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## Pills Tracked From Doctor to Patient to Aid Drug Marketing By KATIE THOMAS

In the old days, sales representatives from drug companies would chat up local pharmacists to learn what drugs doctors were prescribing. Now such shoulder-rubbing is becoming a quaint memory — thanks to vast databases of patient and doctor information being used by pharmaceutical companies to market drugs.

The information allows drug makers to know which drugs a doctor is prescribing and how that compares to a colleague across town. They know whether patients are filling their prescriptions — and refilling them on time. They know details of patients' medical conditions and lab tests, and sometimes even their age, income and ethnic backgrounds.

The result, said one marketing consultant, is what would happen if Arthur Miller's Willy Loman met up with the data whizzes of Michael Lewis's "Moneyball." "There's a group of geeks, if you will, who are running the numbers and helping the sales guys be much more efficient," said Chris Wright, managing director of ZS Associates, which conducts such analyses for pharmaceutical companies.

Drug makers say they are putting the information to good use, by helping a doctor improve the chances that their patients take their medications as prescribed, or making sure they are prescribing the right drug to the right patients.

Some doctors, however, expressed discomfort with the idea of sensitive data being used to sell drugs, even though federal law requires that any personally identifiable information be removed. "I think the doctors tend not to be aware of the depths to which they are being analyzed and studied by people trying to sell them drugs and other medical products," said Dr. Jerry Avorn, a professor of medicine at Harvard Medical School and a pioneer of programs for doctors aimed at counteracting the marketing efforts of drug makers. "Almost by definition, a lot of this stuff happens under the radar — there may be a sales pitch, but the doctor may not know that sales pitch is being informed by their own prescribing patterns."

The research firm IMS Health has tracked information about which drugs doctors prescribe since the 1990s, and over the last decade, the list of available information has expanded to include insurance claims data, which yields a trove of intelligence about patients' medical diagnoses and insurance coverage. Additional details about patients, including income, education and ethnicity, can also be available.

One company, SDI Health, promises to provide clients with "actionable analysis" by tracking people — on an anonymous basis — as they move through the "patient experience." That includes, according to their Web site, filling prescriptions at a pharmacy, visiting a doctor, being admitted to the hospital and undergoing lab tests.

"Through our unique and proprietary patient-linking technology, we connect all aspects of a patient's behavior," the company's Web site states. IMS Health acquired SDI in 2011.

"The sales representative theoretically has the ability to understand not only the doctor's behavior, and which other physicians are key opinion leaders that the doctor listens to, but also the behavior of that doctor's patients," said Jerry Maynor, the director of marketing for North America at Cegedim Strategic Data, one of the companies that performs data analyses.

Some said that tracking physicians' behavior was no different from techniques other industries use to sell products, including following a consumer's Internet activity. But David Orentlicher, a law professor at Indiana University who writes on medical ethics issues, said the pharmaceutical companies' use of data has become more invasive. "A lot of the information comes out of the doctor-patient encounter," he said.

Privacy advocates also pointed to research showing that people in anonymous databases can sometimes be re-identified. "It just seems like it skirts the edge of the laws that do exist," said Adriane Fugh-Berman, an associate professor at Georgetown University Medical Center who is a critic of pharmaceutical marketing tactics.

Doctors who object to the use of their prescribing data by pharmaceutical companies can opt out through a program set up by the American Medical Association in 2006. But doctors cannot block the use of their insurance claims and other data, and some doctors complain that few know the program exists. About 31,650 of the nation's more than 767,000 practicing physicians, roughly 4 percent, have enrolled in the opt-out program since it was created, according to the A.M.A., which also sells information about doctors to companies like IMS.

Drug makers and their consultants say their techniques can help doctors by providing information that is customized to their needs. To sell the respiratory drug Spiriva, for instance, the German drug maker Boehringer Ingelheim uses insurance and prescribing data to focus on doctors with patients who have chronic obstructive pulmonary disease but who are not frequently prescribing long-acting drugs like Spiriva, which have been shown to reduce sudden attacks of severe complications in people with the disease, compared to shorter-acting drugs.

"You start analyzing what they're doing and you can find out if, through a combination of factors, you can intervene," said Paul Fonteyne, the president and chief executive of Boehringer Ingelheim USA.

Some pharmaceutical companies and consultants said the industry mainly used the data to market to big decision-makers like insurers, by demonstrating that their drugs are more cost-effective or show better outcomes for patients. Boehringer Ingelheim and the insurance company Humana, for example, recently announced a partnership aimed at improving the health and reducing costs for people with C.O.P.D. and other chronic diseases.

"At the end of the day, calling on doctors in terms of a personal selling model is a lot less important to selling your drug," said Andrew Kress, a senior vice president at IMS. "You can read a dark side to any of this, but the reality is that most manufacturers that IMS does research for are really trying to engage in a much more productive dialogue with the health care providers."

Companies are refining their pitches to doctors in part because it is getting harder to market to them. Studies show physicians are less willing to speak to sales representatives, either because they are opposed to such pitches, or because they are under pressure to see more patients. At the same time, the industry has laid off thousands of sales representatives in an effort to save money as once best-selling drugs have lost their patent protection.

"The industry is now having a harder time getting direct access to physicians," said Edward Rhoads, a managing partner and principal at the New England Consulting Group. As a result, he said, drug companies are asking, "How can we get the information into the community in a different way? There's a big emphasis in understanding how physicians influence each other."

This field, called influence-mapping, seeks to put a high-tech twist on the old idea that nothing sells a product better than word of mouth. One company, Activate Networks, applies technology licensed from Harvard University to draw connections between physicians with patients in common, then uses those ties to accelerate the adoption of newly introduced drugs.

"You can tell a lot about a physician's behavior by looking at what the people they have relationship with are doing," said Peter DeWan, the chief scientific officer at Activate Networks.

Mr. DeWan said his company assigned physicians a ranking based on how connected they were, which helped companies decide where to send a representative, or whom to invite to a talk about a drug.

But some doctors questioned whether these techniques were best for patients. Just because doctors are well connected doesn't mean they are prescribing the right drugs, said Dr. David C. May, a cardiologist who practices in a northern suburb of Dallas and is chairman of the board of governors for the American College of Cardiology.

"We have seen, in our particular part of Dallas, situations in which the physicians were aggressively marketed to and the drugs were perhaps inappropriately used early on," he said.

Dr. Larry Miller, the chief executive of Activate Networks, noted that the company also advised clients like insurance companies, which are using the same networks to persuade doctors to choose more inexpensive treatments. "You still have to be very careful," Dr. Miller said. "We all know our own networks and know who we respect."