Insurers Test Data Profiles to Identify Risky Clients

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Life insurers are testing an intensely personal new use for the vast dossiers of data being amassed about Americans: predicting people's longevity.

Insurers have long used blood and urine tests to assess people's health—a costly process. Today, however, data-gathering companies have such extensive files on most U.S. consumers—online shopping details, catalog purchases, magazine subscriptions, leisure activities and information from social-networking sites—that some insurers are exploring whether data can reveal nearly as much about a person as a lab analysis of their bodily fluids.

In one of the biggest tests, the U.S. arm of British insurer Aviva PLC looked at 60,000 recent insurance applicants. It found that a new, "predictive modeling" system, based partly on consumer-marketing data, was "persuasive" in its ability to mimic traditional techniques.

The research heralds a remarkable expansion of the use of consumer-marketing data, which is traditionally used for advertising purposes.

This data increasingly is gathered online, often with consumers only vaguely aware that separate bits of information about them are being collected and collated in ways that can be surprisingly revealing. The growing trade in personal information is the subject of a Wall Street Journal investigation into online privacy.

A key part of the Aviva test, run by Deloitte Consulting LLP, was estimating a person's risk for illnesses such as high blood pressure and depression. Deloitte's models assume that many diseases relate to lifestyle factors such as exercise habits and fast-food diets.
This kind of analysis, proponents argue, could lower insurance costs and eliminate an off-putting aspect of the insurance sale for some people.

"Requiring every customer to provide additional, and often unnecessary, information" such as blood or urine samples, "simply makes the process less efficient and less customer-friendly," says John Currier, chief actuary for Aviva USA.

Other insurers exploring similar technology include American International Group Inc. and Prudential Financial Inc., executives for those firms confirm. Deloitte, a big backer of the concept, has pitched it in recent months to numerous insurers.

The industry is grappling with how to get policies into the hands of middle-class families more cost-effectively. Sales of life policies to individuals are down 45% since the mid-1980s. Deloitte says insurers could save $125 per applicant by eliminating many conventional medical requirements. Under Deloitte’s predictive model, the cost to achieve similar results would be $5, Deloitte says. The total underwriting costs for a policy range from $250 to $1,000, insurers say.

Making the approach feasible is a trove of new information being assembled by giant data-collection firms. These companies sort details of online and offline purchases to help categorize people as runners or hikers, dieters or couch potatoes.
They scoop up public records such as hunting permits, boat registrations and property transfers. They run surveys designed to coax people to describe their lifestyles and health conditions.

Increasingly, some gather online information, including from social-networking sites. Acxiom Corp., one of the biggest data firms, says it acquires a limited amount of "public" information from social-networking sites, helping "our clients to identify active social-media users, their favorite networks, how socially active they are versus the norm, and on what kind of fan pages they participate."

For insurers and data-sellers alike, the new techniques could open up a regulatory can of worms. The information sold by marketing-database firms is lightly regulated. But using it in the life-insurance application process would "raise questions" about whether the data would be subject to the federal Fair Credit Reporting Act, says Rebecca Kuehn of the Federal Trade Commission’s division of privacy and identity protection. The law’s provisions kick in when "adverse action" is taken against a person, such as a decision to deny insurance or increase rates.

The law requires that people be notified of any adverse action and be allowed to dispute the accuracy or completeness of data, according to the FTC.

Deloitte and the life insurers stress the databases wouldn't be used to make final decisions about applicants. Rather, the process would simply speed up applications from people who look like good risks. Other people would go through the traditional assessment process.

The use of the data also may require passing muster with insurance regulators. Regulators in Connecticut, New Jersey and New York, all home to major U.S. life insurers, say they haven’t been briefed.

They say their concerns would include ensuring that the approach doesn’t unfairly discriminate. "An insurer could contend that a subscription to 'Hang Gliding Monthly' is predictive of highly dangerous behavior, but I’m not buying that theory: The consumer may be getting the magazine for the pictures," says Thomas Considine, New Jersey's commissioner of banking and insurance.

AIG is in the early stages of analysis "to figure out what is meaningful and what is not" in the data, says Bob Beuerlein, chief actuary for its SunAmerica Financial unit. The tests are being conducted by an in-house "think tank" whose mission, he says, is "to see where we’re going in the future."

A Prudential spokesman says the insurer "is looking at" the potential of marketing data, declining to discuss details.

Some insurers are taking a wait-and-see approach. Deloitte's "methodology is sound," says Mike Belko, chief underwriter at USAA Life Insurance Co., but for now, "it’s too soon to say how much reliance we would put on the information."

The largest marketing-database companies in the U.S. include Axiom, Alliance Data Systems Corp., Experian PLC, and Infogroup. Each says it has detailed information on more than 100 million U.S. households, though contents of their databases vary as do their rules related to data use.
There are myriad sources of personal data. Acxiom recently told investors it takes in three billion pieces of information daily as businesses seek to "monetize" information about their customers. Some retailers share information about purchases made by people, including item description, price and the person's name.

Increasingly, information comes from people's online behavior. Acxiom says it buys data from online publishers about what kinds of articles a subscriber reads—financial or sports, for example—and can find out if somebody's a gourmet-food lover from their online purchases. Online marketers often tap data sources like these to target ads at Web users.

"Personally identifiable data from the online world is merged with personally identifiable information from the offline world, every day," says Jennifer Barrett, Acxiom's head of global privacy and public policy. She also says that, while Acxiom does store personally identifiable information, it doesn't store or merge anonymous online-tracking data, such as Web-browsing records.

Acxiom says it wouldn't let insurers use its data to help assess applicants, for fear of triggering the stiffer federal credit-reporting regulations. Infogroup says it isn't supplying information to insurers for this use. Experian said its marketing data may only be used for marketing purposes.

Units of News Corp., including The Wall Street Journal, supply information to marketing-database firms and buy information from them. "We have strict precautions around confidentiality," a spokeswoman said.

This isn't the first use of database mining in insurance. About 20 years ago, data pros found that some factors in people's credit histories have a strong correlation to claims on car and home-insurance policies.

In other words: The better your credit, the less likely you'll file a claim. Today, most car and home insurers use this phenomenon to price their policies. For this purpose, property-casualty insurers look at people's credit reports, as opposed to the consumer-marketing databases.

Life insurers haven't changed their general underwriting approach for decades, relying heavily on medical screening.

Deloitte's effort to promote predictive modeling to life insurers gained steam in recent months, boosted partly by the Aviva research. Deloitte detailed the test in May at a seminar hosted by the Society of Actuaries, a professional group.

At the seminar, a consultant helped explain Deloitte's concept by discussing imaginary 40-year-old insurance buyers, "Beth" and "Sarah."

Using readily available data, the consultant said, an insurer could learn that Beth commutes some 45 miles to work, frequently buys fast food, walks for exercise, watches a lot of television, buys weight-loss equipment and has "foreclosure/bankruptcy indicators," according to slides used in the presentation.

"Sarah," on the other hand, commutes just a mile to work, runs, bikes, plays tennis and does aerobics. She eats healthy food, watches little TV and travels abroad. She is an "urban single" with a premium bank card and "good financial indicators."
Deloitte’s approach, the consultant said, indicates Sarah appears to fall into a healthier risk category. Beth seems to be a candidate for a group with worse-than-average predicted mortality. The top five reasons: "Long commute. Poor financial indicators. Purchases tied to obesity indicators. Lack of exercise. High television consumption indicators."

Data From 'What They Know'
The Wall Street Journal analyzed the tracking files installed on people's computers by the 50 most popular websites, plus WSJ.com. Explore the data here and see separate analysis of the files on popular children's sites.

Another consultant detailed the Aviva test to the seminar attendees. Deloitte didn’t identify the insurer; Aviva confirmed its role to the Journal.

The consumer-marketing data for the test came from Equifax Inc.’s marketing-services unit, since bought by Alliance Data Systems. An Alliance spokeswoman says the company was unaware of the insurance-related test, which was done before it bought the former Equifax subsidiary. Alliance "does not provide its marketing data for such purposes," she says.

The goal of Aviva’s test: With 60,000 actual insurance applicants, figure out how to use the marketing databases and other information to reach the same underwriting conclusions that Aviva reached using traditional methods such as blood work. The 60,000 people were applicants Aviva had already judged.

Such predictive models wouldn’t necessarily look for indicators of all diseases, such as AIDS, because the insurer would likely learn about some conditions from the answers on an application. Rather, insurers say a model would tend to look for potential risks such as, for instance, diabetes (from, say, a poor diet).

Aviva declined to discuss the process in detail, but Mr. Currier says the insurer found that the model consistently yielded results that "closely aligned with those of purely traditional underwriting decisions."

The insurer says pilot projects with marketing data are continuing in its effort to improve clients’ buying experience.

Deloitte acknowledges the potentially controversial nature of its work. "No matter what their predictive powers may be, any variable that is deemed to create a legal or public-relations risk, or is counter to the company's 'values,' should be excluded from the model," its consultants wrote in an April paper.

Deloitte isn't the only firm pushing data-mining for insurers. Celent, an insurance consulting arm of Marsh & McLennan Cos., recently published a study suggesting insurers could use social-networking data to help price policies and aid in fraud detection.
A life insurer might want to scrutinize an applicant who reports no family history of cancer, but indicates online an affinity with a cancer-research group, says Mike Fitzgerald, a Celent senior analyst.

"Whether people actually realize it or not, they are significantly increasing their personal transparency," he says. "It’s all public, and it’s electronically mineable."

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