A SAFE PREDICTION: USING A PREDICTIVE MODEL WILL ACCELERATE GROUP HEALTH SALES, IMPROVE PRICING, AND BOOST RETENTION

BY DAN BECKER, FSA, MAAA

When it comes to signing up new employer groups in your PEO's health insurance pool, collecting questionnaires has always been a sticking point. Today's clients are like any other consumers; they demand seamless and nearly instant purchase experiences.

Personal health questionnaires (PHQs) can take days or weeks to gather, causing delays that are less and less acceptable in an increasingly real-time business environment. They're also only as accurate as employees are conscientious.

If anything, general health questionnaires (GHQs) can be more problematic. When submitted with complete data, they provide a basis for sound medical underwriting, but they're a burden on your potential client, and their protective value is often little better than underwriting based on standard rate tables. Even in a best-case scenario, GHQs cannot meet the needs of PEOs who are under pressure to deliver quotes at the speed of competition.

So, skip them. I've been working with predictive models in the group health space for years, so I'm not surprised that more PEOs are adopting them to rapidly assess a new group's health risk without compromising the medical underwriting requirements expected by master policy holders. Not only can a model drastically cut the time it takes to prepare a quote (usually down to a few minutes), but the best models are statistically superior to conventional underwriting, making it easier for you to strategically price your new group and manage your entire book at the same time.

IT'S TIME TO DEMYSTIFY PREDICTIVE MODELS

Some insurtech companies trumpet their artificial intelligence tools as if predictive models were one step away from the sentient robots in science fiction movies. The truth is that predictive models aren't particularly futuristic or mysterious; they're just tools that use machine learning to find patterns in huge troves of data. But they do it very quickly and very effectively.

The first predictive model for underwriting in the group health space has been in the market for over a decade. Virtually all carriers depend on models to rapidly assess risk when they lack high-quality claims experience. Now, PEOs are finding they can reap the same benefits of speed and predictive reliability and are progressively incorporating this established technology into their workflows.

REPLACING PHQS AND GHQS WITH DATA

In the case of group health assessment, the data that powers predictive models usually consists of prescription histories and medical records. Machine learning searches through the health records of millions of people, looking longitudinally at lives over periods of years, often considering thousands of data points per life. A key advantage of this approach is that it allows for more nuanced risk assessment. It doesn't just assign the same rate increase to every person with a given condition; in some instances, the model may identify unique data patterns associated with lower morbidity.

This complex data science all happens in the training and model-building phases. After that, it's remarkably easy to use: One merely inputs the group's census data and lets the model predict future claims risks based on previously observed trends. It will usually kick out a single, easily actionable risk metric for the end user in moments.

The best part about this may be the most obvious difference: There are no questionnaires involved. All a PEO needs to provide is a simple group census consisting of basic demographic details. Some models don't even require employees' Social Security numbers. You don't need to worry about HIPAA authorizations, because even though the models input members' individual health records, personal health information is deidentified and scores are delivered at the group level.

NOT JUST EASIER, MORE ROBUST AND MORE LIKELY TO HIGHLIGHT LOW RISKS, TOO

In retrospective studies, models powered by prescription histories and medical data have consistently produced actual-to-expected claims ratios that are closer to the pin than questionnaire-based medical underwriting. Using a high-quality model lets you aggressively price less-risky groups to win their business, while you right-price high-risk groups. With this approach, you can strategically manage your entire pool without putting it all at risk of unexpected rate adjustments that can lead to clients looking elsewhere instead of renewing.

> *Not only can a model drastically cut the time it takes to prepare a quote (usually down to a few minutes), but the best models are statistically superior to conventional underwriting, making it easier for you to strategically price your new group and manage your entire book at the same time.*

While questionnaires and conventional medical underwriting can be useful in avoiding high risks, another advantage of models is that they will give insight into the cost differences among "good risk" groups where little information is disclosed on a typical questionnaire.

Of course, one can imagine situations in which a questionnaire could yield information that a model would miss. In such cases, a hybrid approach, using a model and questionnaire in tandem could result in the best risk assessment of all. But the more scrupulous the responses, the longer it takes to process the questionnaire. Indeed, almost any use of questionnaires serves to underline another advantage of models: consistency. Given the same input, models will always produce the same output. That's simply not a trait that applies to humans, whether they're employees answering health questions—or underwriters interpreting those answers.

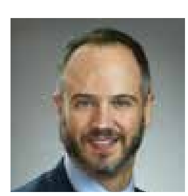
NOT ALL PREDICTIVE MODELS ARE CREATED EQUAL

Models are only as good as the data that they're trained on. Data quantity is usually measured in millions of lives in the training data. But data quality is just as important. What data is being analyzed and how is it weighted? If you want to model group morbidity, knowing that a group member has been treated for alcoholism is more relevant than knowing what brand of beer he prefers.

Few PEOs have the time or resources required to run a retrospective analysis on their own data, so choosing your model provider comes down to choosing a company with actuarial and clinical skills you trust.

Some providers also deliver predictive model results through a conventional underwriting rules engine. That can serve as a useful set of guard rails, providing additional information when you want it and giving you the confidence you need to trust the output.

Predictive models aren't the future of group health quoting—they're the present, and PEOs not using them may be at a severe competitive disadvantage. Are they superior to questionnaires? If you ask me, there's no question about it. ■



DAN BECKER

Product Director for Curv® Group Health
Milliman IntelliScript
Brookfield, WI