

Key principles of Health Behavior

Improving outcomes and lowering costs of chronic health conditions require a better understanding of health behavior—and the science, strategy, and technology that support it.

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What is Health Behavior?

Devising programs that help people make lasting behavioral changes in their health is difficult.

But countless studies show why it's the key to a brighter future for health-care, especially for millions of people who suffer from chronic health conditions, which account for 90% of all healthcare costs in the United States.*

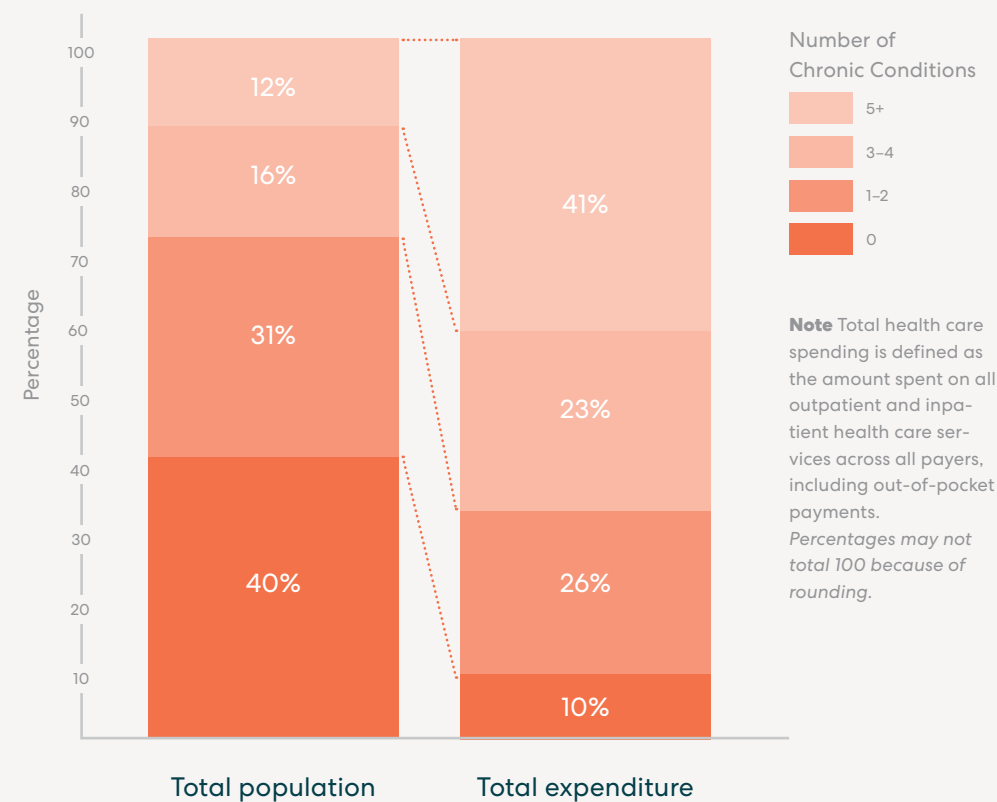
While the science of behavior change has been well-established for decades, the modern discipline of health behavior—applying behavior science to clinical care, in tandem with personalized digital tools, apps and analytics—is not well-understood by employers, HR and benefits leaders, or patients themselves. Although behavior is typically perceived as a function of the individual, for example, health behavior is influenced by multiple factors, such as a person's social and physical environment, their neighborhoods and communities and cultural norms.

This guide explores some of the fundamentals of health behavior, such as the increasing responsibility of employers to invest more in these types of programs; the complexities of managing human motivation to create sustainable change; the mistaken assumptions about health behavior that are handicapping adoption and progress; the symbiotic partnership between human coaching and digital health apps and tools; and how to approach measurement and ROI calculations of health behavior programs and interventions. ■

* https://www.rand.org/content/dam/rand/pubs/tools/TL200/TL221/RAND_TL221.pdf

Prevalence and spending by number of chronic conditions

Americans with five or more chronic conditions make up 12 percent of the population yet account for 41 percent of total health care spending





PART 2

It's time to invest in health behavior

Stanford health researcher Jeffrey Pfeffer explains how and why employers need to step up

Researchers have known for years that behavior change is one of the most effective ways to improve outcomes for the millions of people with chronic health conditions—and to bring down skyrocketing healthcare costs in the process. But employers and benefit leaders need

to do more to invest in modern health-behavior programs, says Stanford health researcher and author Jeffrey Pfeffer.



KEY TAKEAWAY

Health behavior needs to be a higher priority in employee health plans.

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Jeffrey Pfeffer

The evidence is there, but attention and investment lag behind

“The problem isn’t that we can’t prove health behavior matters. It’s that most benefits leaders tend to have a limited perspective and purview which, for the most part, is to ignore prevention and to not want to pay for benefits other than traditional health care.”

The reason some companies do better

“Most CEOs don’t pay sufficient attention to employee health, disease prevention and benefits administration. The answer to all this is actually incredibly simple. The companies that do a better job on effective health programs and outcomes are those where the executive leadership takes it seriously and pays attention to it. Companies that don’t do very much are those where senior leadership ignores it.”

What stops more companies from focusing on health behavior

“Many companies seem to be waiting for a solution that will solve everything—but perfect is the enemy of the good. I believe the solution is easy. Employers need to demand more from their benefits administrators, consultants and health care providers. They need to figure out what they want and get it.”

How to start making meaningful change

“If I wanted to improve customer service at a company, it wouldn’t be a hard thing to do. You would figure out what the measures were of customer satisfaction or engagement. You would run various experiments and track how well those experiments were working and implement those that provided the greatest value.

“It’s the same thing with employee health. There are standardized, well-validated measures of physical health and behavioral health. Companies should collect those measures, and then expect those measures to get better year over year, and if they don’t, companies should find people and vendors who have the expertise and will take responsibility to make things better.”

How to put employers on the right path

“There is a lot of innovation happening with health behavior, benefits administration and interventions to improve workplace health. But the companies and their benefits consultants are extremely conservative, so they’re not buying the services of innovative providers that could do a better job for them. They’re sticking with the same vendors who for the most part are not innovative and are decades behind where research says they should be.

“The other thing employers can do is to find ways to reduce workplace stress, which is what drives a lot of unhealthy behaviors that lead to chronic conditions in the first place.” ■

PART 3

3 big myths about health behavior

Biases and false assumptions have slowed adoption of more effective science-based approaches

Changing health behavior is hard, whether it means losing 10 pounds, exercising 30 minutes a day or managing the challenges of a chronic health condition. More people fail to meet their goals than succeed.



KEY TAKEAWAY

Many HR and benefits leaders favor entrenched biases over scientific evidence.

1

Myth Willpower is the engine of behavior change

Reality Repeating habits is a more useful determinant

One of the biggest misperceptions about health behavior is the belief that human willpower and self-control are the catalysts of great outcomes—and that some people have it, while others don't.

“Behavior change requires repetition that's not easily handled by willpower, simply because it requires us to persist,” says Wendy Wood, director of the Wood Habit Lab at the University of Southern California and author of “Good Habits, Bad Habits, the Science of Making Positive Changes that Stick.” “Habit memories form and change very slowly, and establishing one requires a lot of repetition.” To make that

possible, Wood says, it's necessary to identify the obstacles to the desired change and get rid of them—“reducing friction,” as she says.

Need help sticking with a diet? Then map a new route to work that doesn't pass your favorite doughnut shop. Or choose a seat further from the bar to make it harder to order another round. Park closer to the stairs than to the elevator to get more exercise. Setting up your environment to help promote the behaviors you are aiming for helps create lasting change.



2

Myth Behavior change follows a schedule

Reality Time frames are different for everyone, and setbacks are part of the process

Many motivational wellness programs are based on set schedules and clearly defined goals, from six-week weight-loss challenges to 10,000-steps-a-day exercise regimens.

But they often backfire, as employees push themselves to meet an immediate objective and don't make the small yet important changes to their routines that lead to sustained weight loss or alleviate stress, and they don't learn how to tackle new challenges or bumps in the road. They can quickly become discouraged and toggle back to old habits.

Science shows that quick wins are attractive but dangerous illusions. Some behavior changes take longer to instill than others, and times can vary widely from person to person. Rather than asking

participants to stick rigidly to a plan, health behavior programs are more likely to succeed when they build in flexibility and treat “failures” as an opportunity for self-knowledge.

“If we help people learn to treat these setbacks as expected moments that require reflection, compassion and problem-solving,” says Megan Call, a professor of psychiatry at the University of Utah School of Medicine, “we increase the chances of changing a new, helpful behavior into a habit.”



Myth Information and tools alone will drive change

Reality Coaching works better than explaining

The dismal success rates of stop-smoking campaigns and government nutrition programs make one thing clear: Simply informing someone about the dangers of unhealthy behaviors and the benefits of healthy ones has little or no effect on behavior.

What about tools designed to guide people to healthier actions, such as meal-by-meal diet plans or weekly workout schedules? By themselves, they aren't much more effective than information campaigns. They need to be accompanied by continuing guidance on how best to use them.

Instead of lectures, people need to understand why losing weight or exercising more is meaningful for them. And fixed meal plans and workout programs don't help when someone experiences inevitable setbacks that can cause them to drop out.

"There are new choices and variables all the time that impact health behaviors, like it's snowing outside or they get an injury," says Jennifer La Guardia, director of clinical product and behavior science at Omada Health. "We need to equip them to be ready to respond to any setback or challenge." ■



Changing health behavior requires well-designed programs that teach a process of continuous change.”

The art of the nudge

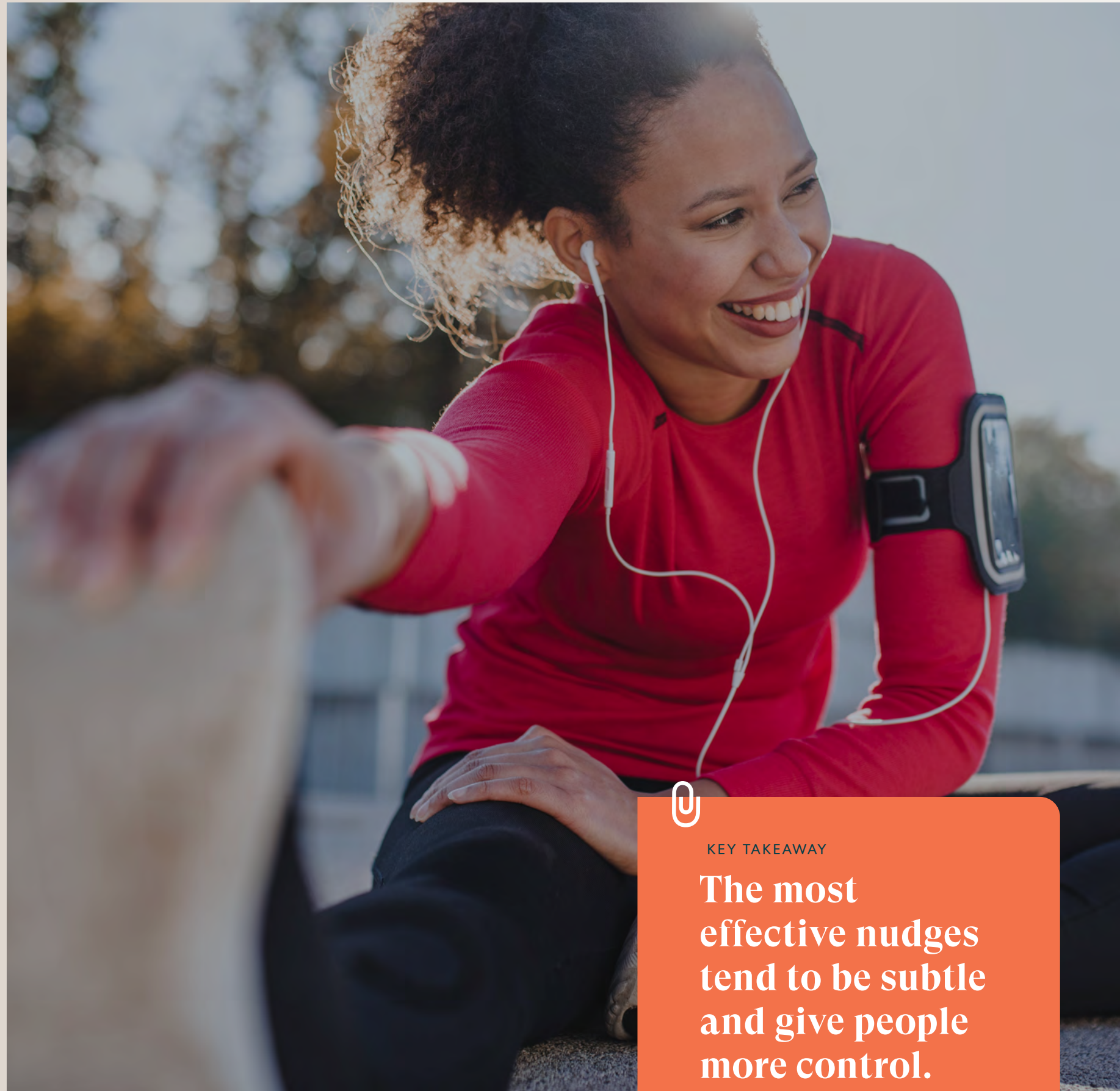
Health program designers use different strategies and tools to “nudge” people toward the right behaviors. Science tells us which ones work, and why.

The path to better health is littered with good intentions—and billions of dollars. Consider the year-end ritual of committing to a new fitness regimen or to quit smoking, only to snap back after a few attempts, then repeat the failed ritual 12 months later.

Aiming to solve this problem and armed with data that proves human behavior can be redirected with the right combination of interactions, information and coaching, new digital health programs and apps to support these goals have exploded in recent years. More than 1.4 billion people are expected to use them by 2025, according to Jupiter Research.

A central feature of many of these offerings is the “nudge”—ideally designed and personalized motivators, prods and reminders that can create lasting behavior change. (Think of a personal message from a coach or a caregiver, congratulating you after logging a workout or taking your medication on schedule.) Or, they can create no change at all, if targeted or delivered the wrong way. (Think of a health app prodding you relentlessly to take a lengthy quiz.)

Here’s a look at three types of behavioral nudges, and what makes them effective.



KEY TAKEAWAY

The most effective nudges tend to be subtle and give people more control.



1

Reminders

Anyone who's used a fitness app knows about reminders: text messages or device notifications tied to a program you've signed up for. A reminder might ask you to weigh yourself each morning and record the data.

The outcome of the reminder—a reward in the form of helpful information—is critical to success, says Gary Bennett, a professor of psychology and neuroscience at Duke University.

"If we do it well, we give you insights about yourself and make it easier to make those changes yourself," he says. For instance, it matters how long after stepping on the



Some of the best health outcomes integrate human providers with digital tools."

scale that participants get something in return. "You've got to minimize that time between the information and the prize," says Bennett.

Massachusetts General Hospital used reminders to support patients undergoing lumbar spine surgery; the system sent patients messages about healthy behaviors before and after their operations. Readmission rates, an important measure for hospitals, decreased 75%.



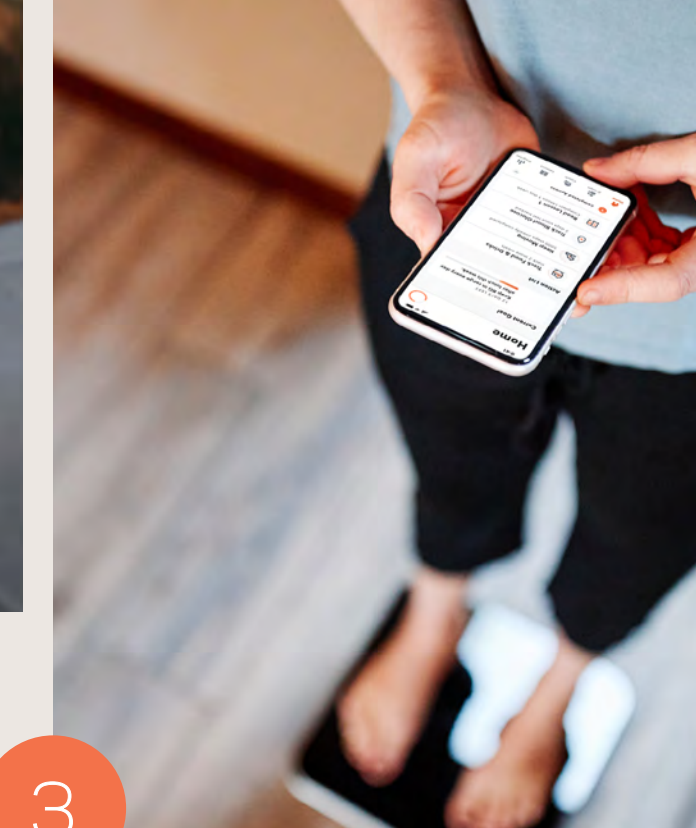
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Coach-enabled nudging

Some of the best health outcomes integrate human providers with digital tools. One example is a program that reduced the risk of diabetes among a Medicare population, according to a 2018 study in *Journal of Aging and Health*.

In this study (which focused on a digital care program from Omada Health and took place over 16 weeks), 500 individuals were given tools to improve their health, including lessons, daily exercises, reminders and more. Importantly, the tools sent the individuals' data to health coaches who reviewed the information and provided feedback or consultations.

Researchers concluded that the combination of coaching with the digital tools led to improvements in weight, well-being and overall health.



3

Personalized trackers

From FitBit to the Apple Watch's many apps, there's no end to an individual's options for keeping, compiling and monitoring health data. But do they work?

As behavior nudges, activity trackers can be effective in surprising ways: A review of data from 8,500 medical and pharmacy claims showed that people who used health trackers for steps, sleep, weight or diet were significantly more likely to stick to their medication schedules. Another study found that the use of digital trackers increased the amount of exercise by overweight postmenopausal women by 38 minutes per week. ■

PART 5

A better way to manage human motivation

To win important battles against chronic conditions like diabetes, depression or high blood pressure, patients must sustain a routine of health behaviors, track health markers to manage their conditions, and incorporate new feedback and strategies that can extend months or years.

Benefit planners and others should focus on managing motivation to change individual behavior, says Jennifer La Guardia, Omada Health director of clinical product and behavior science.

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KEY TAKEAWAY

Many of the most important behavior changes happen in between visits with caregivers.

What makes behavior science-based interventions so different

“To make health behavior changes that last, you have to be thinking about motivation over the long term and the components of behavior change that sustain it. It’s not simply a “nudge” or the incentives you might apply when you want to achieve a discrete ending or short-term outcome. It’s different in health behavior—it’s an ongoing activity, a process that you have to continue to maintain and attend to.

When health interventions don’t account for that, they tend to focus on quick wins. That’s why you see fad diets where people can often make big changes quickly, but they’re not sustainable because the changes haven’t really been integrated into their lives. They might be able to go without carbs for a few months, but once they start integrating them back in, it doesn’t work.”



Jennifer La Guardia

How to think about measuring behavior change

“Engagement is an important thing to measure, not just how many times you click into an app, but how much you’re engaging and trying to make behavioral changes. That said, you can also measure health benefits from seeing how people are making small, incremental changes towards different behaviors. One person might not lose a ton of weight, but if they’re walking more and they’re eating healthier, that’s going to have a benefit to long-term health.”

What digital-care tools and apps need to succeed

“You need different approaches. First is a bottom-up, individualized approach, where you iterate and create an intervention based on a person’s inputs. You want to have it make sense to the person and be easy and well-organized. You design it so that patients feel seen through the inputs they provide, and then you can tailor and personalize and iterate on an experience just for them.

But making health behavior changes is hard, and many people aren’t sure how to approach behavior change. They haven’t yet figured out a formula for what will be sustainable. So you have to combine it with guidance based on science—provide a structure for people that explains how behavior change actually happens. If you give people a roadmap and choices about how to engage, they can orient around how to go about making the change. You have to give them the building blocks of being able to make sustainable changes.”

A better way to set goals

“Many programs pay attention to the markers that are important in terms of business and lowering costs, but often don’t pay enough attention to what’s most important to patients in terms of their own goals.

Most people who join a weight-loss program will say they want to lose weight because it’s a common goal. But when you dig into that more, you find there are other goals that they really want. They want to feel better in their clothes or feel better about how they look. They want to reduce their risk for disease, be able to be more mobile or have less pain or have more energy.

Often, those things are tangible markers that help them to stay engaged. When we pay attention to these issues that make sense to them, it can help them to see progress—even if the number on the scale isn’t moving.” ■



PART 6

Rethinking the ROI of health behavior

Measuring health behavior is far more difficult than advertised. But getting it right is critical for health programs to succeed.

Benefits managers spent nearly \$50 billion in 2019 on employee wellness programs, which are largely seen as a brake on skyrocketing healthcare costs.

While the programs have shown some success in getting employees to exercise more and watch their weight, recent studies have found that many have no significant impact on important measures of success, such as lower cholesterol, reduced healthcare spending, less absenteeism or improved job performance.

Experts say the problem is that too many of these programs rely on the wrong benchmarks for defining and tracking success. Many focus on surface metrics, like regular weigh-ins or calorie counts, that by themselves don't signal meaningful behavior change. They also rely frequently on incentives, which tend to be fleeting and ineffective long-term.

Here's a look at three areas—engagement, tracking and outcomes—where existing measures of health behavior fall short, and how evidence-based benchmarks defined by behavior research can lead to greater success.



KEY TAKEAWAY

Better measures of a successful program are new behaviors that employees learn and repeat on their own.



Engagement: Focus on quality, not quantity

Benefits managers commonly look at engagement metrics as leading indicators of a program's effectiveness—the number of times per day an employee clicks into a fitness app, or how much diet or exercise content they've consumed. The problem, healthcare professionals say, is that engagement data doesn't signal whether people are adopting new behaviors that lead to meaningful changes.

"There's a tendency in digital health programs to try to generate more engagement under the hypothesis that more engagement will inevitably lead to better health outcomes," says Ryan Quan, director of data science at digital care provider Omada Health. "But our data shows that engagement quantity isn't the key to outcomes; instead, it's a combination of the consistency and quality of that engagement that matter at least as much."

Digital wellness programs don't work very well without the help of human coaches and peer-group communities. A far better predictor of success is how consistently employees engage with the coach or a community of other participants.

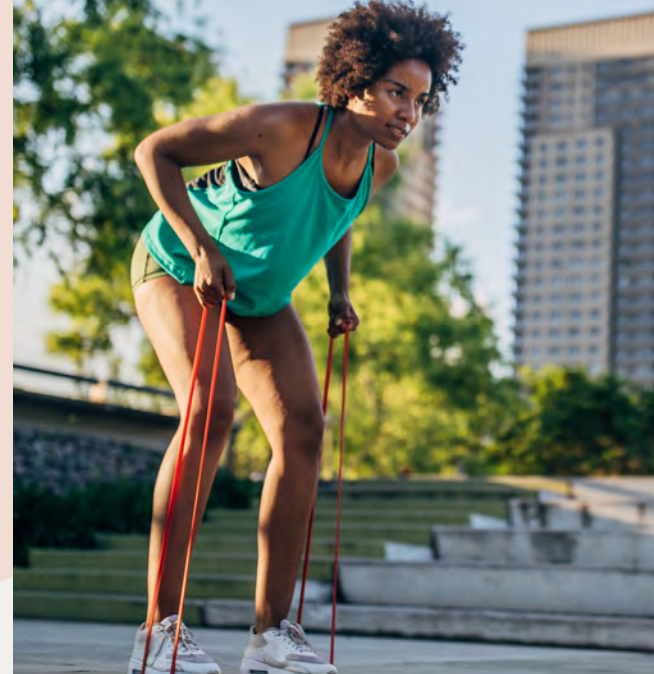


Some of the best health outcomes integrate human providers with digital tools."

Tracking: To create change, combine data insights with actionable steps

Digital wellness apps make it possible to track all sorts of health information, from heart rates, calories burned and time spent exercising to daily weigh-ins and meal-logging. But the data points don't always give the whole picture.

For example, participants in a diabetes management program can get continual readings of their glucose levels. But simply tracking that data doesn't help the participant change behaviors, cutting out an afternoon snack, for example, or enable the program manager to track whether progress is being made.



Working with a coach or a peer group can help turn this information into action, Quan says. Coaches can help set goals and develop plans for meeting those goals; they can also identify other issues, such as stress or mental health concerns, which can compound chronic health problems. Tracking with those types of approaches is a far better indicator of overall success, Quan adds.

Outcomes: Long-term health gains matter more than short-term cost savings

Traditional measures of health program outcomes, like first-year ROI and healthcare savings, can be useful, but they don't always describe or capture meaningful health improvements. They can also be misleading.

One study in 2013 of a wellness program at a Missouri hospital system found that while it reduced in-patient costs, other expenses rose, and the employer saw no net savings. At the same time, hospitalizations for conditions targeted by the program were 41% lower than for members in a comparable group—a significant benefit for those who avoided a hospital stay.


Even when a program's metrics show success, they can obscure the underlying reasons for the improvement. Another study examined the effects of a digitally based "intensive behavioral counseling" program run by Omada Health. The goal was to help a group of seniors lose weight and reduce the risk of diabetes and other chronic health problems.


Participants reduced their weight on average by nearly 7% in 26 weeks. Researchers estimated that this would translate to medical-spending savings of as much as \$1,770 per person in three years and \$14,200 in 10 years, or \$12,840 after factoring in program costs.

The takeaway for health plan managers: Patience pays. "When we look at the trajectory of long-standing behavior change, we see that success builds over time," says Quan. "The goal of a successful program should be optimizing for the long term." ■


THE OMADA GUIDE

Key principles of Health Behavior







Diabetes




Musculoskeletal



Prediabetes
& Weight
Management



Hypertension



Behavioral
Health

Omada Health combines the latest clinical treatment guidelines with breakthrough behavior science to make it possible for people with chronic conditions to achieve long-term improvements in their health.

