

# 'Mr. Watson—Come Here' A New Way to Share Data

When Alexander Graham Bell phoned it in, so to speak, who could have predicted that it would eventually lead to IBM's Watson Health tackling medication adherence with state-of-the-art analytics?

By Jan Greene

**H**uman behavior is a mystery. Sometimes we don't even know ourselves why we do things. But IBM's Watson Health thinks it can put its big-brain cognitive thinking cap on and figure us out, as revealed in the data fingerprints we leave behind when we enter the health care labyrinth.

IBM Watson Health has been growing fast, as parent IBM patches new health care analytics companies into the entity it created about a year ago. The company's \$2.6 billion purchase of Truven Analytics is a recent example. The result: a company with ginormous data sets (health information on 300 million Americans) and sophisticated algorithms. CVS Health, venturing far beyond its just-a-pharmacy roots, has partnered with IBM Watson Health (named for IBM's founder, not Bell's assistant) to tackle adherence woes and improve the sharing of information between its pharmacists and physicians.

The problems with adherence start right after a patient walks out of the doctor's office. Prescription in hand, he shoves it into his pocket, where it may never be seen again. One in five prescriptions don't get filled to begin with, says William Shrank, MD, chief scientific officer for CVS Health. Even when the bottle is sitting on a counter at home, many more people don't open it. Shrank talks about a recent study of Aetna members who had just had a heart attack and were offered their medications for free. They still took their medications only half the time.

People don't take their medications for any number of reasons. Maybe they're expensive, have annoying side effects, come in a bottle with a label that the person can't read, or are prescribed for a reason that was never explained. Or some people may feel fine and just don't believe they really need the medication. Such an array of rationalizations and excuses requires a personalized response. "We need to create a wide menu of interventions and target them to the right person," Shrank told an audience at the annual meeting of the Health Information and Management Systems Society (HIMSS) in March.

Some of that targeting involves getting into the

heads of individuals and finding the best way to reach them. Other times it's really not that complicated. For instance, CVS has already gained better medication adherence by understanding the common problem of too many medicine bottles. Expecting older or frail patients to keep track of multiple doses of multiple drugs each day is a formula for nonadherence and medication mistakes. CVS started packaging all of a patient's drugs together, so all of the morning doses are in one container, as are those for the rest of the day.

The IBM-CVS partnership is using cognitive computing to turbocharge and refine population health. They're using the data and Watson's ability to learn, not just compute, so that it may be foreseen when, for instance, a person with cognitive impairment and heart failure is heading downhill and needs an intervention. "We're already making great progress in our ability to anticipate who is going to have a decline [in health]," said Shrank at the HIMSS meeting. "If you can start identifying those folks with reasonable precision you can intervene early and in a cost-effective way."

## Understanding human behavior

CVS also envisions a future that goes beyond sending a terse text to a patient who doesn't show up for his checkup. Instead, this future uses data and Watson's off-the-charts artificial intelligence IQ to understand *why* he didn't show up and tailor the message accordingly. The ambition is also to share those insights with old-fashioned human beings—the physicians, nurses, family caregivers, and pharmacists whom, in an ideal world, would form a cohesive care team.

That sounds a little like what doctors used to aspire to before they were swamped with information, tending to EHRs, and speeding through 15-minute appointment blocks. "There's really no time to try to better understand what's going on with your patient between visits," Shrank said.

Watson, he believes, can be there to help. **MC**

---

*Jan Greene is a veteran health care journalist based in northern California. Her work has appeared in the Los Angeles Times, Health magazine, Hospital & Health Networks, and many other publications.*