



## Humana Studies Patient Noncompliance

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By Jan Shuxteau

Humana Innovation Enterprises Inc. will collaborate with pharmaceutical giant AstraZeneca and the University of Miami Leonard M. Miller School of Medicine, conducting research on the problem of noncompliance—the problem, that is, of chronically ill patients not taking their prescribed medications or treatments in the proper amount, on time, or at all.

Even though it seems like the prescribing physician could just remind patients that they're going to get sicker/die/end up paying more if they don't take their pills, it's not that easy. "Compliance is a significant challenge for healthcare," said Jonathan Lord, M.D., Humana's senior vice president and chief innovation officer.

In fact, the word "significant" is an understatement. The problem of medication non-adherence adds an estimated \$100 billion to healthcare spending in the United States every year, according to a study from *The New England Journal of Medicine*. Research shows that 43 percent of adults, 54 percent of children and teens and 55 percent of seniors do not take their medication as prescribed by their physicians.

"There are some people who do a great job with their medications and follow their doctors' orders religiously," said Lord. "But there are also some people who take their medicine only if it makes them feel better. If it doesn't, they stop taking it. Some who need their medicine don't take it for economic reasons. Some get confused, and some don't like the idea of taking something foreign into their bodies. They see reliance on medication as a failure on their part, and they won't deal with it. There are a lot of reasons for noncompliance."

Among other things, the research will try to predict which patients have these reasons. Researchers will ask: Who among the chronically ill have the most difficulty adhering to complex medication schedules? How can physician-initiated care management help with this problem? How should technology be used to offer patients needed support?

**High Standards.** The research will be conducted through the University of Miami Miller School of Medicine-Humana Health Services Research Center on the school's Miami campus. Initial estimates are that the project will cost between \$2 million and \$3 million and be funded through academia, according to Lord. Results will be open to the public and submitted to scientific journals for publication.

The School of Medicine has earned acclaim for research, clinical care and biomedical innovations. It has 777 faculty

physicians with more than 30 specialties. Research is a top priority, with more than 800 ongoing projects funded by more than \$217 million in external grants to University of Miami faculty. The school ranks in the top third among U.S. medical schools in terms of research funding. Humana, AstraZeneca and the medical school have each pursued research to improve the care of patients with multiple chronic conditions, such as those individuals who will be surveyed in the noncompliance study. According to the *Journal of the American Medical Association*, chronic disease was responsible for a global mortality of more than 40 million people in 2002. By 2020, it is expected that chronic disease will contribute to nearly 70 million deaths with direct medical costs escalating to more than a trillion dollars.

**Humana And University Partnership.** Humana and the University of Miami School of Medicine joined forces last year after the insurer became the university's employee benefits provider. They created the on-campus Health Services Research Center and began a research project to study the medical effectiveness and cost efficiency of popular employer-based insurance programs for such things as weight loss and smoking cessation.

### THIRTEEN CAUSES OF NONCOMPLIANCE

1. Not having a prescription filled
2. Taking an incorrect dose (too little or too much)
3. Taking medication at the wrong time
4. Forgetting to take one or more doses
5. Stopping the medication too soon
6. Prescription not collected or not dispensed
7. Purpose of treatment not clear
8. Perceived lack of effect
9. Real or perceived side effects
10. Instructions for administering not clear
11. Physical difficulty in complying (e.g. with opening medicine containers, handling small tablets or swallowing difficulties, travel to place of treatment)
12. Unattractive formulation (e.g. unpleasant taste)
13. Cost

Sources: Commonwealth of Massachusetts; Group Insurance Commission; British National Formulary

It was planned that much of the Health Services Research Center's research would be developed using medical faculty researchers, clinical data from the School of Medicine's records and Humana's information about claims and health benefits, as well as its statistical expertise and ability to develop sophisticated, predictive models. These parameters will remain essentially the same for this new research. The study may include additional research subjects such as other Humana members.

"Humana's ability to engage consumers in managing their health, no matter what their individual circumstances, will help in developing and testing solutions as this research delves into

the reasons behind non-adherence," said Lord. "Humana has, for example, used its voice-activated technology and its scan capabilities to find patient information in a computerized database. Based on a medication purchased, we can scan and tell a patient less expensive alternative medicines."

**Outlook.** The problem of patient noncompliance is far more compelling (and costly) than most people realize. There are a myriad of reasons why people don't or won't take their medications. Coming up with a predictive model is Humana's forte, but it will be no easy task to profile the likely non-complier. And, looking ahead, it may be even tougher to change their behavior. ■