

# Risk Selection in a Fluidless Environment

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Thomas Naraindas, Senior Data Scientist, Integrated Analytics

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**NOT IF, BUT HOW**

# Risk selection in a fluidless environment

How can predictive analytics and machine learning models help insurers determine which cases can go through an accelerated, fluidless underwriting process and which ones require full underwriting?

Presented by Munich Re's Senior Data Scientist, Thomas Naraindas.

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## Fluidless underwriting benefits both insurer and applicant.

Fluid testing, using medical labs, is a trusted way for insurers to determine mortality risk. However, it can also be inconvenient and time consuming for applicants, potentially turning them away from the insurer in frustration. Insurers who utilize an accelerated, fluidless underwriting program (AUW) provide a less invasive customer experience, enabling faster underwriting decisions using automation and predictive analytics.

Predictive models can learn and apply patterns in historical underwriting data.

By consuming the historical data behind past underwriter-led decisions, predictive models can learn the patterns and associations necessary to appropriately triage life insurance cases. While these models do not necessarily deliver the final underwriting decision, they can be used to determine whether a case is cleared to go through AUW or will need more evidence and must, therefore, go through full underwriting.

**Predictive models can also be used to:**

- Detect misrepresentations, such as applicants who claim to be non-smokers, while other evidence suggests a different perspective.
- Assign risk classifications, such as whether the case should be considered Standard or Declined.

## New data sources provide a different perspective on mortality risk

- New data sources can partially offset the information lost through fluidless underwriting.
- Several U.S. vendors offer access to a variety of data sources, such as prescriptions, credit scores, among others.

- Vendors also offer mortality-based risk scores, which utilize predictive analytics to provide a single risk score. These scores can be used to both appropriately triage cases and determine eligibility for risk classes.

It's important to monitor predictive models to see how they are performing, and continually assess accuracy.

There are two key methods to monitoring models:



#### Random hold out

which pulls random cases from the AUW queue and puts them through full underwriting to compare the results.



#### Post issue underwriting

which pulls additional evidence, such as APS, after a case has been issued, to evaluate the decision the AUW would have made vs an actual underwriter.

There are advantages and disadvantages to each method, to both insurer and applicant. Random holdouts provide a direct mortality comparison to full underwriting but require the applicant to be fluid tested, losing the improved experience of AUW and potentially driving withdrawals. The insurer must decide whether to perform a policy rescission if material misclassification is discovered.

Predictive analytics does not replace fluid testing entirely. It leverages new data sources to appropriately triage risks.

The role of predictive modeling in risk assessment is to utilize new data sources that may not have been possible through fluid testing only. AUW and predictive modeling can be beneficial in appropriately triaging cases to better understand which ones may need additional evidence, and which ones can proceed smoothly through the accelerated underwriting process.

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#### About the author

**Thomas Naraindas** is a Senior Data Scientist at Munich Re, Canada (Life). With a background in physics and statistics, Thomas has years of hands-on experience utilizing diverse data sets to build predictive models, derive key insights, and develop analytic solutions. He has worked with major carriers in the North American life market to analyze Accelerated Underwriting (AUW) programs and identify opportunities for increasing Straight-Through-Processing (STP). He is an expert in investigating new sources of data for use in AUW programs and has developed analytics solutions for Munich Re in underwriting and claims. Thomas is currently onboarding insurers onto Munich Re's Digital Assessment Platform (DAP) to develop analytics to garner comprehensive insights into its underwriting practices and enforce risk exposure.