consulting after graduating from Purdue University. She is a Fellow of the Society of Actuaries and a member of the American Academy of Actuaries.