

## “Nudge theory” explored to boost medication adherence

JUN 29, 2018

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To encourage patients to live healthier lifestyles, researchers at Intermountain Medical Center Heart Institute have adopted Nobel Prize-winning “nudge theory” for medication adherence in cardiovascular patients. Nudging is based on the idea that people don’t always make rational choices with their own best interest in mind. They are influenced by emotions and personal needs, but these choices may not lead to the best outcomes.

Intermountain and CareCentra use economist Richard H. Thaler, PhD’s nudge theory in a new study called Improvement in Medication Compliance Through the Implementation of Personalized Nudges: the ENCOURAGE Trial. This 12-month study looks at how personalized nudges may improve medication adherence.

“What matters is the behavior you want to change, not necessarily the disease process. If you’re trying to improve medication adherence, you want to do that whether it is a patient with congestive heart failure or diabetes,” said Paresh Shah, MD, director of general surgery and vice chair of surgery at NYU Langone Medical Center, during an event at MATTER in Chicago this spring. He is also the co-founder of CareCentra.

“The application of understanding a patient at an individual level to help them drive their behavior in a way that enables their care to be better is what we’re focused on,” Dr. Shah added.

With nudges, patients had six times more positive than negative responses. Here is how sending nudges can help improve medication adherence.

### About 1 in 2 patients miss their meds

“The problem we are facing today is that a lot of people, on average, are only taking their medication 40–50 percent of the time,” said Benjamin Horne, PhD, principal researcher of the ENCOURAGE trial.

Horne is an epidemiologist at the Intermountain Medical Center Heart Institute. “At Intermountain, an average of 60 percent of patients were adherent to their medication.”

CareCentra looks at segmenting the population according to what the individual needs of the patients are, what the patient’s perception of the world is, and what the different approaches are in the choices they make. Intermountain’s risk assessment tool and CareCentra’s MoBe Map, an app that provides risk identification, segmentation and behavioral modification to drive patient activation and behavior change, were combined to empower patient self-management.

This app combines a range of data from a patient’s reality, such as clinical, social and behavioral, to classify individuals into one of 16 segments that provide different health actions, including medication adherence or lifestyle changes. Based on various techniques and feedback from health outcomes, it then persuades patients toward the desired behavior through personalized nudges.

“We wanted to reach outside of the health system and contact patients in the best way possible to impact their health and health outcomes in a way we had not done before that was centric to the patient,” Horne said.

## Avoiding nudge fatigue

Four channels were used to nudge patient behavior: emails, texts, voice recordings and voice calls. Researchers recently added social media, interaction with Alexa and interface with the Apple Watch. With several channels available, some are better for certain nudges than others.

“Text messaging is a simple and potentially desirable way to approach patients to contact them in a relatively non-intrusive way that will help them out,” said Horne.

The best approach requires the patient to make choices and engage in behaviors that improve health outcomes. Nudges are designed to move behavior a slight amount through triggers. If the motivation and ability are both too low, it might mean that the nudges don’t work at all.

“To utilize nudges, we must understand both physical health and the view the patients have of their world,” he said.

However, patients didn’t want to think about their health too much, said Horne. They wanted minimal intrusion. To prevent nudging those randomized to the control group, researchers avoided initial nudges and discussed procedures prior to randomization as patients enrolled. After enrollment, patients in the intervention group received weekly nudges to minimize notifications and avoid alert fatigue. Out of 186 participants enrolled, only four withdrew (2 percent).

The ENCOURAGE trial will end in February 2019. With good responses so far, Horne expects nudges will translate to better medication compliance.

Learn eight steps to improve medication adherence and get answers to common questions about how to involve staff and patients in identifying nonadherence and changing behaviors with this free AMA STEPS Forward™ module.

The STEPS Forward collection offers free online modules that help physicians and system leaders improve well-being, including learning about the organizational changes that lead to physician satisfaction and improving resiliency.

Several modules have been developed from the generous grant funding of the federal Transforming Clinical Practices Initiative (TCPI), an effort designed to help clinicians achieve large-scale health transformation through TCPI's Practice Transformation Networks.

The AMA, in collaboration with TCPI, is providing technical assistance and peer-level support by way of STEPS Forward resources to enrolled practices. The AMA is also engaging the national physician community in health care transformation through network projects, change packages, success stories and training modules.

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