The health care industry is diving headfirst into game theory as a way to engage consumers and get them to adopt healthier habits. But skeptics -- and even enthusiasts -- of this trend say there's no proof yet that rewards, leader boards and competition will produce lasting positive health outcomes. This is an audio report for iHealthBeat, a daily news service of the California HealthCare Foundation. I'm Tara Siler.

Insurance companies and employers are increasingly looking to the digital world to tackle health crises like obesity and diabetes and lower health care costs.

(Woods): "When you go through the front door, you're going to take a health survey."

Rhett Woods is chief creative officer of Rally Health, a startup based in Washington, D.C., and San Francisco. He's walking me through his company's recently launched online wellness platform.

(Woods): "The health survey is going to output what's called your Rally age, which is a health age calculation. And then it's going to make recommendations to either improve or maintain your health."

When users finish this survey, they earn coins, similar to airline miles. Users can earn more and more coins as they complete more tasks.

(Woods): "Like walking 30 minutes a day or even 15 minutes a day. Or eating more greens. There's even some fun ones in here like dancing."

(Siler): "So you're saying eating greens isn't fun?"

(Woods): "Well, you got to kind of mix it up." (laughs. fade under)

Users can also earn coins by connecting online with a health coach or by anonymously competing in challenges with other users through forums.

They can cash in their coins by entering a raffle -- for new headphones, for example. Some employers also have set up health savings accounts, and users can
then offset their health care costs, like co-payments and premiums, after
completing activities such as a health survey or physical exam. Woods says people
don't necessarily need an incentive to fill out the health surveys or do other online
activities, but, he says, they are a useful enticement.

(Woods): "I think it's those offline activities where people really need the
dollars to be motivated to go to a clinic or to a mobile vehicle where
they’re going to be having their numbers checked-- so you will absolutely
see higher returns on those."

Meanwhile Cigna is using a different product. Willis Gee is Cigna's director of client
innovation. He says since the company began using a gamified risk assessment,
there's been an uptick in completion of the survey and more people are returning to
the site.

(Gee): "Most people don't end up having to engage the health care system.
So as a result of that, they don't really have a good understanding of what
they're at risk for or ways that prevention should become a part of their
daily lifestyle. But as a result of having this gamified health risk
assessment -- -- they did."

But rewards can only go so far in changing behavior.

(Lister): "You know you can pay people to quit smoking, and they will in
fact quit smoking. But if you take that money away, they'll go back to
smoking again."

Cameron Lister is the lead author of a study by Brigham Young University that
surveyed 132 health applications and found they relied heavily on reward systems
but failed to actually teach people the skills needed to change their daily health
behaviors.

(Lister): "Do I know what healthy food is versus unhealthy food? Do I live
in a neighborhood where they have grocery stores nearby? Is the stress
level in my life low enough that I can actually make a change? Do I know
how to plan ahead in order to make some of these comprehensive changes
or am I just relying on will power?"

And do I want to change my health habits -- because it's good for me -- not
because I'm earning points? In other words can gamification help cultivate intrinsic
motivation? Kevin Werbach, an associate professor of legal studies and business
ethics at the University of Pennsylvania's Wharton School of Business, says
gamification can be a stepping stone.

(Werbach): "This is a technique like any other -- that if you want to be
effective with it, you need to spend the time and do the effort to really
focus in on who are the participants, what are their needs, what are their
motivations, how do you think about making something more focused on their intrinsic desire?"

And make the process fun. Tom Baranowski is a professor of pediatrics at Baylor College of Medicine, who evaluates and designs video games aimed at changing health behaviors to fight childhood obesity.

(Baranowski): "I think fun is critical. I think if we're going to be effective at health behavior change in the future, we've got to find fun procedures to reach people and to make them want to do it. I just don't think we're there yet."

Baranowski says a lot more research is needed to fully assess gamification in health care. But that means companies need to conduct some trials on their products and publish that research, something private companies are reluctant to do.

This has been a special report for iHealthBeat, a daily news service of the California Healthcare Foundation. If you have feedback or other issues you'd like to have addressed, please email us at iHB@CHCF.org.

I'm Tara Siler.