



The Forecaster

Risk Selection:

Considering New Mortality Markers



By **Dave Dorans**,
Vice President,
Mortality Solutions

While life insurers continue to reflect mortality improvements in their pricing, it is uncertain how much of the improvements can be attributed to better underwriting information and processes and how much to general mortality improvements in the insured population.

Dave Dorans, Vice President of Mortality Solutions, discusses life insurance underwriting with Tia Goss Sawhney, owner of TSSstrategic Consulting, LLC. Tia, a health actuary focusing on public health, believes that life insurers still have much room to improve mortality risk assessment via the underwriting process – from the design of health history questions to the use of technology to improve the process and to capture data for experience analytics.

Tia frequently presents at industry meetings and writes for industry publications on a broad range of life and health underwriting, technology and public health topics. She is currently pursuing her DrPH in public health from the University of Chicago.



By **Tia Goss Sawhney**,
FSA, MAAA
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David Dorans: How would you rate life insurers' effectiveness in underwriting?

Tia Goss Sawhney: If by "effectiveness" you mean how well underwriting practices and tools improve mortality performance, I think it's hard to say – and I'm not sure most insurance companies could really say. They may know at the aggregate level after a decade, but I'm not sure they know what specific decisions drive the results.

The life insurance industry – and the world around it – has changed drastically since the time traditional underwriting procedures were developed. Technology has improved by orders of magnitude. Information is more readily available, reliable and timely. And competition – from life insurers, settlement companies and other financial firms – continues to put pressure on traditional business models. Given these conditions, it's quite remarkable that the underwriting process has changed as little as it has over the years.

DD: How do you account for this?

TS: I think it boils down to tradition. Life insurers started out with a methodology and a set of questions decades ago, and they haven't really stepped back and reexamined the process or even the questions. We tend – everyone does it, every industry does it – to go forward with what we have, incrementally changing it. But I think we're reaching a point where incremental change isn't enough. We really need to rethink the whole process.

DD: Some would say that the current underwriting process has served the industry well. What most concerns you about it?

TS: I have two overarching concerns, each with its own set of challenges. One is collecting the right information and the other is ensuring that whatever information is collected is used to its maximum value.

The industry tends to focus on disease and ignore other potentially relevant information. I think this bias limits the potential to really break through to new territory and to consider other mortality markers. Companies spend enormous resources on blood profiles, the attending physician's statements (APS), stress tests, etc. to determine every

disease diagnosis that can be attached to the applicant now or in the future. Then they spend more resources collecting detailed information when diseases are found. None of this is bad, but I think it can give companies a false sense of security about a risk profile or a sense that they've invested enough in their risk selection program.

Another concern is that the current technology and processes that many insurance companies use don't permit robust outcome analysis. In reality, if you don't capture information systematically, it won't get into a database. Typically the application is imaged and stored electronically, but this format has no more value than a paper application from a mortality experience analysis perspective.

I. The Application

DD: The application – as a document and as a process – is arguably the most important component in information collection for life insurers. How effective is the typical application?

TS: Except for the addition of AIDS-related questions, we've seen very little change in the application over the last few decades. For the most part, the industry still operates in a paper-driven environment with an agent managing the process. To me, life insurers need to completely rethink the application, both the form and the process.

However, as much as I believe in new ideas, a blank slate is nearly impossible to contemplate. Anything but well executed, gradual change has too much potential to put underwriting, pricing and marketing out of synch and very likely could destabilize pricing.

DD: What additional questions should companies be asking?

TS: There are some "big-picture" questions that would be incredibly valuable in life underwriting. For example, from a public health perspective, we know that education is highly correlated with disease onset and then with disease survival. Highly educated people have fewer diseases and are less likely to die when they have a disease,

even when adjusted for clinical severity. I don't understand why life insurers don't ask questions about education level, except that they traditionally have not done so.

Information about accidents and emergency room visits – and the time of day they occur – should also get more consideration because it may reveal high risk activity, especially in the younger age groups. It can also shed light on a medical condition: If an applicant is in the ER because of an asthma attack, that says something about the severity of his or her respiratory condition.

Companies ask about doctors' visits but not about ER visits. Accidents happen all the time, but an ER visit at 2:00 in the morning is more likely to be influenced by alcohol or drug use. A question about ER visits may reveal more about risky behavior than an MVR. A clean MVR can't tell you whether an applicant is risk averse, a mass transit user or just lucky!

I'd also recommend that companies tailor applications to demographic groups. There should be core questions for everyone, but beyond that, we should be underwriting more toward the risk of specific demographic groups. Historically the application has been a static, one-size-fits-all document because companies print and distribute them in paper form all over the country. But as companies move to a tele-interview environment – and I'm a huge proponent of this – they can fine tune the underwriting process as needed.

Lastly, companies should start adding questions with future analysis in mind – even if the information doesn't have immediate use.

II. Other Mortality Markers

DD: This sounds like a new way of thinking. How would you suggest companies approach this?

TS: It is a new way of thinking, and it requires companies to broaden their perspective, to take in the "big picture" and not just the disease aspect of the applicant's life. Life insurers need to step back and really think about the information they need

to make an underwriting decision, examine the options for acquiring that information, and then develop well worded questions to elicit specifically that information.

DD: What are some of these “big picture” elements?

TS: In public health we talk about the “healthy adherer effects.” This refers to the number of collective decisions, each of which is small, that add a new dimension to the typical profile of a life risk – visiting the dentist, wearing seatbelts or joining a gym.

Obviously, we can’t underwrite for all these things, but there are some healthy adherer items that we can consider. We already mentioned the impact of education level on mortality. Health insurance is another incredibly valuable marker. Some people keep health insurance coverage because they have a health problem, and they know it’s too dangerous to go without it. Presumably you’d identify those people through underwriting anyway. But a healthy person who maintains health insurance is signaling the fact that he or she will have access to treatment if something happens. This is a good thing if you’re insuring their life. Also, given how health insurance traditionally is delivered in the U.S., consistent health care coverage signals a consistent work history, which is another “healthy adherer” item.

DD: Won’t regulators prevent the use of this type of information in risk selection?

TS: The use of credit scores and, more recently, foreign travel has been looked upon unfavorably, but I think the industry has a responsibility to continue discussions with regulators as to whether a particular piece of information is applicable to risk selection. Clearly, we need to make sure it is fundamental to risk selection and be careful that we can substantiate whatever we do.

III. Collecting the Information

DD: Who is in the best position to collect this information?

TS: Tele-interviewers! I’m a big advocate of tele-interviewing because I believe this approach presents multiple opportunities for improvement. The most important one

is that it provides a neutral environment for applicants to openly disclose the details of their health history. The interviewer is trained to ask questions in a professional manner, look for inconsistencies in responses and probe as needed. Also, the calls are recorded which may contribute to more forthcoming answers.

DD: It seems that producers are resistant to this, though.

TS: I can’t imagine that agents enjoy filling out applications. It takes a lot of time, they have to sit there and hope their clients won’t be embarrassed.

Here’s a challenge I’d like to give everyone in the industry: Try filling out your company’s application yourself. I’m very healthy but I can’t honestly answer in detail every single health question and fit it into those tiny boxes – on the paper and even in some of the electronic versions. Then people self select the details to disclose.

So the tele-interview seems like a win-win proposition for everyone. The agent saves time and the customer is more comfortable. And the insurance company gets better information on the first pass.

DD: How well do companies capture actionable data today?

TS: Companies collect so much information that is difficult to use in underwriting and virtually impossible to use for future analytics. Very little information captured in the application process finds its way into a database, and the main culprit is hand-written or imaged copies of applications. I think paper applications have outlived their usefulness, especially as we continue to move to greater technology use.

Companies need to transition to an electronic environment in order to maximize the value of the information they collect. This includes the third party tele-interview. And within these electronic formats we need to allow fewer free-text responses. We certainly can have another conversation about the benefits of integrating a rules-based engine into this process. But at a minimum companies need to electronically collect the data they’re using to assess risk.

IV. Rx Profiles

DD: We are seeing increased use of prescription drug databases in underwriting. How helpful are these?

TS: I think that prescription drug profiles should be a standard part of life underwriting. Drug profiles are instantaneous, inexpensive and relevant information. I would imagine that companies not using this information run the risk of anti-selection from distribution.

Studies say there are Rx records on about 80 percent of the people. You'd like to get every record on every person all of the time. Still, such a high coverage level is well beyond the critical threshold for protective value. Furthermore, advertising that a company orders Rx history gives the insured and the agent incentive to disclose information. Neither knows if that particular applicant will fall in the 80 percent or 20 percent.

Two important pieces of information are returned on these records: The drugs themselves and the list of prescribing doctors. Now, in addition to the primary care physician disclosed on the application, there may be several other doctors in the picture. These may be the physicians you want to order an APS from.

Another important aspect of the Rx profiles is its all-or-nothing response rate. If one prescription shows up on the drug history then it's likely that all of them will show up. If there is not an Rx hit for an applicant, it may be prudent to pursue further risk assessment.

DD: At what point should prescription data be collected on an applicant?

TS: As soon as possible – ideally before the tele-interview. The results of the profile can be integrated into the tele-interview script. The goal should be to get the best information possible on the first pass. Every time you have to go back and talk to the applicant again or send out for an APS you add days and weeks – and dollars – to the underwriting process.

Transamerica Reinsurance has demonstrated its commitment to risk selection improvements by investing resources in underwriting research and technology, client consultation and ultimately through tailored solutions to help clients meet the needs of their target markets. Tia's perspective sheds light on a number of markers that may be useful in mortality risk selection. Some carriers are already exploring some of these ideas, but great opportunities still exist for insurers to more fully capitalize on these concepts. We look forward to discussing these topics with our clients.



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TFN-0209-2000-06