

Healthcare Innovation NEWS

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Making a Case for Healthcare Innovation

A Selected Case Study in Healthcare Innovation and Transformation...

Janssen Healthcare Innovation's Care4Today™ Mobile Health Manager Tackles Medication Adherence

Program Objectives:

- Tackle a complex problem using simple technology and everyday devices.
- Deliver potential increase in patient adherence.

Program Description:

In September 2013, Janssen Healthcare Innovation (JHI) launched the Care4Today™ Mobile Health Manager 2.0, a platform to address persistent medication adherence using mobile technologies. JHI is an entrepreneurial team within the Janssen Pharmaceutical Companies, a Johnson & Johnson company, charged with creating integrated healthcare businesses and enabling technologies that will transform the healthcare experience, improve outcomes and reduce healthcare costs.

Care4Today Mobile Health Manager is a convenient and secure mobile app and website that addresses a complex healthcare problem—medication adherence. It is an integrated mobile platform to support and encourage people to manage their health.

Patients often face significant challenges adhering to their medication regimen, especially when they are on several medications that need to be taken at different times throughout the day. Failures in medication adherence are extremely common. It is estimated that only about half of patients with chronic illness take medication as prescribed.¹ Failing to take medication on schedule can have serious consequences, including prolonged sickness and hospitalization. Lack of medication adherence causes adverse health consequences and at least 10% of hospitalizations in the United States each year.² In addition, medication-related hospitalizations cost the economy approximately \$100 billion a year.³

Innovation Using Everyday Devices

Using mobile technologies, JHI's Care4Today Mobile Health Manager takes an innovative approach to this problem. The overwhelming majority of American adults—about 90%—carry a mobile phone with them wherever they go.⁴ Many of them already use their phone to keep track of their daily schedule. Studies have shown that a text message reminder can significantly help patients maintain their prescribed drug regimen.⁵ These types of alerts are a simple yet effective way to nudge patients to take their medication on schedule, wherever they are and whatever they happen to be doing.

Recognizing the opportunity that mobile phones and text messaging present, JHI developed an easy-to-use messaging platform, including a mobile app (iOS and Android), SMS text for feature phone users and a website that patients can download for free to receive reminders to take their medication. With the mobile health tool, patients have a helpful and customizable tool to help them manage complex treatment regimens.

With Mobile Health Manager, consumers can set up reminders for any kind of prescription; over-the-counter medication; nutritional supplement; or health activity, such as walking or remembering to drink enough water throughout the day. The platform uses secure, two-way messaging on mobile phones, and each reminder message prompts a response that is recorded in the user's adherence report. Users can view reports summarizing their seven- and 30-day adherence, and share the information with their healthcare provider or caretaker.

Distinguishing Features: Care4Today Mobile Health Manager can be used on any type of phone, either by downloading the app or by registering on the Care4Today website and using text messaging for communication.

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Making a Case: Care4Today™ Mobile Health Manager ... *continued from page 2*

Users can sign up on the website to receive text reminders and can create a free account, schedule medication reminders and update information from either their mobile device or the website.

Care4Today Mobile Health Manager interfaces with other products to further motivate users. Care4Charity™ allows users to select a charity, including AIDS United, the American Diabetes Association and the American Cancer Society, which will receive a \$0.25 donation from JHI for each day users indicate they have taken all of their medications on time. JHI has committed a minimum donation of \$20,000 to each charity and a maximum additional donation of \$50,000 to all of them combined, totaling \$150,000 over two years (September 2013 to September 2015).

Another feature is Care4Family™ that allows caregivers to link family members to their account so that they can help monitor their medication adherence. When linking to other Mobile Health Manager users, family members can receive a notification if their loved ones fail to take their medications on time. Once alerted, they can call or text them as a reminder. Family members also can share their real-time medication compliance with their physicians.

With four in 10 adults in the United States caring for an adult or child with significant health issues, and more than 25% of children in this country taking medications to treat ongoing health conditions, Care4Family is designed to provide people with extra encouragement to stay on their treatment schedules.¹

Finally, the Care4Today Patient Dashboard offers care providers and pharmacies timely monitoring of self-reported medication adherence. A hospital, clinic or pharmacy can view all of a patient's adherence information in one online report, which also sends notification if a patient has not responded to an alert in the past three days.

The patient dashboard also provides a tool for providers to work directly with their patients to track medication adherence and health outcomes.

Evaluation Process

The JHI team is continually monitoring qualitative and quantitative feedback to measure the success of the Care4Today Mobile Health Manager. It studies aggregate data from active users and in order to gauge success, JHI looks at seven- and 30-day aggregate medication adherence scores for patients. In addition, the team is actively pursuing a number of clinical studies in various stages of development to demonstrate the value of Mobile Health Manager in various settings and patient categories, one of which has been recently completed and is in the final phase of data evaluation.

Results: To date, the Care4Today Mobile Health Manager has:

- 275,000 total downloads.
- 75,000 registered users.
- 200+ new downloads per day on average.

Lessons Learned:

- Some patients will spontaneously search for these types of tools, but a recommendation from a clinician seems to carry more weight.
- Downloads do not always translate into users. Promotion of Care4Today Mobile Health Manager is most effective when it is focused on the right users, rather than simply encouraging as many downloads as possible.
- Simple is better. The easier JHI makes the app to navigate, the more likely it will capture a user. More specifically, sign up and sign on need to have as few steps as possible and collect the minimal amount of data.

¹Adherence to Long-Term Therapies: Evidence for Action." World Health Organization, 2003.

²Venkatraman M, et al. "Interventions to Improve Adherence to Self-Administered Medications for Chronic Diseases in the United States: A Systematic Review." *Annals of Internal Medicine*. 2012;157 (11): 785-95.

³Ostlerberg L, & Boschke T. "Adherence to Medication." *New England Journal of Medicine*. August 2005;353:487-97.

⁴"Smartphone Ownership 2013." Pew Internet & American Life Project. Pew Research Center. 2013.

⁵Venice TM, et al. "The Effectiveness of Interventions Using Electronic Reminders to Improve Adherence to Chronic Medication: A Systematic Review of the Literature." *Journal of the American Medical Informatics Association*. 2012;19 (6):696-704.

⁶"Family Caregivers Are Wired for Health." Pew Internet & American Life Project. Pew Research Center. 2013.

⁷"New Research: Kids' Consumption of Chronic Medications on the Rise." May 19, 2010 press release. Medco Health Solutions.

For more information, visit <http://www.care4today.com>.

Video Content Management Improves Care, Reduces Costs... *continued from page 1*

Hospitals, clinics and other healthcare providers face the challenge of scaling their services to this large population of patients. These providers have to not only ensure they have enough doctors, nurses and assistants on staff, but also that the whole staff is educated on the latest treatments and protocols. In addition, healthcare providers need adequate resources to make care accessible to people living close to and far from clinical facilities.

Collaborative video technology, including video content management (VCM), can give healthcare organizations a clear advantage in addressing these major modern healthcare issues. It gives providers the two things they need most: a way to work together with patients and colleagues across locations and time zones and the tools necessary to make this collaboration scalable.

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"VCM gives providers the two things they need most: a way to work together with patients and colleagues across locations and time zones and the tools necessary to make this collaboration scalable."