



Improving your customer's experience through Streamlined Underwriting

An emerging idea for the Colombian market

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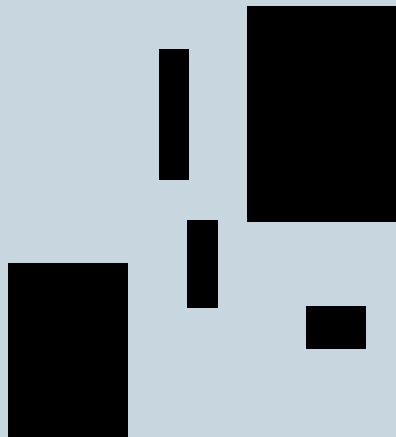
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Agenda

- Introduction to Streamlined Underwriting
- U.S. Market Trends
- How do I implement in my business?

Introduction to Streamlined Underwriting



What is Streamlined Underwriting?

- **Replicates full underwriting with fewer requirements**
 - Underwrites a policy without the need for blood work or attending physician statements
 - Data from outside sources is used to augment the application
- **Underwriting process may be fully or mostly automated with little input from underwriters**
 - Models are developed to handle new data and assign risk class scores
 - Underwriters review model decisions or make decisions on complex cases

Using predictive modeling for underwriting decisions

Key benefits seen in the U.S. Life insurance market

Increased speed to market

Policies are quoted and opened faster by classifying applicants using methods faster than traditional underwriting

Additional benefits:

- Mortality significantly more favorable than simplified issue (which also has the advantage of speed to issue)
- Mid-size companies can partner with reinsurers who are researching streamlined underwriting and its implications on mortality

Fully vs. Streamlined Underwriting

	Full	Streamlined
Primary Data	Policy form, physician's statement, blood work, etc.	Policy form, prescription history, etc.
Time	30-60 days	1-3 days
Expense	▲ High	▼ Low
Risk Class Determination	Full underwriter review	Automated or "targeted UW review"
Mortality	More certainty	Uncertainty
Distribution	Agents	Agents and digital platform

Changes in the sources of data

Many types of data are used to augment policy form information

Traditionally Relied Upon	New Sources of Focus
<ul style="list-style-type: none">■ Physicians statements	<ul style="list-style-type: none">■ Source for health records (U.S. Medical Insurance Bureau)
<ul style="list-style-type: none">■ Self-reported driving record	<ul style="list-style-type: none">■ Prescription data
<ul style="list-style-type: none">■ Lifestyle assessment	<ul style="list-style-type: none">■ Motor vehicle records■ Credit score (in some cases)

New data sources and vendors are entering the market to cater to the streamlined underwriting companies

Understanding data sources

Example: Prescription drugs



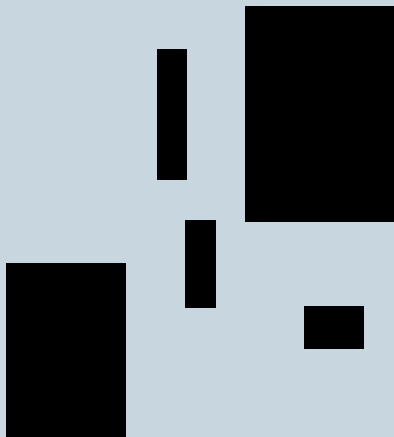
- **Prescription drug records provide information on current and historical medications used by applicants**
 - Drug combinations and dose can be used to infer current health
- **Using the new data sources can have limitations**
 - Prescription history can infer details on existing conditions, but is not as concrete as a physician diagnoses
 - Streamlined underwriting methods review combinations and doses of these drugs in an attempt to determine the most probable underlying condition
 - A single drug may be used to treat multiple diseases creating margin for error

Are there any drawbacks?

Some potential limitations

- Limited issue ages – upper limit of approximately 60 – which may be an issue for some permanent products
- In the initial introduction, there was limited opportunity for preferred risk classification – important for younger ages, but more carriers are offering the same underwriting classes now
- Mortality generally less favorable than fully underwritten (different perspectives)
 - No reliable experience available since relatively new; only case studies, back testing or anecdotal information
 - Need underwriting expertise in interpreting newer data sources (Rx, Credit Scores, etc.)
 - No available information regarding protective value of additional data sources in lieu of blood work or urinalysis
- Streamlined underwriting products are generally a large investment in new systems and models

U.S. Market Trends



U.S. experience adopting streamlined underwriting

Market trends

- In the U.S. we see major carriers developing streamlined underwriting programs and mid-sized carriers are following their leads
- Larger companies may develop their own in-house modeling expertise and mid size are more likely to rely on reinsurers
- They typically find that initial mortality uncertainty does not negate the increased sales, placement rates, and expense savings
- Products are very well received by the market
- As predictive analytics becomes more common we expect this trend to continue as companies attempt to keep up with competitors



Streamlined Underwriting – A lot of unknowns

Mortality Levels:

- Mortality still above fully underwritten, but some belief that industry will get there
- Rx closes some of gap from loss of labs, but there is still undisclosed, undiagnosed, and untreated:
 - Timing and duration of prescription matters
 - Dosage matters
 - Drug combinations matter
- Other data sources may include credit and / or social with potential future inclusion of lifestyle and electronic medical

Excerpts from May 2016 SOA Presentation “Accelerated Underwriting and Simplified Issue/New Underwriting?” and August 2016 Underwriting Issues and Innovation Seminar

Streamlined Underwriting – A lot of unknowns

Non-Disclosure:

- Studies show that 19.3% of life insurance applicants who tested positive for cotinine self-reported as non-tobacco and there is some evidence that smokers mortality is comparable to 230% now of non-smokers mortality
- 5% understate weight by 25 pounds or more
- Study indicates that 10-20% of people are comfortable lying about various factors to get lower rates

Monitoring:

- Monitor agents to limit anti-selection
- Have thresholds at target market / agent level
- Determine whether audits or Attending Physician Statement checks make sense

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Risks & mitigation techniques

How the U.S. is addressing

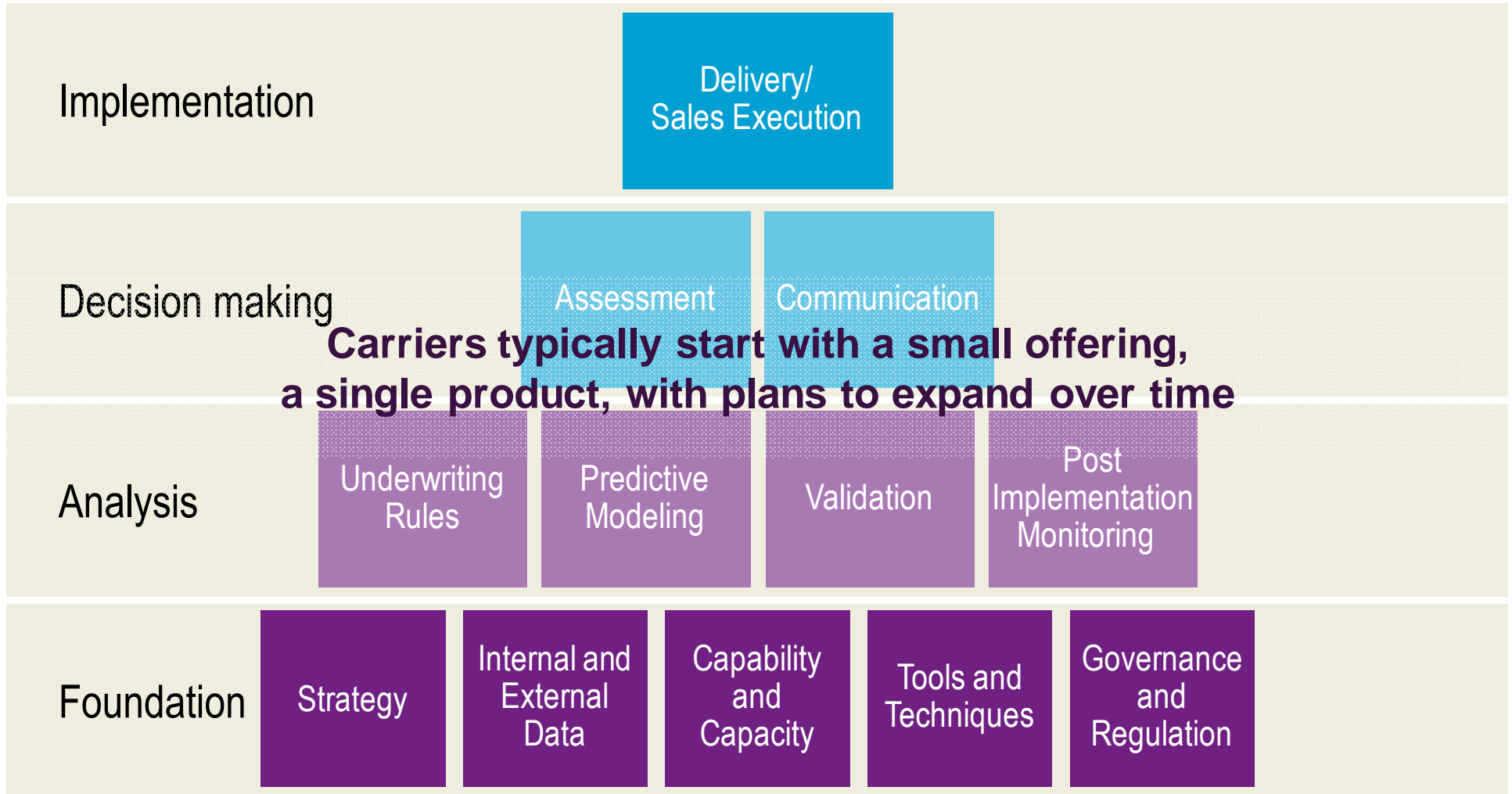
- **Anti-selection**
 - Change in mix of business (i.e., mix of conditions in applicant population)
 - Increase in misrepresentation on the application (e.g., smoking, weight)
- **Declines / Substandard appears in preferred class**
- **Conditions that do not exist in testing data**
- **Change in composition of risk classes**
- **Risk Mitigation Techniques**
 - Pilot – where test results for a period of time
 - Tele-underwriting
 - Agent monitoring
 - Risk class monitoring
 - Reinsurance
 - Timely monitoring with ability to modify algorithm / pull program quickly
 - Additional data sources

How do I implement in my business?



Implementing Streamlined Underwriting

Best practices framework



Key considerations

- Policies are underwritten using non-traditional electronic data sources
- Underwriting and review of information is automated
- Restrictions on age and face amount of policies may be more restrictive than for fully underwritten variations of the same product
- Modeling efforts are generally very involved and the use of predictive analytics is common
- Developing mortality assumptions under streamlined underwriting is difficult
- Aim to achieve reasonable consistency with the underwriting and mortality results of fully underwritten policies
- Most companies are not changing prices or products

Implementation methods

Direct writer

- **Use own data to develop scoring algorithms**
 - Need to digitize historical information that may use in new rating algorithm – can be significant effort
 - Determine how to use data in the predictive modeling exercise (e.g., pharmacy, MIB, etc.)
 - Best results are where you have all relevant data sources electronically that may be used going forward

- **Most companies have mimicked underwriting decision as opposed to modeling mortality directly**
 - For a subset of business, look to predict the current underwriting decision
 - Less exposure needed to complete the analysis
 - Allows quicker time to issue, but does not answer the question of whether current underwriting is effective

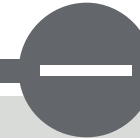
- **Generally use some combination of underwriting rules and results from the predictive model**

Direct writer



Benefits:

- Specific to your business, underwriting criteria / practices, and distribution channel
- Back testing can be done on your specific data and you can complete your own sensitivity testing
- You have control over the program and insight into what is driving results
- No reliance on third party for analytic work – just acquisition of the third party data (e.g., Rx, MVR, etc.)



Drawbacks:

- Need internal predictive modeling expertise and ability to interpret / check results for reasonableness
- May need medical expertise
- Need to get reinsurers onboard if use reinsurance on impacted block
- Need infrastructure to obtain results of scoring algorithm and use in underwriting

Implementation methods

Partner with a reinsurer

- **Reinsurer may directly offer or partner with data aggregators**
 - Some reinsurers are flexible about the offering – may offer automated information that feeds the score, as opposed to a score
 - May be able to tailor the results

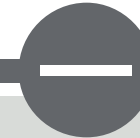
- **Use mortality scoring engine to determine underwriting decision**
 - Based on external data available quickly and application
 - Can use / not use data consistent with your underwriting preference (e.g., credit)
 - Rules / algorithms may not be specific to your underwriting manual, risk tolerances

Partnering with a reinsurer



Benefits:

- Predictive analytics work is already done – no need to acquire expertise
- Back testing already done on industry mortality data
- Back testing can be done with your data if you are willing to provide
- Some reinsurers have medical professionals able to interpret data, which companies may not have
- Reinsurer is often willing to take a material portion of the risk offering additional comfort with the program



Drawbacks:

- Black box – do not know the details of what is driving the decision
- Limited to data and mix of business that is able to be back-tested
- May not be tailored to your specific customer base / distribution channel
- Cost to obtaining the mortality score

Conclusion

Streamlined underwriting offers a way to reach new markets and improve customer placement rates

Large carriers in the U.S. market are embracing streamlined underwriting

Companies interested can explore multiple sources for data or partner with reinsurers

Certainly a way to improve customer experience, reduce expenses and increase profits, but still new and uncertain about its implications on mortality rates. Nevertheless, streamlined underwriting is one way for the insurance industry to react to digital market demands, so companies would rather work on different ways to manage this and any other related emerging risks.

Questions?



Contact information



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