DigitalOwl

The **COMPLEXITIES** Behind
LIFE INSURANCE UNDERWRITING

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Where 80% of the effort is put into 20% of the cases

FEATURING:

Jennifer "JR" Richards, DigitalOwl VP of Life Insurance

Yuval Man, DigitalOwl CEO & Co-Founder

Colin Kearney, SCOR Global Head of Underwriting & Claims

Nichole Myers, Ethos Chief Underwriter

Jason Bowman, CumPane Solutions CEO

Zach Pugh, Legal & General America Chief Underwriter

The Current Landscape

Life insurance underwriting has never been a simple occupation, but the challenges have increased exponentially in recent years. Chief underwriters are desperately trying to streamline their underwriting processes, maintain competitive pricing, help their carriers compete with flagging demand, and deal with increasing expectations for consumer-friendly underwriting.

> **"We are in the industry of the more you know the less risk you have. I do understand the balance of time versus quality or completeness of information. However, the more data you have, the better risk selection you do, especially for underwriting."**
>
> **Yuval Man**

Chief underwriters are progressively turning to new data sources and underwriting techniques to search for solutions. The growth of insurtech firms is pushing underwriters to challenge the current process and find ways to be better. In recent years, this has led to a shift from **traditional underwriting** towards **accelerated** and **automated underwriting.** While all of these methods have their advantages based on each situation, **each method has drawbacks** that make it difficult for the underwriter to accurately determine risks, creating the need for a new solution in underwriting.

TRADITIONAL UNDERWRITING

Traditional underwriting, also referred to as manual underwriting, is the process of a human reviewing the application, plus multiple sources of additional data collected in the underwriting process. Medical records, often referred to as "The Gold Standard" by underwriters, are becoming longer due to the proliferation of Electronic Medical Records (EMR).

> "We need to be helping consumers during the whole journey of the policy. We should be identifying how we can help people that have medical impairments and then engage with them. That should become the norm. Every insurer and every reinsurer should be pushing those solutions to make the consumer experience better."
>
> — **Colin Kearney**

The Challenges

Since traditional underwriting is completed through human review, several challenges can arise that could impact both the organization's bottom line and the experience for the customer.

Traditional underwriting is far more costly and time consuming for the carrier and the consumer. Even the most efficient operations can take several days – or even weeks – to make a decision. The delay decreases the number of cases an underwriter can examine over a period of time. This approach tends to drive up the cost of insurance, with complex cases requiring hours of review by senior underwriters and a frequent referral to the medical department.

Traditional underwriting also introduces significant friction to the application process. Medical records often require the customer to complete special authorizations or even connect with their providers to help the company obtain records. For any significant amount of coverage, most carriers require an ounce of blood (literally!) to assess the customer's health risk.

LOST Time → **LESS** Cases Reviewed → **LESS** Decisions Made → **LESS** Revenue Generated
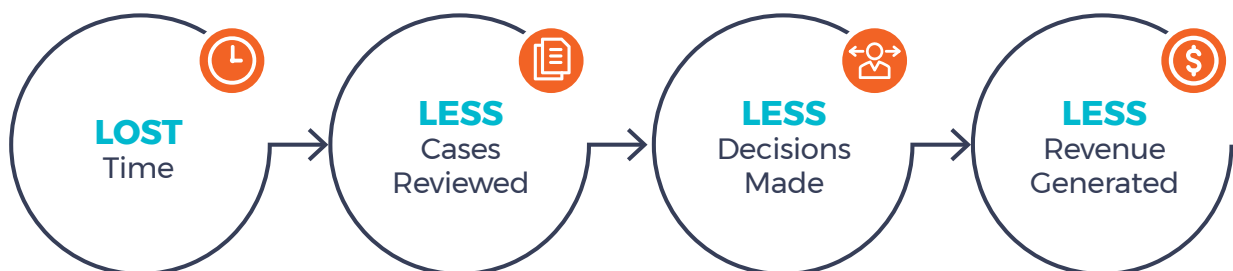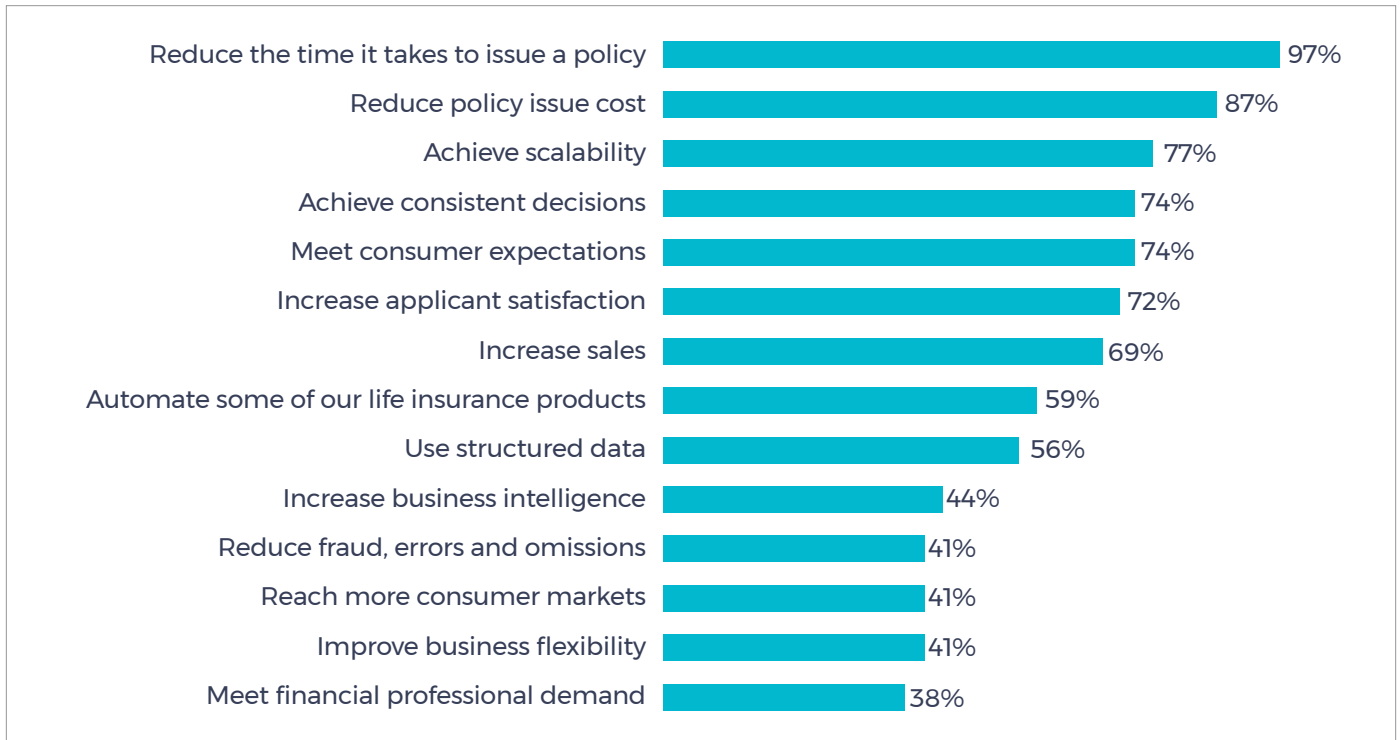
ACCELERATED & AUTOMATED UNDERWRITING

To alleviate the drawbacks of traditional underwriting impacting both the underwriter and the customer, companies are adopting accelerated and automated underwriting models.

Accelerated Underwriting eliminates the physical exam and replaces the blood profile for low-risk customers with data from external sources. This data is paired with new analytics and modeling techniques that allow the underwriter to make a decision much faster, resulting in a better experience for all parties involved.

The savviest carriers employ both acceleration and automation, achieving both a streamlined consumer experience and a faster, more cost-effective process for the carrier.

Previous studies illustrate that the main goals for carriers pursuing underwriting transformation are to focus on reducing the time and cost. This meets consumer demand and leads to a better buying experience.

Reduce the time it takes to issue a policy	97%
Reduce policy issue cost	87%
Achieve scalability	77%
Achieve consistent decisions	74%
Meet consumer expectations	74%
Increase applicant satisfaction	72%
Increase sales	69%
Automate some of our life insurance products	59%
Use structured data	56%
Increase business intelligence	44%
Reduce fraud, errors and omissions	41%
Reach more consumer markets	41%
Improve business flexibility	41%
Meet financial professional demand	38%

Transforming Underwriting, LIMRA 2017[1]

> **"Automation isn't new. It's been around. It's really a matter of being able to deploy it in the right ecosystem with the right tools where the underwriter and the company are experiencing benefits."**
>
> **— Nichole Myers**

Automated Underwriting is a solution that utilizes computers and artificial intelligence (AI) to perform the initial screening functions typically conducted by the underwriter. Like Accelerated Underwriting, this methodology reduces the manpower and time required to review a life insurance application.

While both processes provide a solid solution to the obstacles of traditional underwriting, **they each come with their own unique challenges.**

The Challenges

Accelerated and Automated Underwriting creates a more timely quote for the customer, but it also presents several challenges to the underwriter.

> **"One of the key paths to get there is to ensure you have access to all of the information in a structured format. If done correctly, that's when it becomes searchable, and all necessary evidence can be found and visualized to make an informed decision."**
>
> **— Jennifer "JR" Richards**

Structure of the Data Quality

A perfect Acceleration Program would be 100% accurate when determining what customers are approved without labs or exams. Even the best predictive models never reach 100% accuracy. Chief Underwriters and their partners, Chief Actuaries, struggle with determining the right balance between meaningful approval percentage yet keeping the mortality slippage low.

The key to success is better data, both to build the model and then to use for each applicant. Underwriters know the customer's prior medical history, but the challenge is how to unlock the primarily unstructured data hidden within the records to then be applied in both automation and accelerated underwriting models.

Data Sources

Newer data sources are often fraught with a variety of challenges.

Credit-Based Mortality Models

While directionally accurate, credit-based mortality models are not intuitive to consumers and facing an increase of regulatory scrutiny.

EMR

The entire industry is enamored with the idea of instantly acquiring EMRs. The development has since been hampered with slow adoption by the medical field and the inability to eliminate special authorizations.

Lab Data

Lab data can provide valuable – and structured – information; however, this is only a piece of the story.

Claims Data

Highly valuable and structured, the challenge with claims data is it can often provide false-positive signals based on a provisional diagnosis. For example, a potential diagnosis with further testing being done to determine the actual impairment.

> "At the moment, there is so much fragmentation with the information an underwriter has to look at to be able to make a decision. They have to jump all over the place between different sources and balance conflicting information."
>
> — **Jason Bowman**

> "One of the biggest obstacles is the complexity of turning APS records into structured data. In other words, having a machine that can pick and understand complex, unstructured medical text."
>
> — **Yuval Man**

> "I think ultimately at the end of the day, it's very simple. Getting less friction in that process in a way that we could provide value to our consumer while also maintaining a certain risk appetite within the company."
>
> — **Zach Pugh**

NATURAL LANGUAGE PROCESSING (NLP) FOR MEDICAL SUMMARIZATION

Medical summarization is the process of analyzing and categorizing a medical record based on the data and service providers in the record. The end product of medical summarization is a **comprehensive summary the underwriter can use to come to a data-driven, accurate decision.**

NLP technology is a subset of Artificial Intelligence that gives computers the ability to understand language that is written and spoken. The technology understands the terminology, relationships, structure, formats, and relevance of the extracted entities. It combines computational linguistics (rule-based modeling of human language) with learning models and bridges the gap between human communication and digital data.

This frees up internal resources for the underwriter and gives them exactly what they need to proceed with a confident decision. With increased speed-to-decision, underwriters can review applications far more efficiently, resulting in an accurate risk assessment and a better overall experience for them and the customer.

The summarized data can build increasingly accurate Accelerated Underwriting Programs and efficient Automation Programs. Structured data from all sources, especially "The Gold Standard" Attending Physician Statement (APS) record, is the key to both more effective traditional underwriting, automation, and acceleration programs.

Takeaways:

Traditional underwriting is not going away, but nearly 90% of life insurers are currently using or are planning to use automated underwriting techniques[2]. Even with these techniques, carriers understand there are limits. For example, if the application becomes too complex or the risk too large, carriers will still want an experienced underwriter asking the classic question, "Does it make sense?". Carriers will find a balance with automated underwriting techniques to facilitate clean and low face amount applications. Technology also streamlines the process to help the underwriter, their company, and the life insurance applicant because it presents the underwriter with APS summaries to make traditional underwriting more efficient and accurate.

NLP technology for medical summarization puts all the relevant data at the underwriter's fingertips, giving them the ability to review thoroughly, examine quickly, and proceed confidently.

80% of the effort shouldn't be put into 20% of the cases.

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References:

[1]Transforming Underwriting, LIMRA, 2017
[2]https://content.naic.org/cipr_topics/topic_accelerated_underwriting.htm