

# THE WALL STREET JOURNAL.

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<http://www.wsj.com/articles/bosses-harness-big-data-to-predict-which-workers-might-get-sick-1455664940>

## BUSINESS

# Bosses Tap Outside Firms to Predict Which Workers Might Get Sick



After finding that 30% of employees who got second opinions from top-rated medical centers ended up forgoing spinal surgery, Wal-Mart tapped Castlight to identify and communicate with workers suffering from back pain. *PHOTO: MIKE BLAKE/REUTERS*

By **RACHEL EMMA SILVERMAN**

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Employee wellness firms and insurers are working with companies to mine data about the prescription drugs workers use, how they shop and even whether they vote, to predict their individual health needs and recommend treatments.

Trying to stem rising health-care costs, some companies, including retailer Wal-Mart Stores Inc., are paying firms like Castlight Healthcare Inc. to collect and crunch employee data to identify, for example, which workers are at risk for diabetes, and target them with personalized messages nudging them toward a doctor or services such as weight-loss programs.

Companies say the goal is to get employees to improve their own health as a way to cut corporate health-care bills.

Privacy advocates have raised concerns about such practices. Employees generally have a choice in whether to participate in the programs. The services are new enough that relatively few workers are aware of them.

“I bet I could better predict your risk of a heart attack by where you shop and where you eat than by your genome,” says Harry Greenspun, director of Deloitte LLP’s Center for Health Solutions, a research arm of the consulting firm’s health-care practice.

An employee who spends money at a bike shop is more likely to be in good health than someone who spends on videogames, Dr. Greenspun says.

Credit scores can also suggest whether an individual will be readmitted to the hospital following an illness, he says. Those with lower credit scores may be less likely to fill prescriptions and show up for follow-up appointments, adds Dr. Greenspun.

Welltok Inc., whose clients include Colorado’s state employees, has found that people who vote in midterm elections tend to be healthier than those who skip them, says Chris Coloian, the firm’s chief solutions officer.

In general, midterm voters are more mobile and more active in the community, strong indicators of overall health, he says.

As employers more actively involve themselves in employee wellness, privacy experts worry that management could obtain workers’ health information, even if by accident, and use it to make workplace decisions.

Federal health-privacy laws generally bar employers from viewing workers’ personal health information, though self-insured employers have more leeway, says Careen Martin, a health-care and cybersecurity lawyer at Nilan Johnson Lewis PA. Instead, employers contract with wellness firms who have access to workers’ health data.

“There are enormous potential risks” in these efforts, such as the exposure of personal health data to employers or others,” says Frank Pasquale, a law professor at the University of Maryland, who studies health privacy.

Typically, when a company hires a firm like Castlight, Jiff Inc. or ActiveHealth Management Inc., it authorizes the firm to collect information from insurers and other health companies that work with the client company. Employees are prompted to grant

the firm permission to send them health and wellness information via an app, email or other channels, but can opt out.

Based on data such as an individual's history, the firms can identify a person who might be considering costly procedures like spinal surgery, and can send that person recommendations for a second opinion or physical therapy.

Spinal surgery, which can cost \$20,000 or more, is another area where data experts are digging in. After finding that 30% of employees who got second opinions from top-rated medical centers ended up forgoing spinal surgery, Wal-Mart tapped Castlight to identify and communicate with workers suffering from back pain.

To find them, Castlight scans insurance claims related to back pain, back imaging or physical therapy, plus pharmaceutical claims for pain medications or spinal injections. Once identified, the workers get information about measures that could delay or head off surgery, such as physical therapy or second-opinion providers.

Some firms, such as Welltok and GNS Healthcare Inc., also buy information from data brokers that lets them draw connections between consumer behavior and health needs.

Employers generally aren't allowed to know which individuals are flagged by data mining, but the wellness firms—usually paid several dollars a month per employee—provide aggregated data on the number of employees found to be at risk for a given condition.

To determine which employees might soon get pregnant, Castlight recently launched a new product that scans insurance claims to find women who have stopped filling birth-control prescriptions, as well as women who have made fertility-related searches on Castlight's health app.

That data is matched with the woman's age, and if applicable, the ages of her children to compute the likelihood of an impending pregnancy, says Jonathan Rende, Castlight's chief research and development officer. She would then start receiving emails or in-app messages with tips for choosing an obstetrician or other prenatal care. If the algorithm guessed wrong, she could opt out of receiving similar messages.

To steer more J.P. Morgan Chase & Co. employees to doctors in its network, insurer Cigna Corp. analyzed claims data to identify employees who lacked primary-care physicians. Those employees got personalized messages on Cigna's mobile app with recommendations for in-network doctors, says Michael Sturmer, a regional Cigna

executive in the Northeast. Employees who had downloaded the Cigna app used in-network providers about 2% more than they did before the system was implemented in 2015.

Some people may feel uncomfortable with the idea that their personal data is being used to predict their future. Castlight carefully test-markets its messages to try to avoid appearing too intrusive, says Mr. Rende. “Every word matters,” he says.

Maribeth Quinn says she was surprised to learn that her glucose levels put her at risk for diabetes, news she got in a message three years ago from HealthMine Inc., which says it analyzes health and claims data, but not other personal data. Ms. Quinn, a financial-aid executive at JFK Medical Center in Edison, N.J., has since lost 35 pounds, and is no longer deemed prediabetic. “It was in my face,” she says. “That made me do something about it.”

**Corrections & Amplifications:**

An earlier version of this article ran under the headline ‘Bosses Harness Big Data to Predict Which Workers Might Get Sick,’ which incorrectly implied that employers themselves were doing the data-mining. (Feb. 17, 2016)

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