



LifeVest

Greater Philadelphia Business Group on Health

Behavioral economics: the key to better wellness outcomes

Agenda

1. Overview and introductions	Jeff Wild	5 min
2. Leveraging Insights from Behavioral Economics to Change Health Behaviors	Mitesh Patel	15 min
3. Questions and answers	All	5 min
4. Wearable Devices for changing Health Behaviors	Mitesh Patel	15 min
5. Questions and answers	All	5 min
6. Applications of behavioral economics in the workplace	Jon Cooper	10 min
7. Questions and answers	All	5 min

Leveraging Insights from Behavioral Economics to Change Health Behaviors

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Center for Health Incentives and Behavioral Economics

January 29, 2015

Watching Over the 5000 Hours

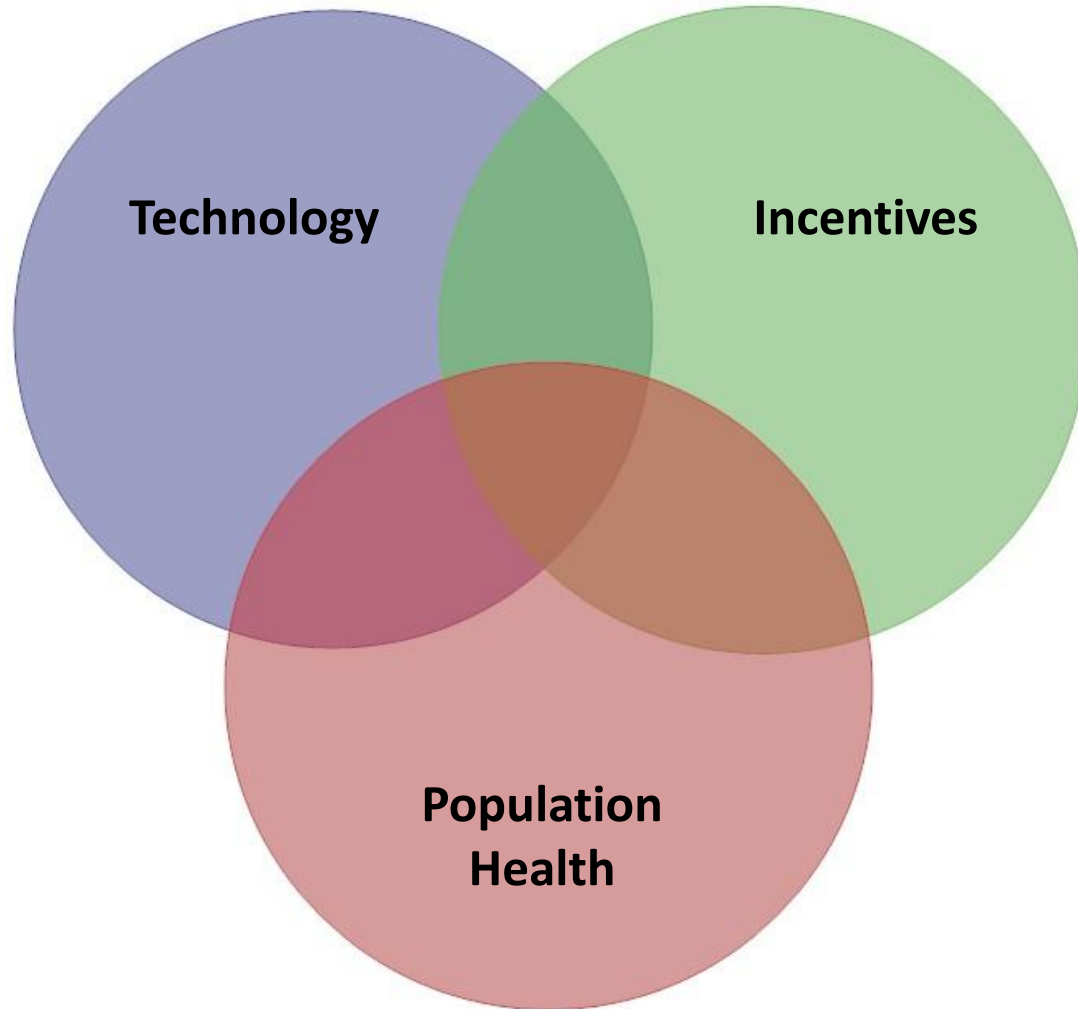
- The average person spends only a few hours a year with a doctor or nurse
- In contrast, we each spend more than 5000 waking hours doing everything else within our everyday lives
 - Choosing what to eat
 - Deciding whether to exercise
 - Remembering to take our medications

New Models of Care Are Needed

- **Reactive, visit-based model is not sufficient**
 - Emphasizes delivering care when you get sick
 - Allocates most resources to interactions with the health care system
- **Proactive model**
 - Passively monitor behaviors within individuals' everyday lives
 - Anticipates you need more attention and addresses issues before you become sick



Three Evolving Trends



Innovations in mobile technology allow us to monitor health behaviors

Science of motivation has evolved based on insights from behavioral economics

Health care financing is shifting focus

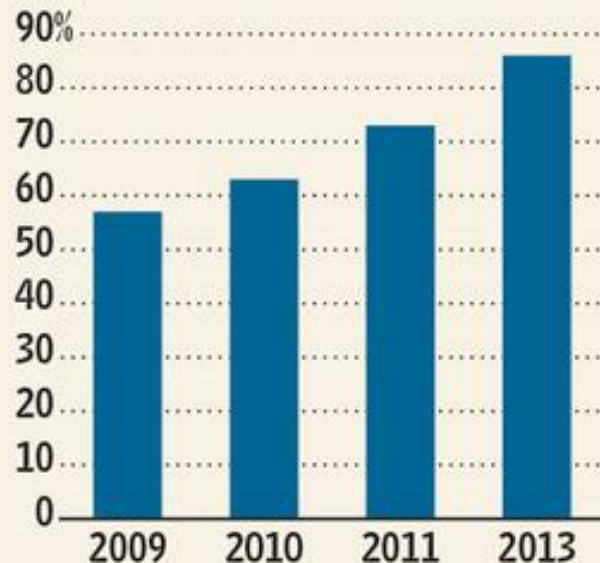
Wellness Incentives and Policy Reform

- HIPAA – Section 146 (1996)
 - Prohibits plans from conditioning eligibility or premiums based on health *status* (e.g cancer or diabetes) but does allow **20%** of premiums to be rewarded as incentives for programs based on health *factors* (e.g. BMI, BP, LDL, smoking)
- ACA - Section 2705 (2010) – “Safeway Amendment”
 - Beginning in 2014, employers may use up to **30%** of employee health premiums to provide **outcome-based wellness incentives**
 - **50%** of premiums can be used as incentives if smoking is targeted
 - Rewards must be made to all “similarly situated individuals”
 - E.g. premium discount or rebate, waiver of a cost-sharing mechanism, absence of surcharge, or a new benefit not currently in the plan

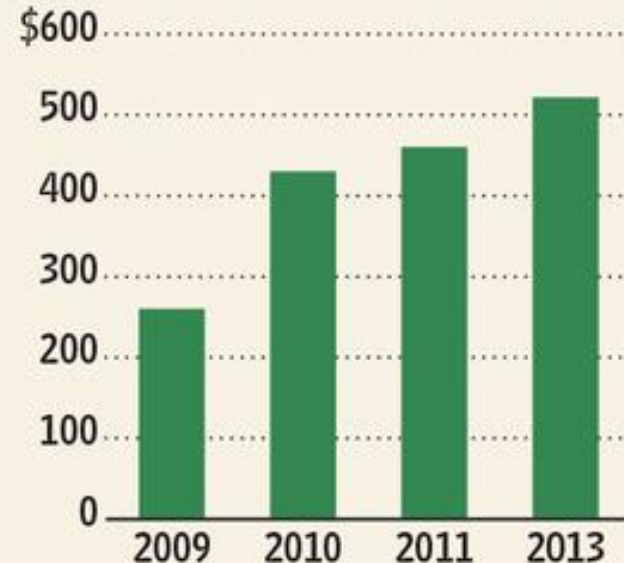
Growing Adoption of Wellness Incentives

Spreading the Health

Percentage of surveyed companies offering wellness incentives



Value of wellness incentives per employee

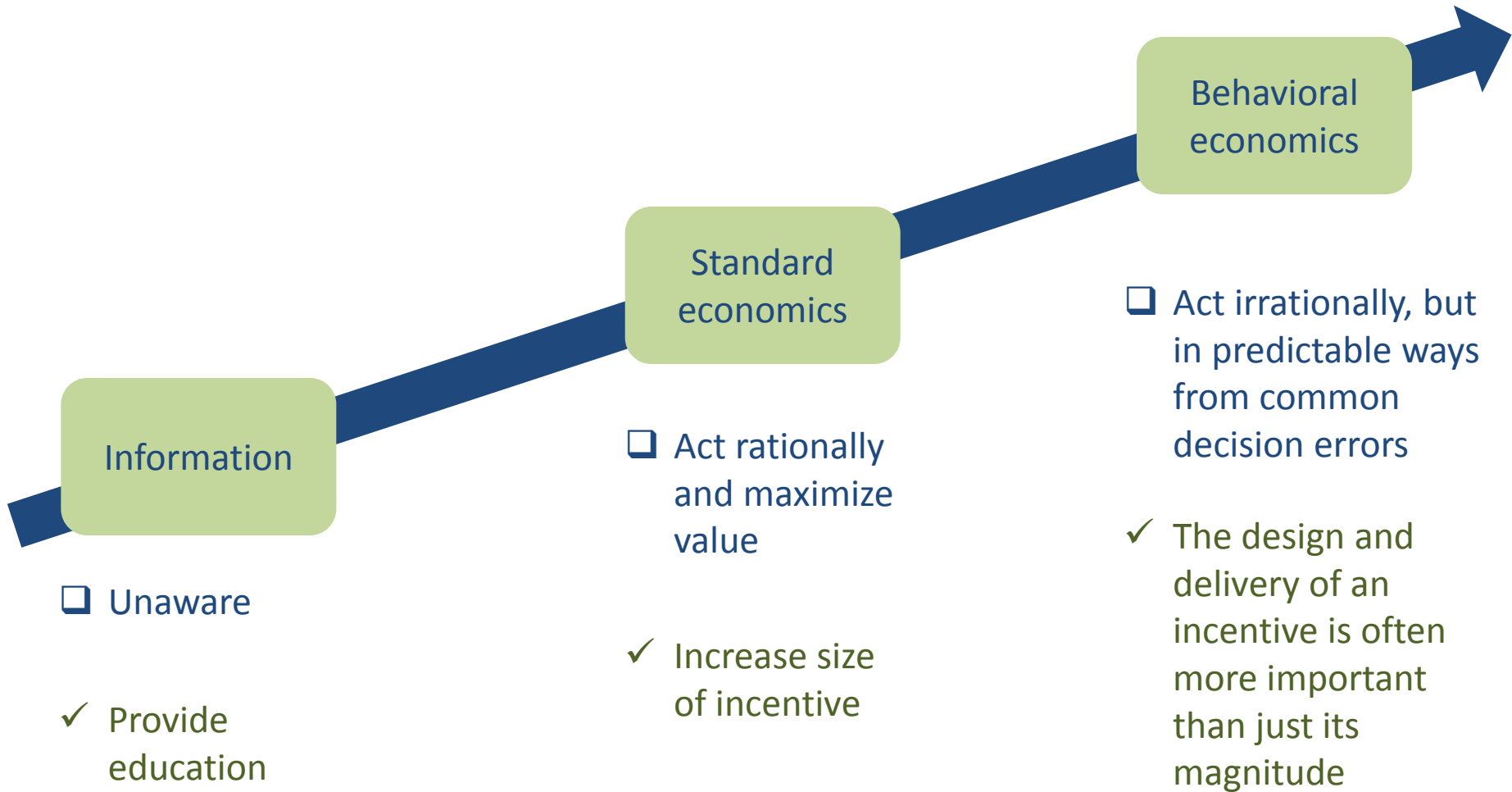


Note: No data for 2012 due to change in survey design.

Source: National Business Group on Health/Fidelity Investments surveys; 2013 data is based on responses from a national sample of 120 companies in a range of industries and sizes

The Wall Street Journal

Science of Motivation has Evolved



Leveraging Insights from Behavioral Economics

Decision Errors	Example Solutions
Default bias	Change path of least resistance
Present-biased preferences	Make rewards immediate and frequent
Overweighting small probabilities	Provide variable rewards using lotteries
Loss aversion	Put rewards at risk if behavior is not achieved
Framing, salience and social norms	Make rewards tangible and in a familiar context
Regret aversion	Tell individuals what they would have won had they been adherent

Early Data Shows Promise for Financial Incentives

- Financial incentives for weight loss
 - 57 participants in a 4 month study comparing lottery incentives (\$3/d) or deposit contracts (1:1 match + \$3/d) to control
 - Control (3.9 lbs), lottery group (13.1 lbs), deposit contract (14 lbs)
- Financial incentives for smoking cessation
 - 878 participants in a 12 month study comparing financial incentives to control
 - Smoking cessation program (\$100), quit by 6 months (\$250), maintained through 12 months (\$400)
 - 6 month cessation rates higher with incentives (20.9% vs. 11.8%)
 - At 12 months, 3-fold difference with less restarts (14.7% vs 5.0%)

Questions and answers (5 minutes)

Wearable Devices for Changing Health Behaviors



Wearable Devices for Population Health

- Enlarging market of population health
 - Apple, Google, Samsung, Microsoft, and many others
- Use of wearable devices
 - 1-2% of the United States population
 - Estimated that sales will increase to \$50 billion over the next few years



Wearable Device Technology

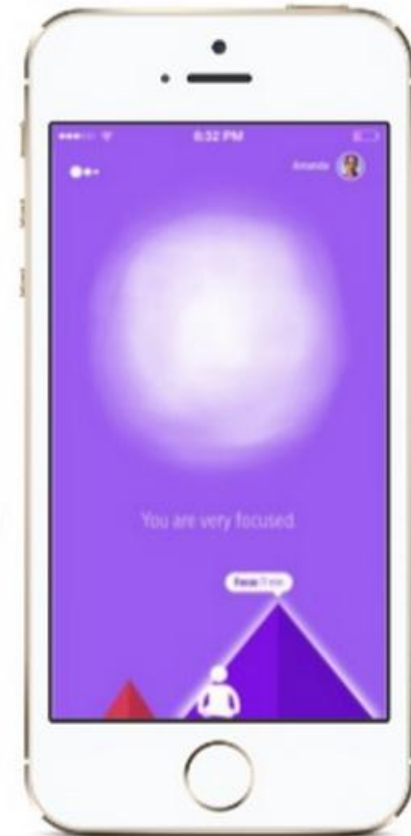
• **Bluetooth Low Energy radio**
First device to implement BLE was the iPhone 4S in 2011

• **Wireless charging coil**
Qi standards-based products first hit market in 2013



• **MEMS accelerometer**
Price has fallen 4X in the last five years

Offloaded computation
Signal processing from sensors is handled in cloud via iPhone



Wearable Device Companies



Wearable Devices for Changing Health Behaviors

- Hope is that these devices can educate and motivate individuals towards better habits and better health
- Little evidence that these devices alone can change behavior for those who need it most
- Four key challenges that need to be addressed

(1) Obtaining a Wearable Device

- Individuals must be motivated enough to want it and be able to obtain it
- Affordability
 - Most cost at least \$99; Apple Watch starts at \$349
- Nielsen survey of wearable device users
 - 75% described themselves as “early adopters of technology”
 - 48% were younger than 35 years of age
 - 29% reported earning > \$100,000
- Individuals that need wearables the most are likely not using them

Wearable Devices Must Be Affordable

- If effective, they could be financed similar to prescription drugs



- Insurers and employers may offer them to their members

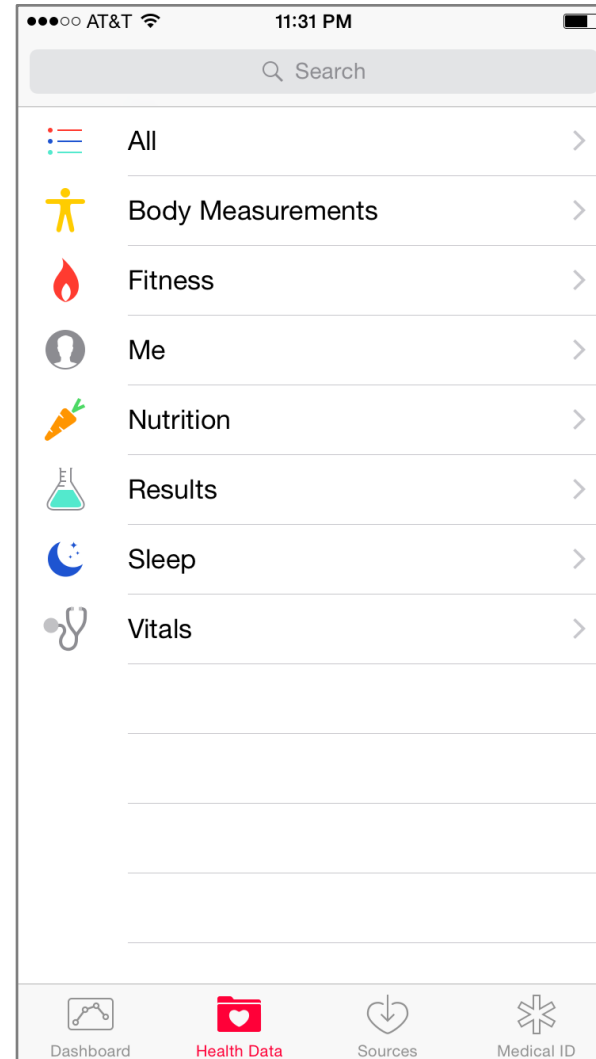
(2) Regularly Using Wearable Devices

- Regularly wear, recharge, and sync the device
 - New behaviors from individuals that have already identified that they have trouble changing behavior
- Endeavor Partners survey of wearable device users
 - 50% stopped wearing the device, one-third did so within 6 months



Evolution of Activity Trackers

iPhone HealthKit



(3) Wearable Devices Must Be Accurate

- Accurately track its targeted behavior
 - E.g. physical activity, heart rate, sleep patterns
- Little evaluation or oversight of these devices
- Wearables may not make sense for some types of outcomes such as blood pressure
 - Instead, they might be paired with a connected device like a wireless pill bottle to remind you when you missed a dose of your medication

(4) Wearable Must Sustain Behavior Change

- Most individuals are less motivated, particularly those with chronic conditions
- Sustained change is more likely driven by engagement strategies that connect with human behavior than by technology alone

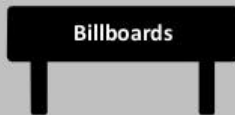
Designing Effective Feedback Loops

- Use a trigger to grab the individuals attention
- Reward behaviors using incentives
- Build new habits
 - Turn external motivations into internal ones (which is hard)
 - Sustain external motivations (which is also hard)

Using a Trigger

EXTERNAL TRIGGERS

The information for what to do next is within the trigger.

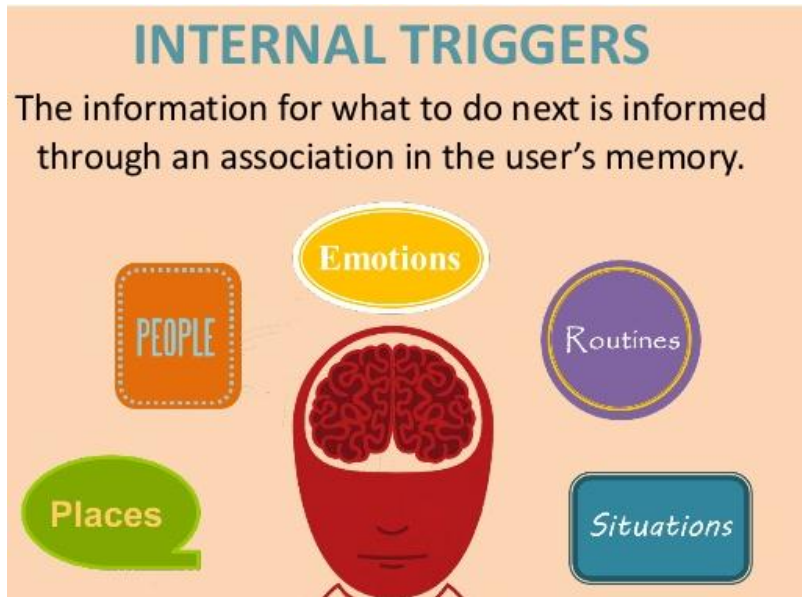


Buy now



- Text message
 - Remember to exercise
- Sign
 - Take the stairs
- Alarm
 - Reminder to workout

Using a Trigger



- Lonely
 - Check Facebook
- Unsure
 - Search on Google
- Bored
 - Browse Youtube

Four Key Aspects of Technology

1. Must be able to obtain the technology
2. Actually use the technology
3. The technology must be accurate
4. Technology must help form new, sustained behaviors

Key Takeaways

- Well-designed technology may help facilitate behavior change, but this change may not be driven them alone
- Ultimately it is the engagement strategies that connect with human behavior that will drive healthier habits
 - Financial and social incentives
 - Competition and collaboration
 - Effective feedback loops

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Questions and answers (5 minutes)

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PRESENT BIAS

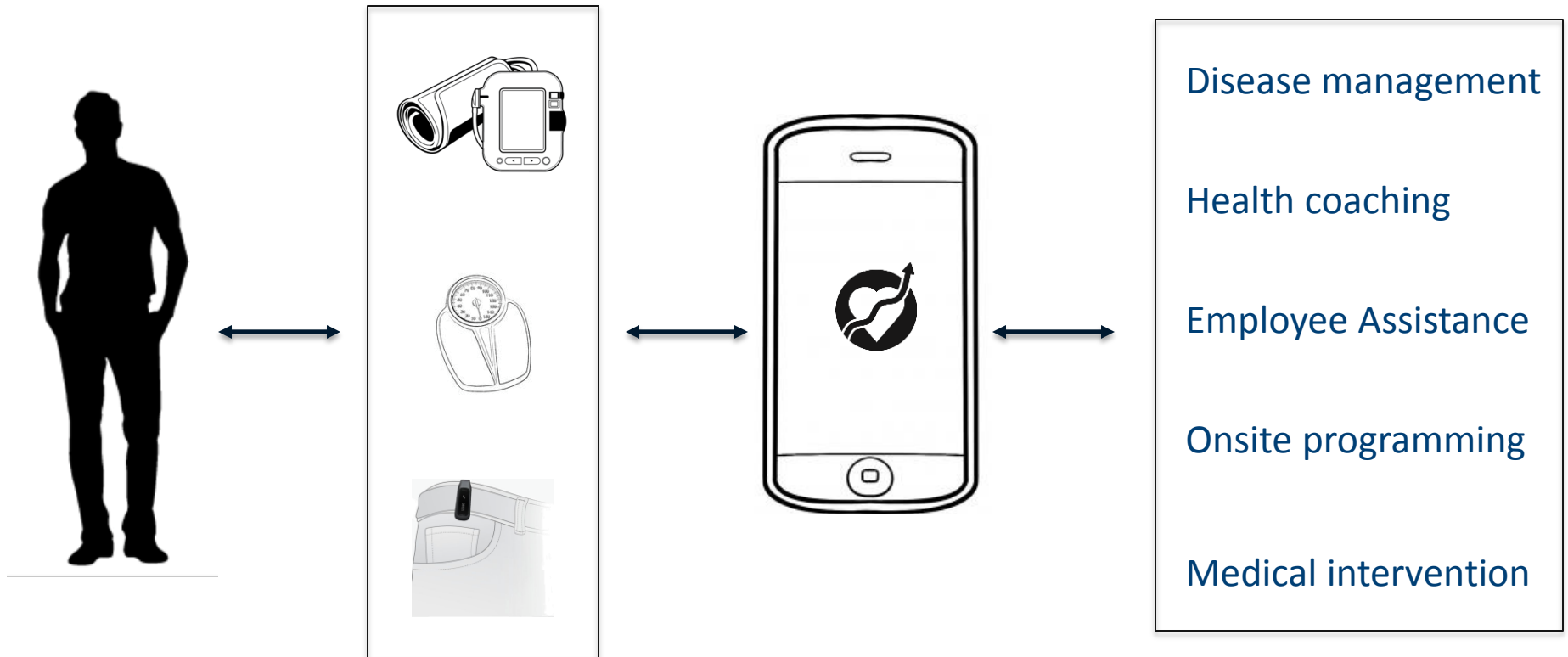
A man with glasses and a blue shirt is looking at a chalkboard. The chalkboard has the text "Bueller... Bueller... Anyone?" written on it in white. The man has a slightly concerned or questioning expression on his face.

***"Bueller...
Bueller...
Anyone?"***

What happens when you go from delayed to immediate gratification?

Present bias

Immediate gratification → real-time insights



LOSS AVERSION



Loss aversion

A gentle nudge gets the benefits of loss aversion without the drawbacks.

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Up the ante to increace your earning potential	Up the ante to increace your earning potential
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Play It Safe \$50	\$0

Next

FRAMING



Framing

How to use framing to increase your profits by 43%

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Framing

How to use framing to increase your profits by 43%

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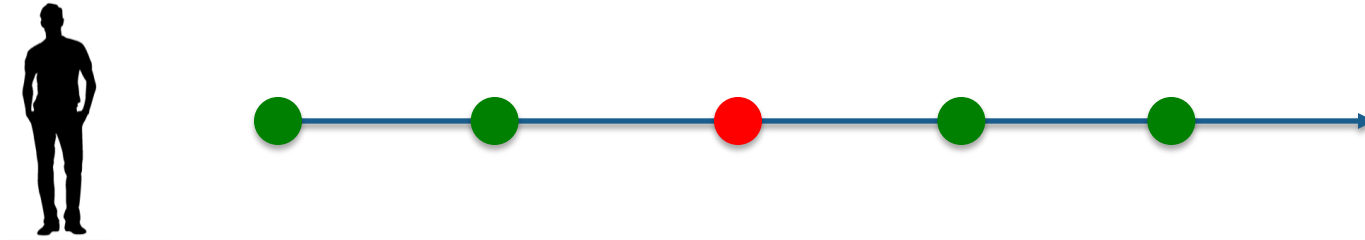
(+52%)

\$114.44

+43%

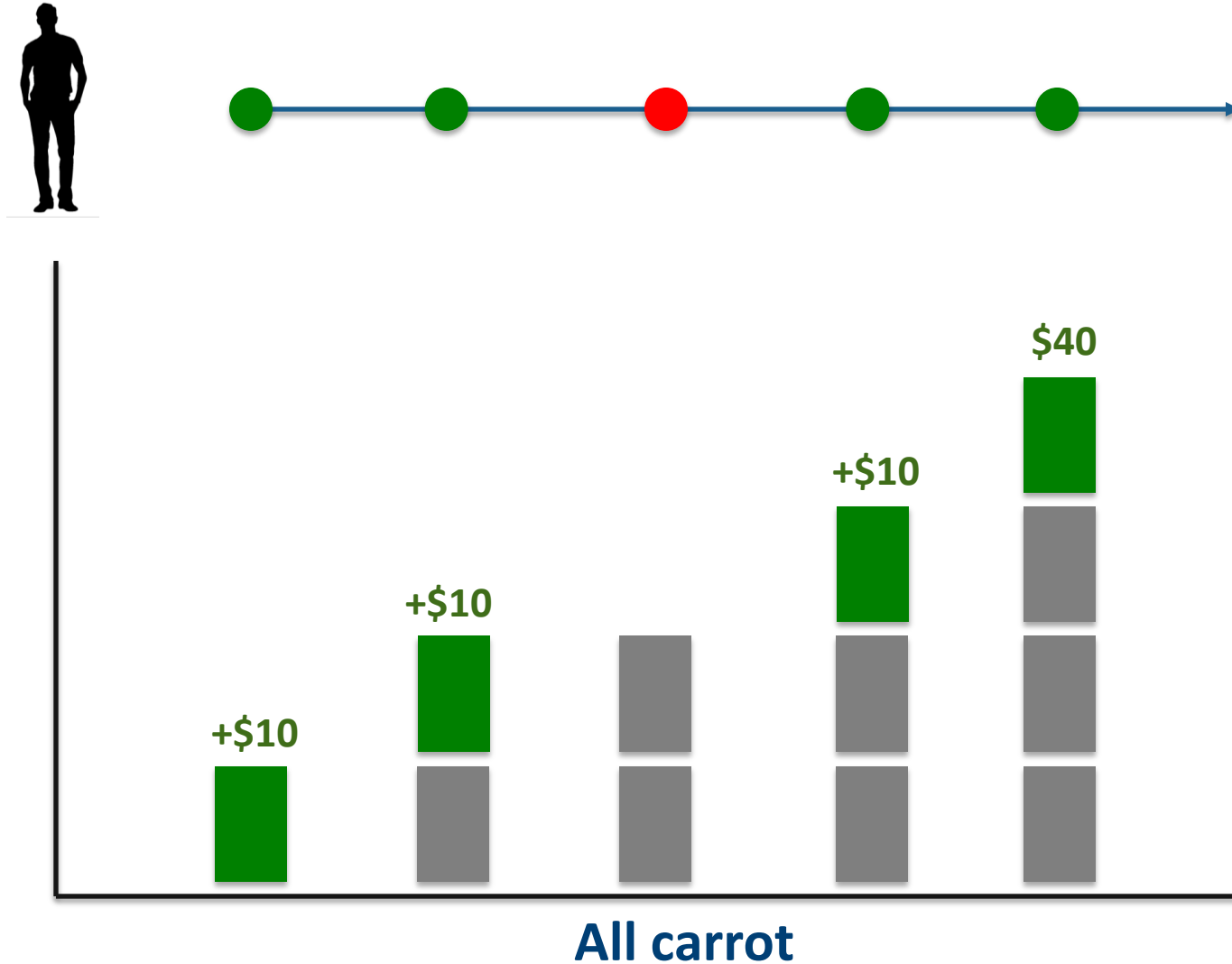
Framing

How to use incentive framing to increase engagement



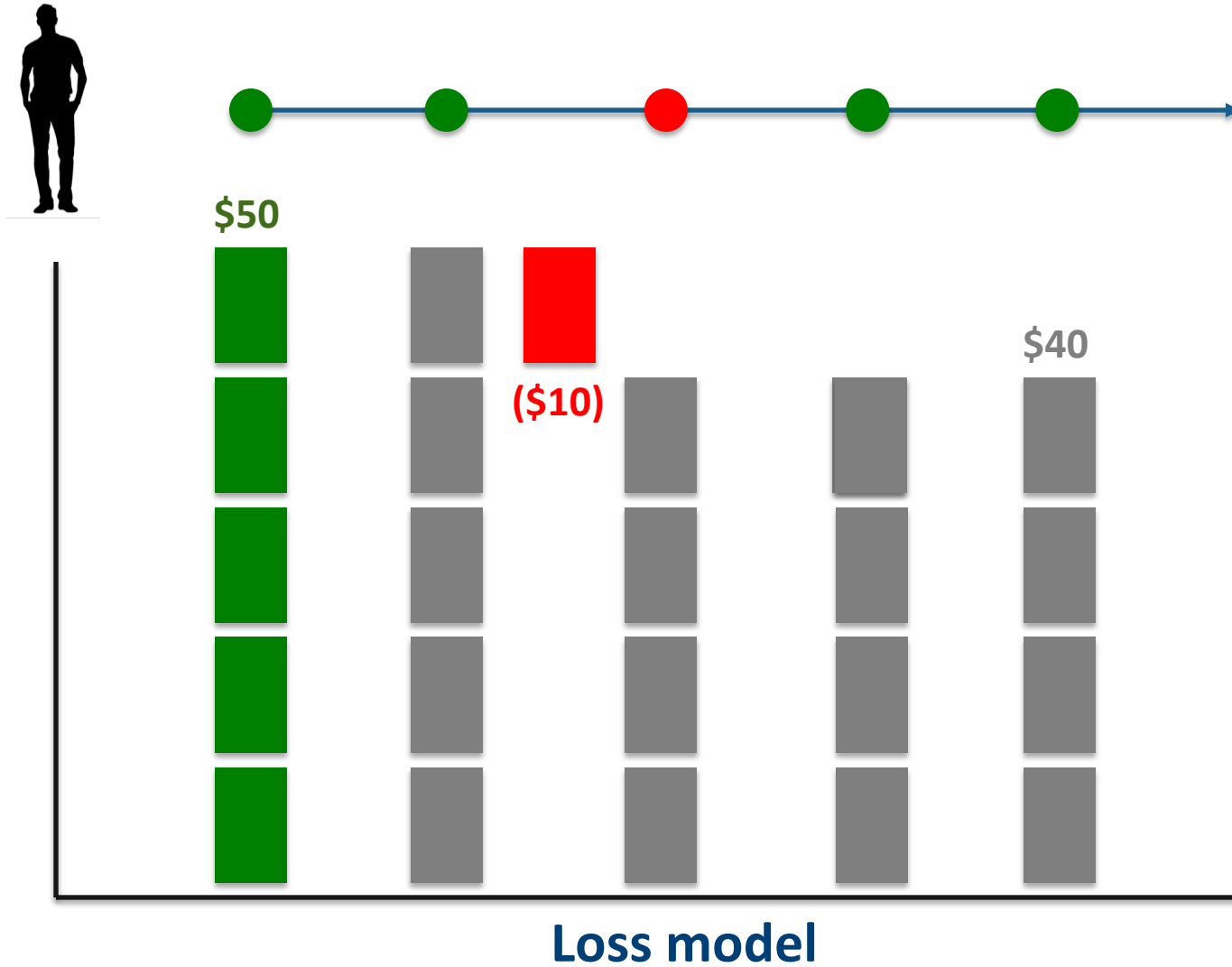
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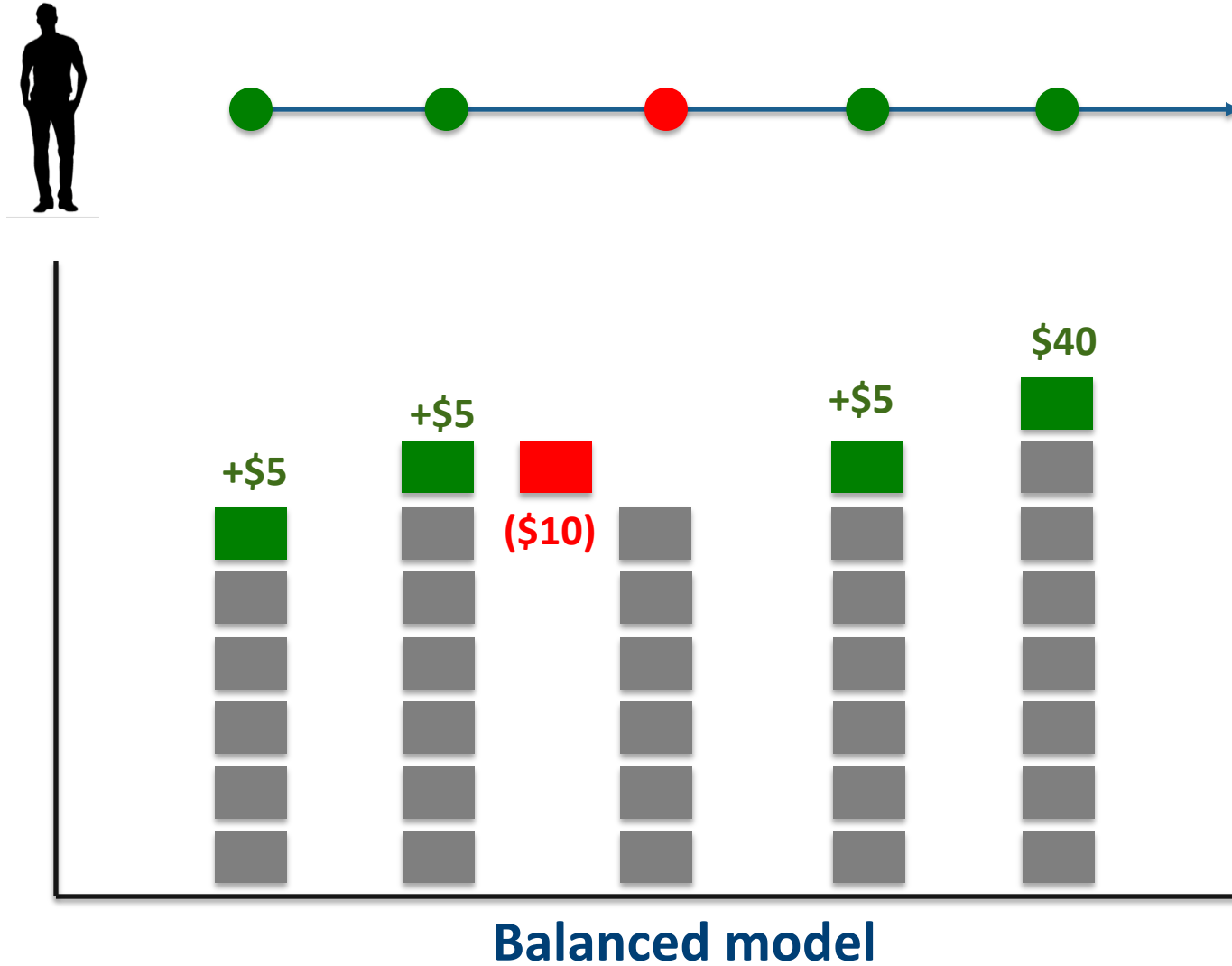
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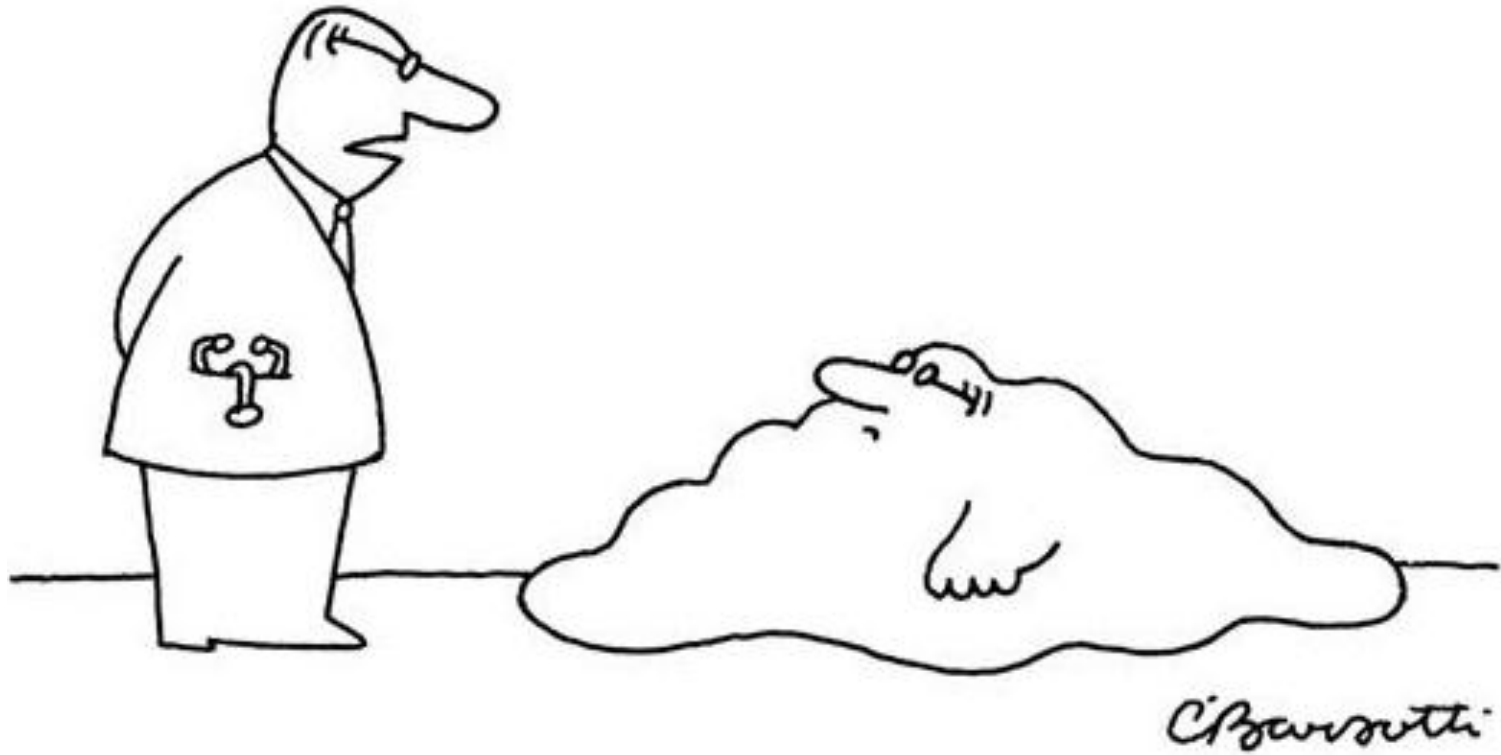
How to use incentive framing to increase engagement



WEARABLES



Wearables: one step in the right direction



Be honest. How much are you really exercising?