



what's **next** in  
treating obesity.

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This talk was presented at:  
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Engineering, and Medicine  
Roundtable on Obesity Solutions**

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Washington, DC

*Slides depicting unpublished data as well as those with extensive animation (and all snarky jokes) have been removed. The full set of slides are available upon request.*











only 18% get pcp counseling





only **18%** get pcp counseling

least likely { racial/ethnic minorities  
low income  
un/underinsured





time

efficacy

training

mission fit

reimbursement





<1% of eligible patients used  
medicare obesity benefit





# behavioral weight loss works

- less so in primary care & high risk populations
- implementation is [very] challenging



A close-up, slightly dimly lit photograph of a wooden cabinet with a grid of small drawers. The drawers are made of dark wood and have small, dark handles. Some drawers have white labels with black text. The text on the labels includes: 'R - RIC', 'PRE - Q', 'SUNN - STA', 'K - KID', 'STE - SE', 'WAN - WED', 'O - OLO', 'KIT - KOR', 'SW - SZ', and 'WEE - WIA'. One drawer in the second row, third column has a small, torn piece of paper with some blue markings on it. The overall atmosphere is quiet and contemplative.

what's next?



device penetration creates  
new opportunities  
to use data

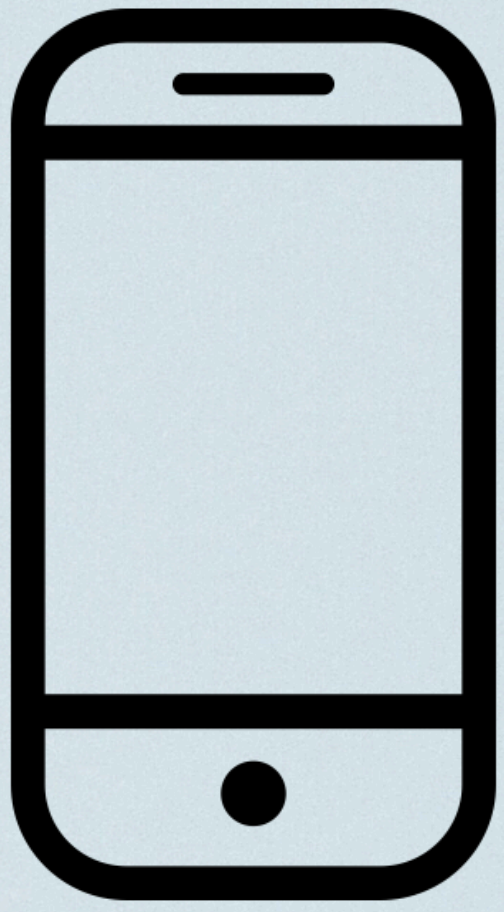




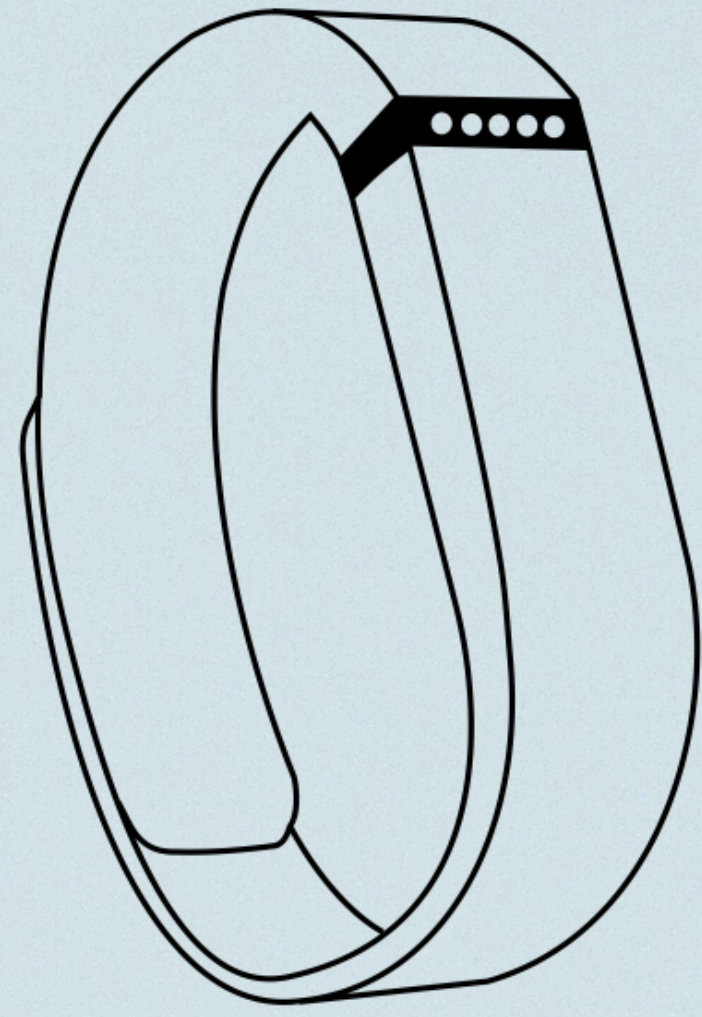
**"data** is the  
new oil"  
*- andrea weigend*



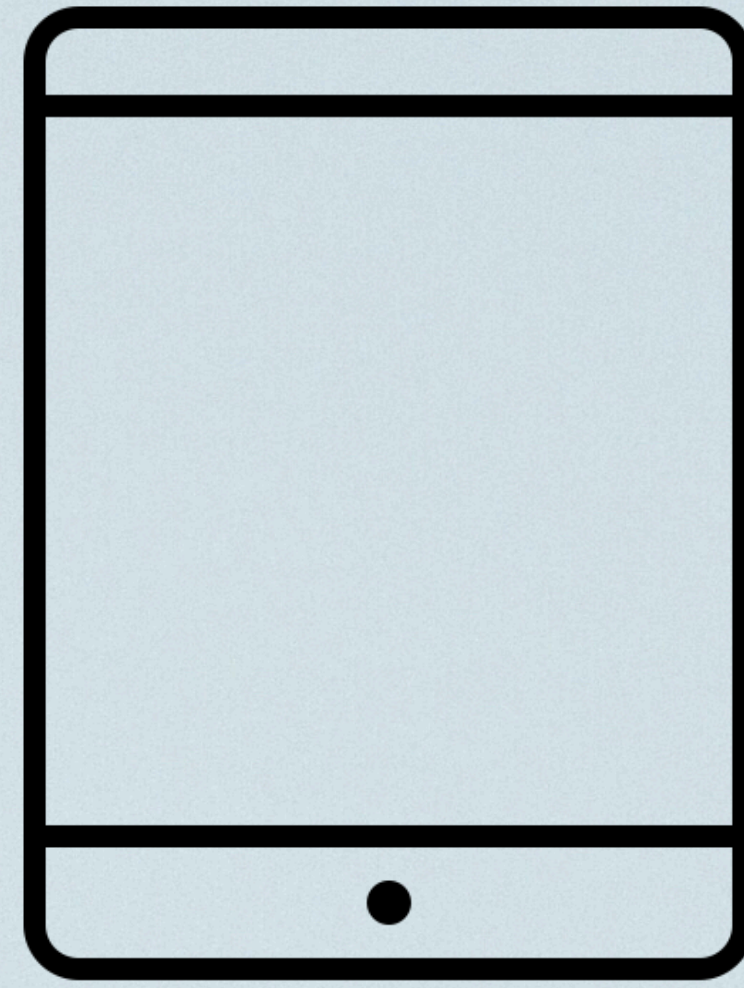




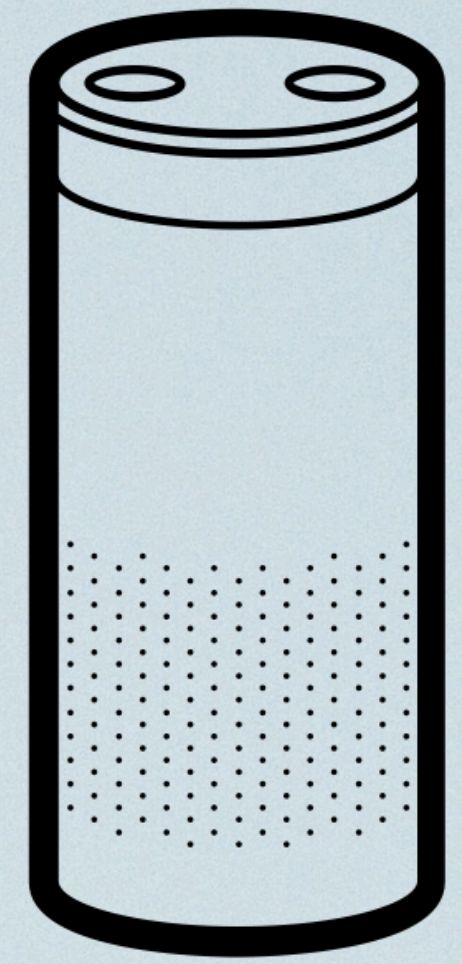
229m



75m



77m



6m



13m







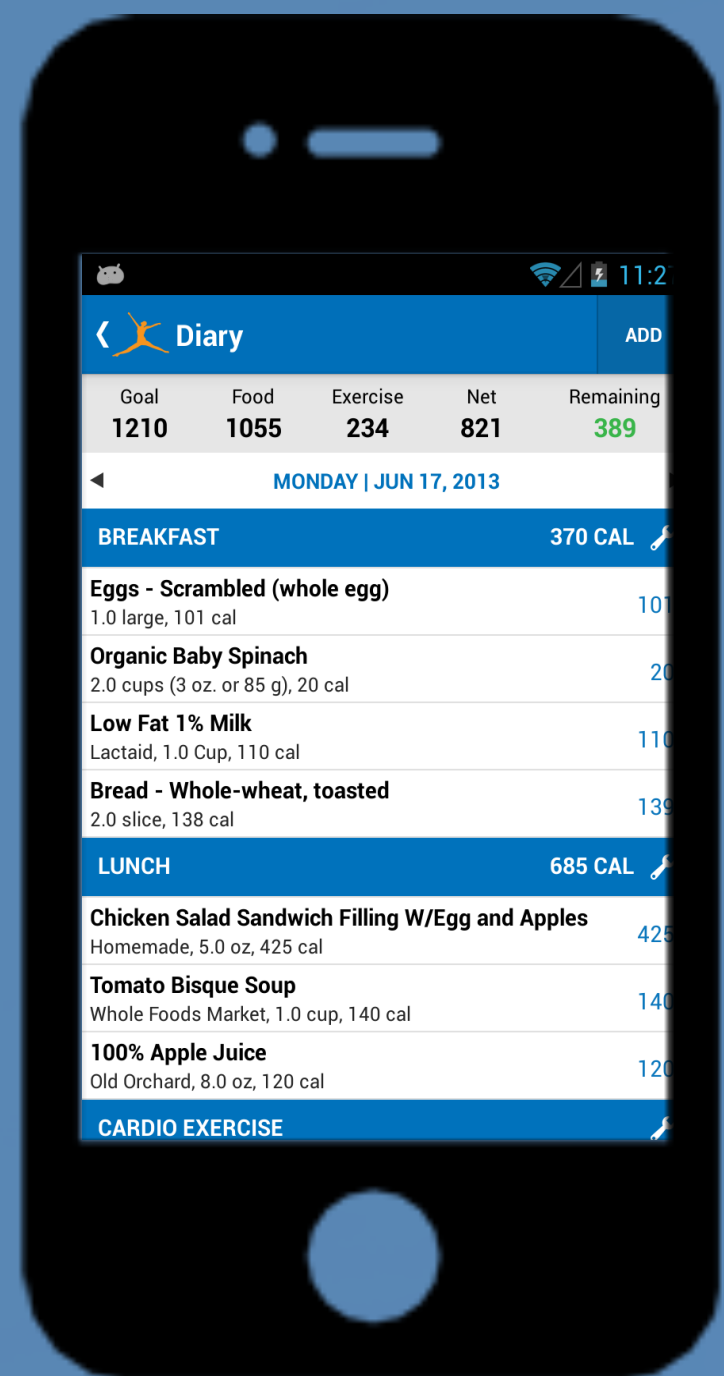
generation 3 **data driven apps**

generation 3 **research-tested apps**

generation 2 **insufficient evidence**

generation 1 **no evidence**

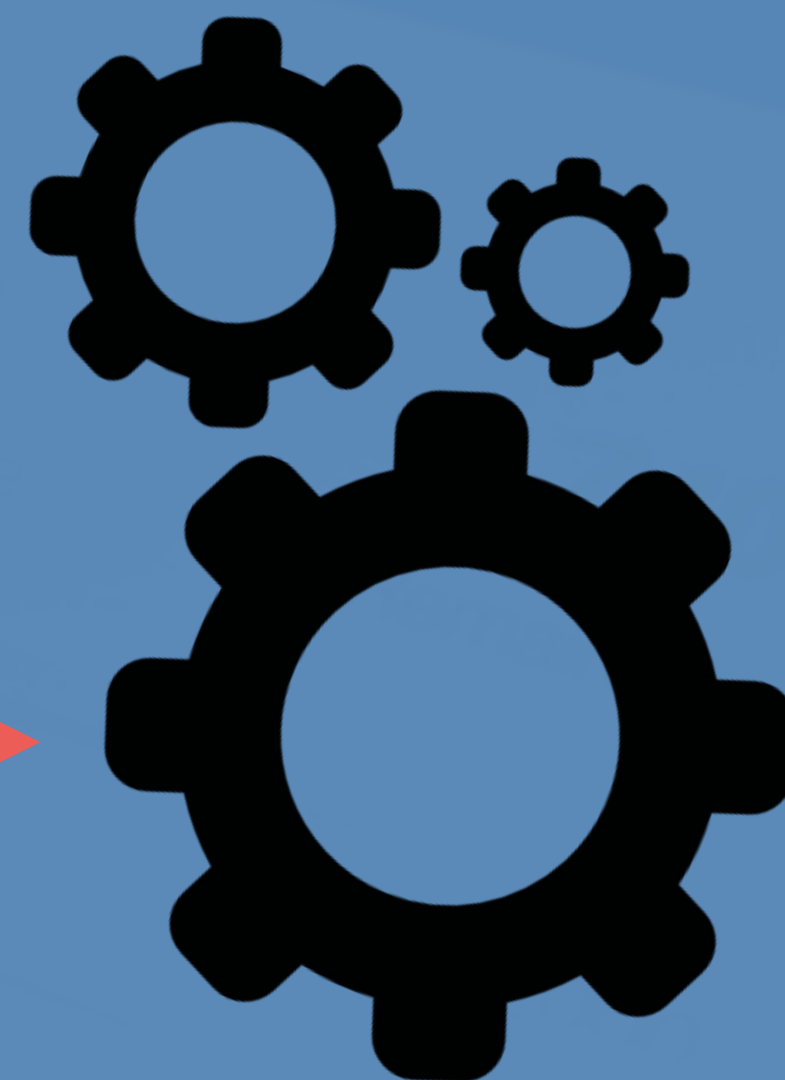
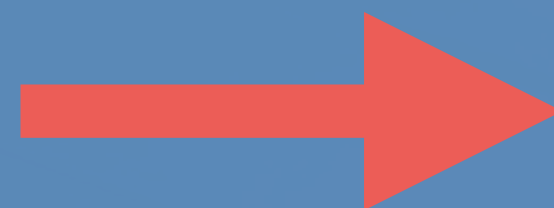




app



myfitnesspal api



dashcloud



daily texts

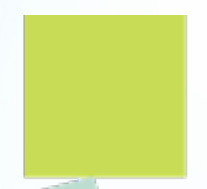


weekly emails



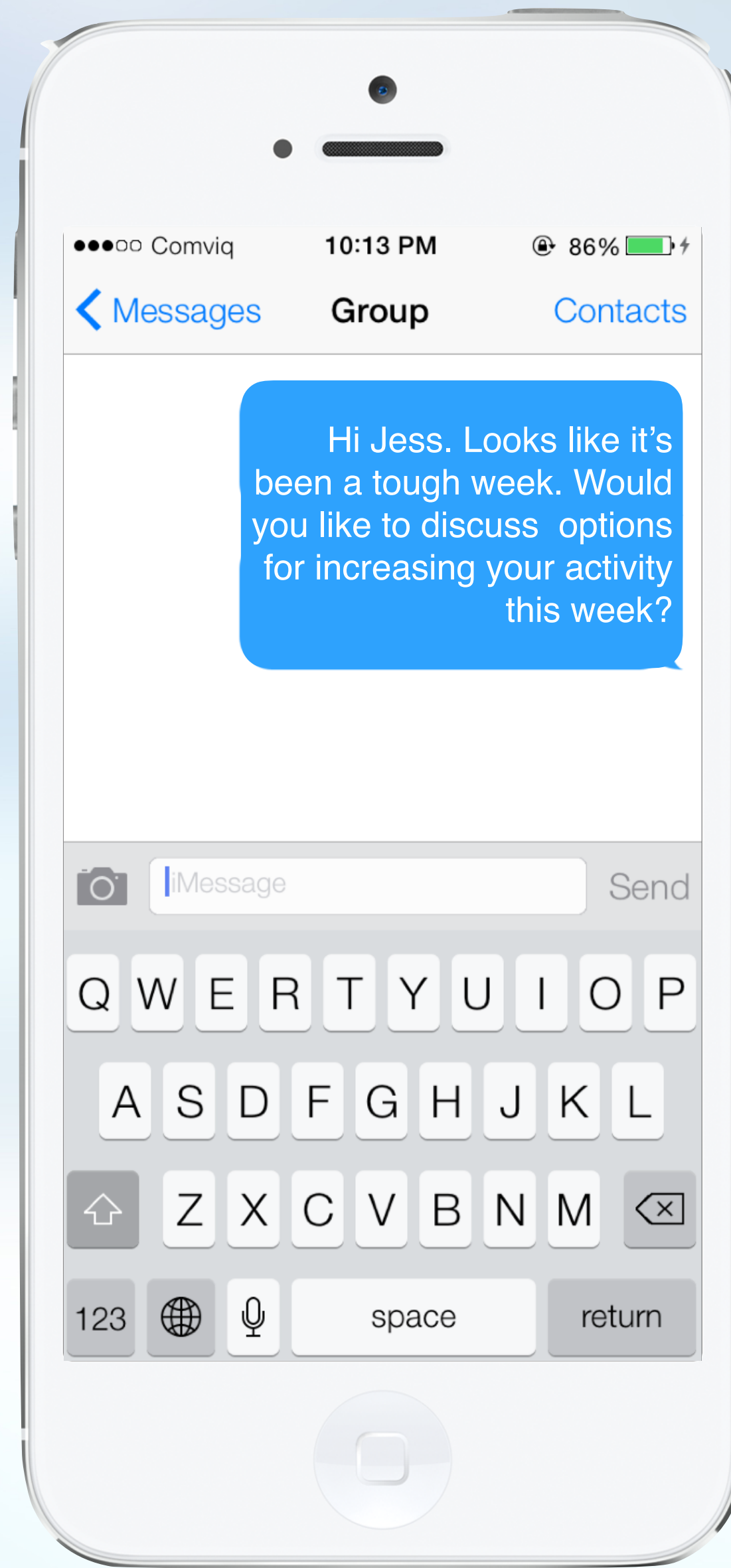
170

 BodyTrace



balance











A server room with rows of server racks. In the foreground, the legs of a person wearing dark pants and white shoes are visible, suggesting they are standing in the aisle. The server racks have green indicator lights. The text is overlaid on the right side of the image.

**a.i.**

enhance engagement

maximize treatment fit

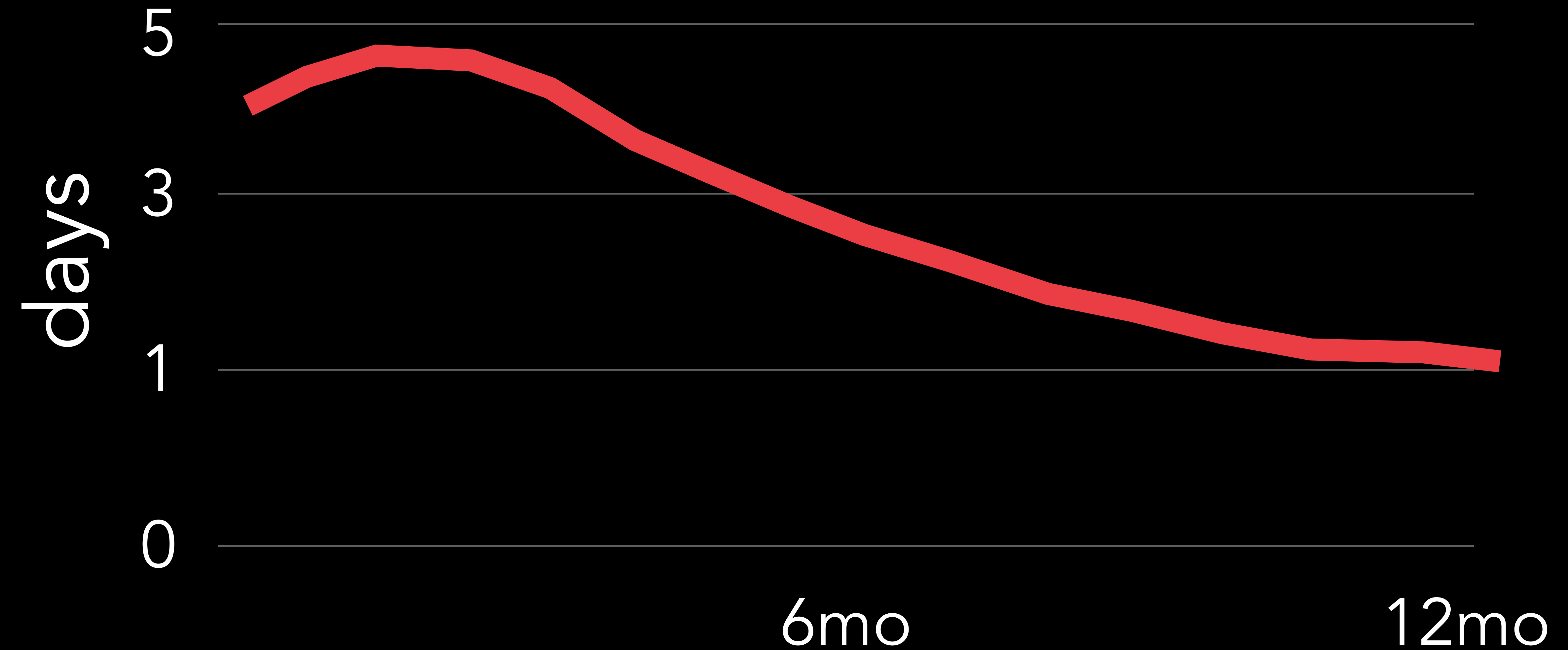
new channels (bots)

personalize feedback

predict outcomes

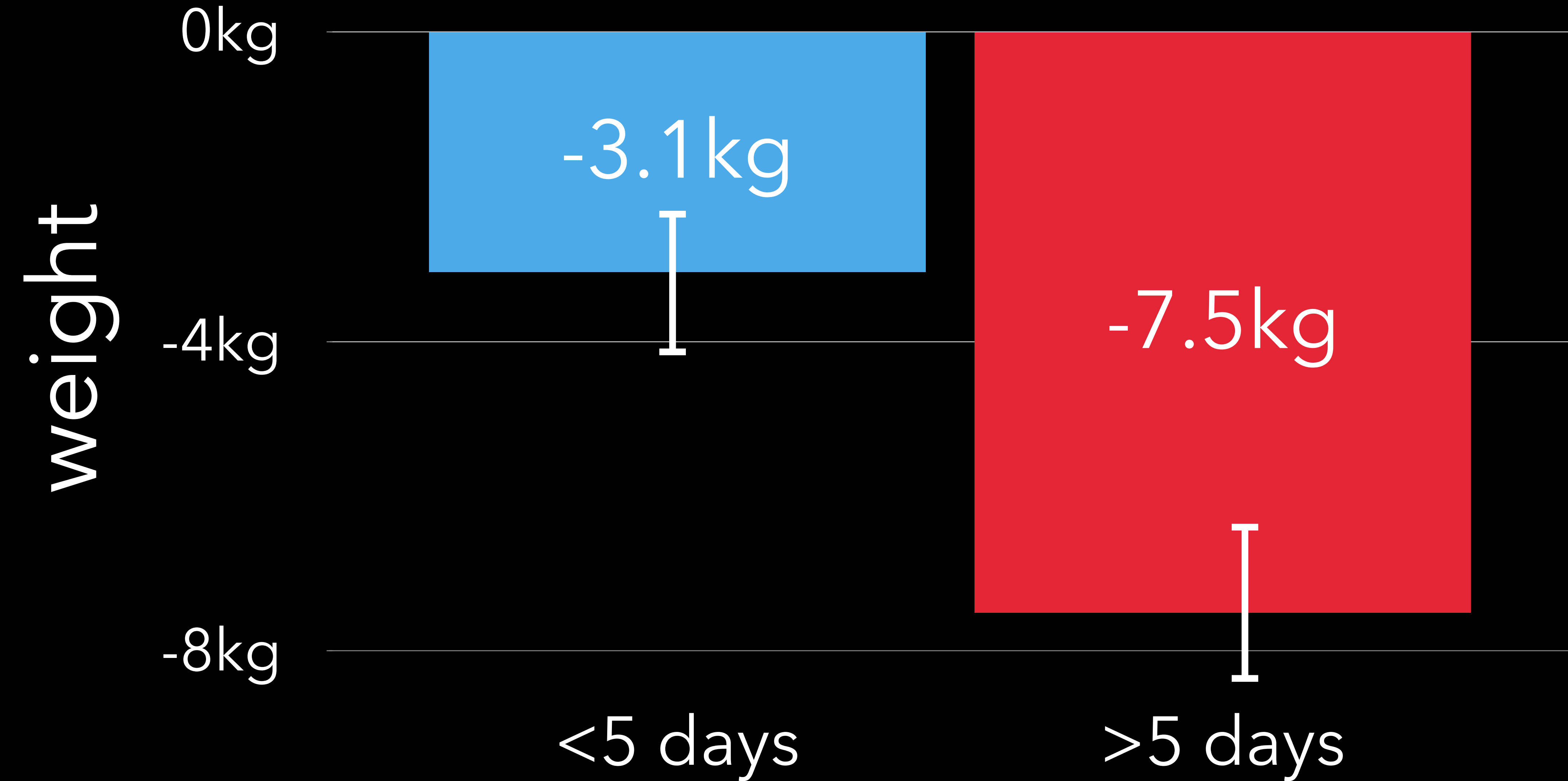


# daily self weighing declines over time





# greater 1 year loss with regular weighing





digital therapeutics will be a  
primary referral channel







digital obesity  
treatments produce  
**2-4kg** weight loss at  
1 year (*max of ~5kg*)

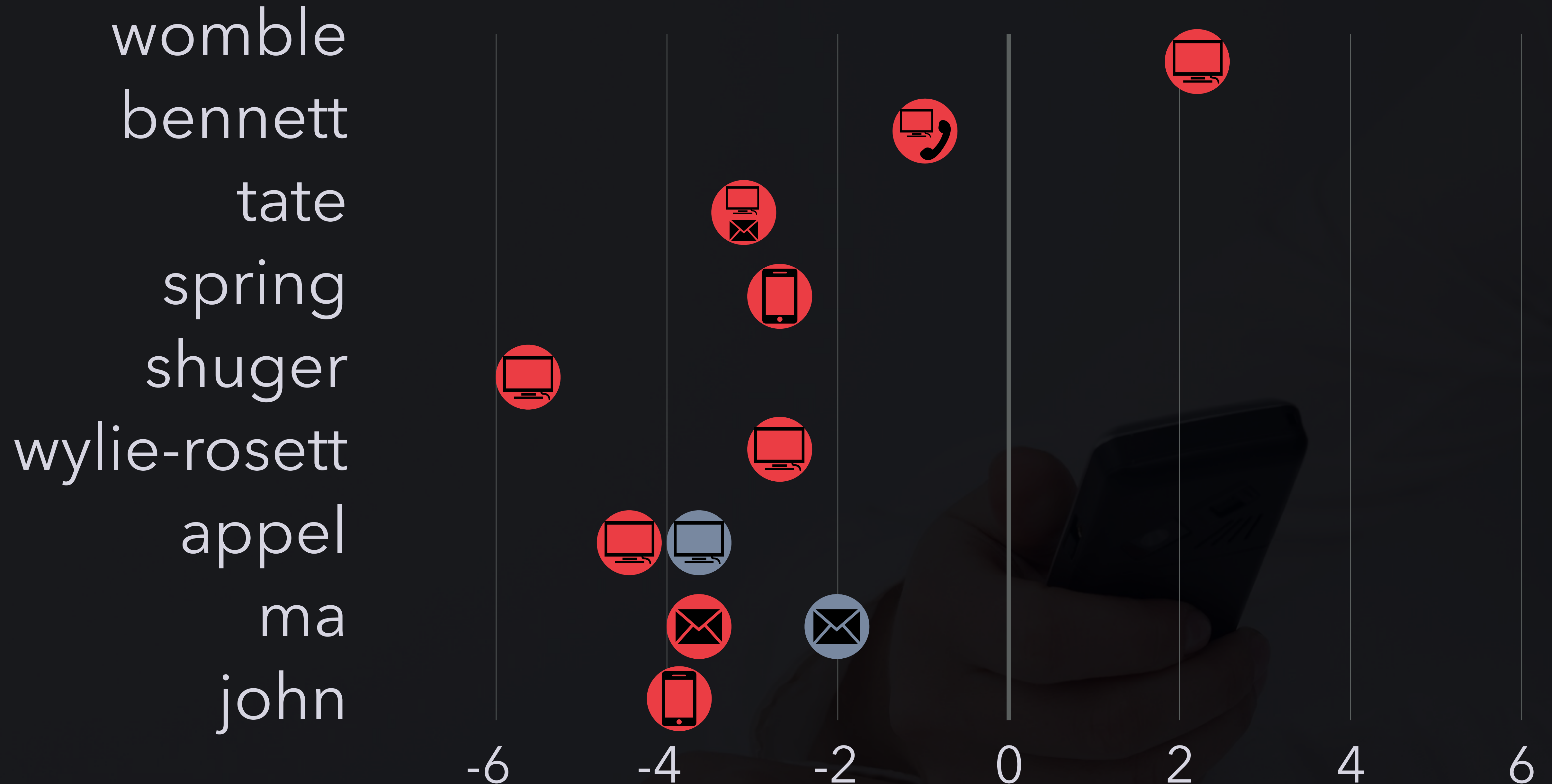


outcomes are similar by device



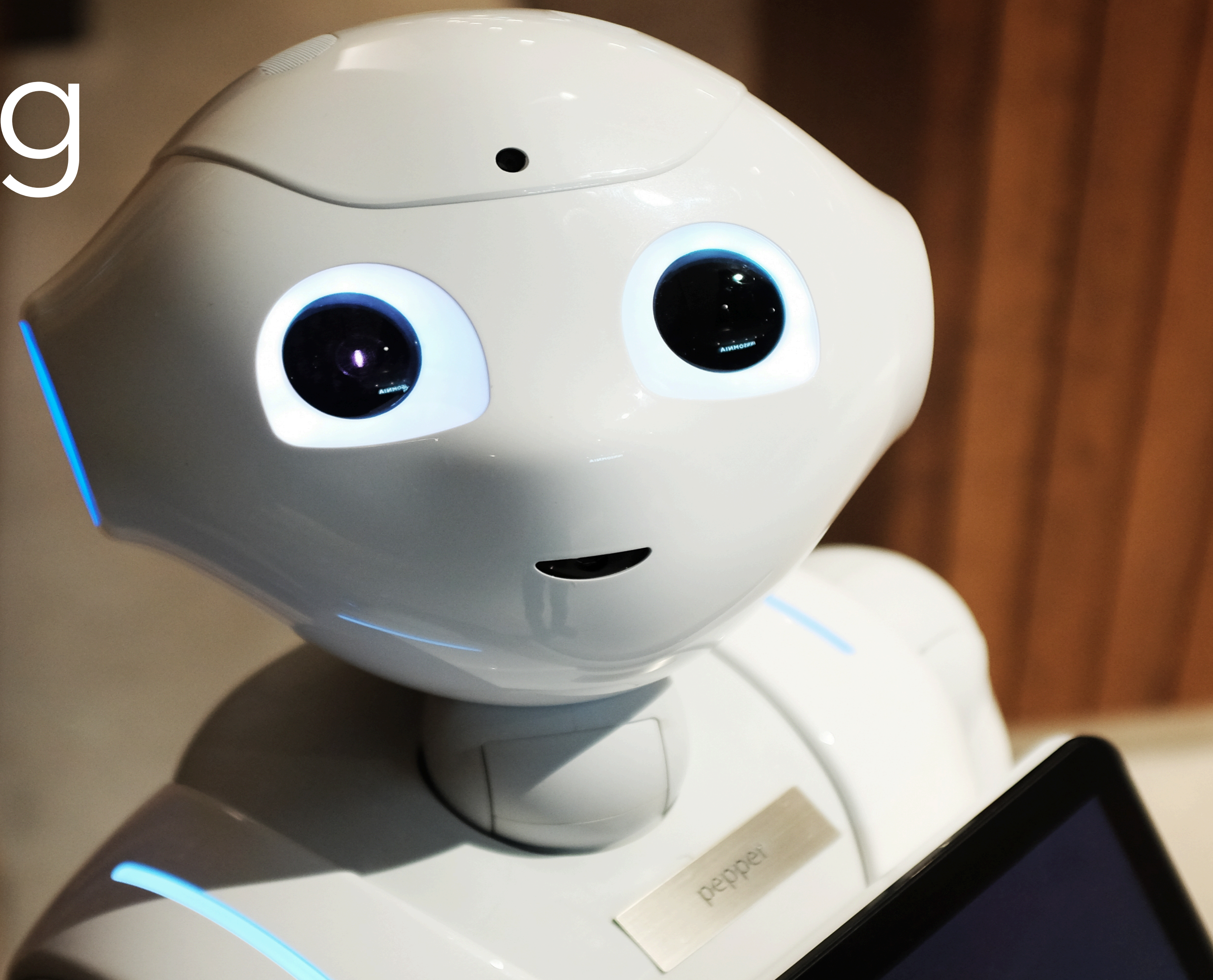


# 1yr outcomes in digital health trials

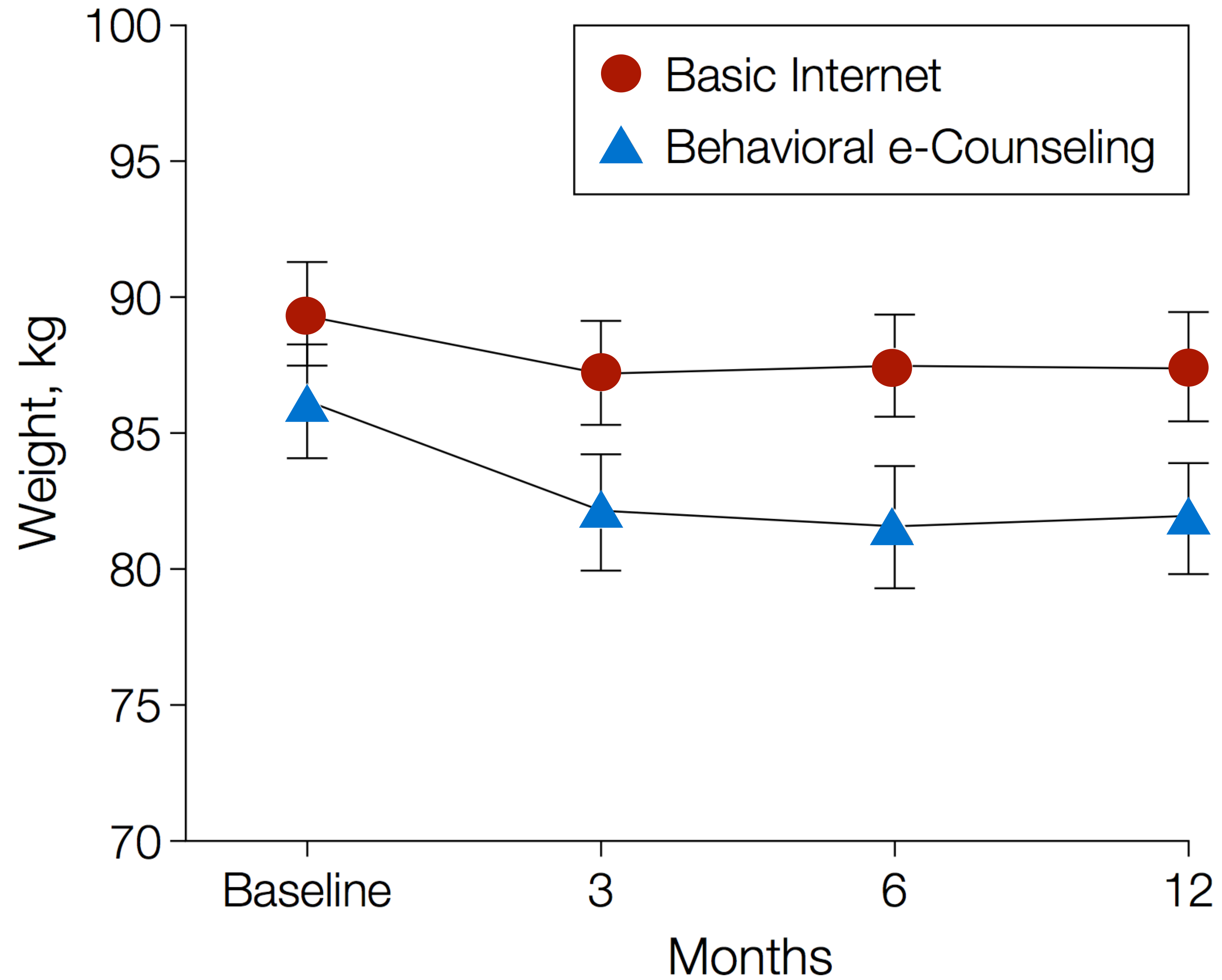




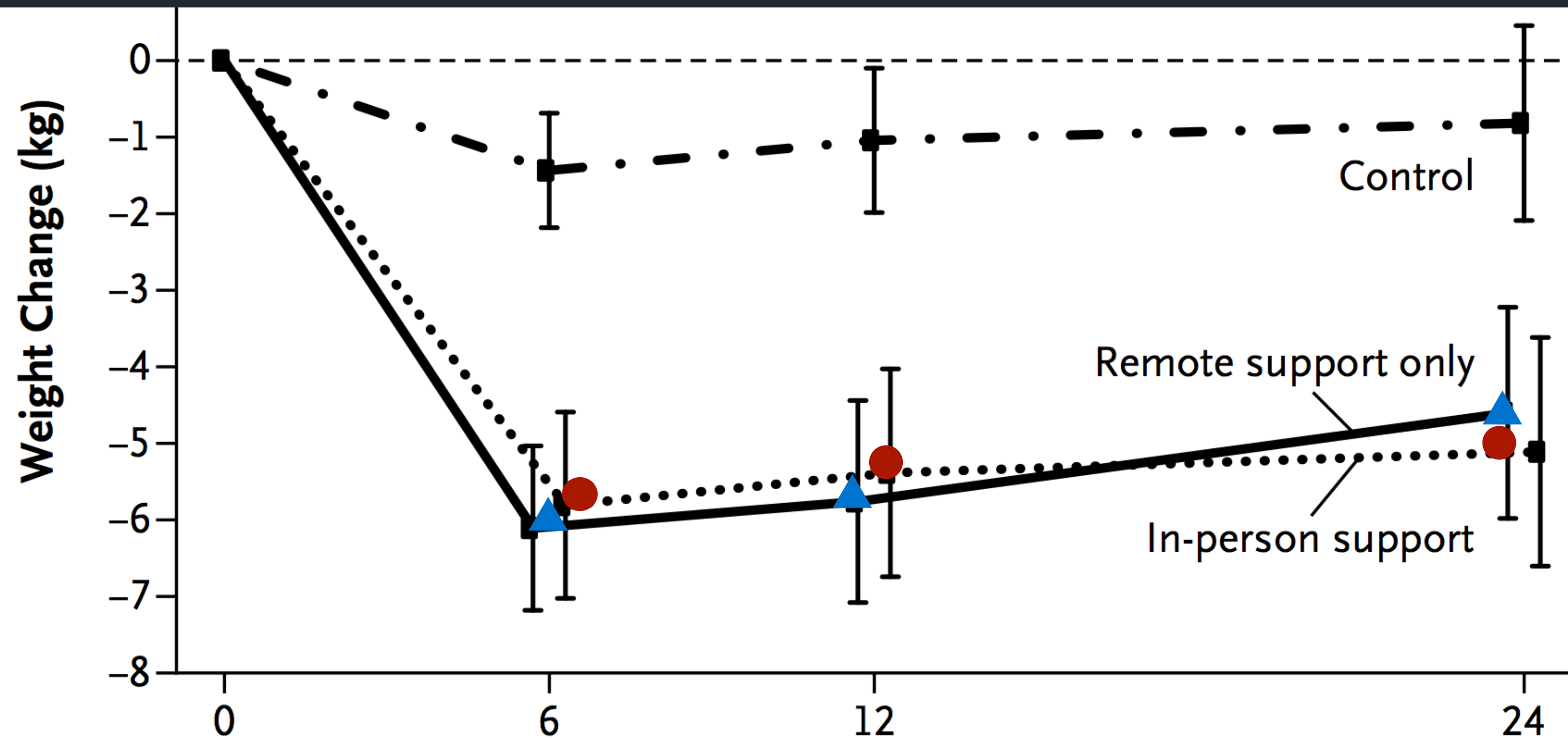
human counselors  
aren't going  
anywhere











**remote support**

telephone counseling from coaches at healthways

**in-person support**

delivered on site by study staff



# 1yr outcomes in digital health trials

varying counseling approaches



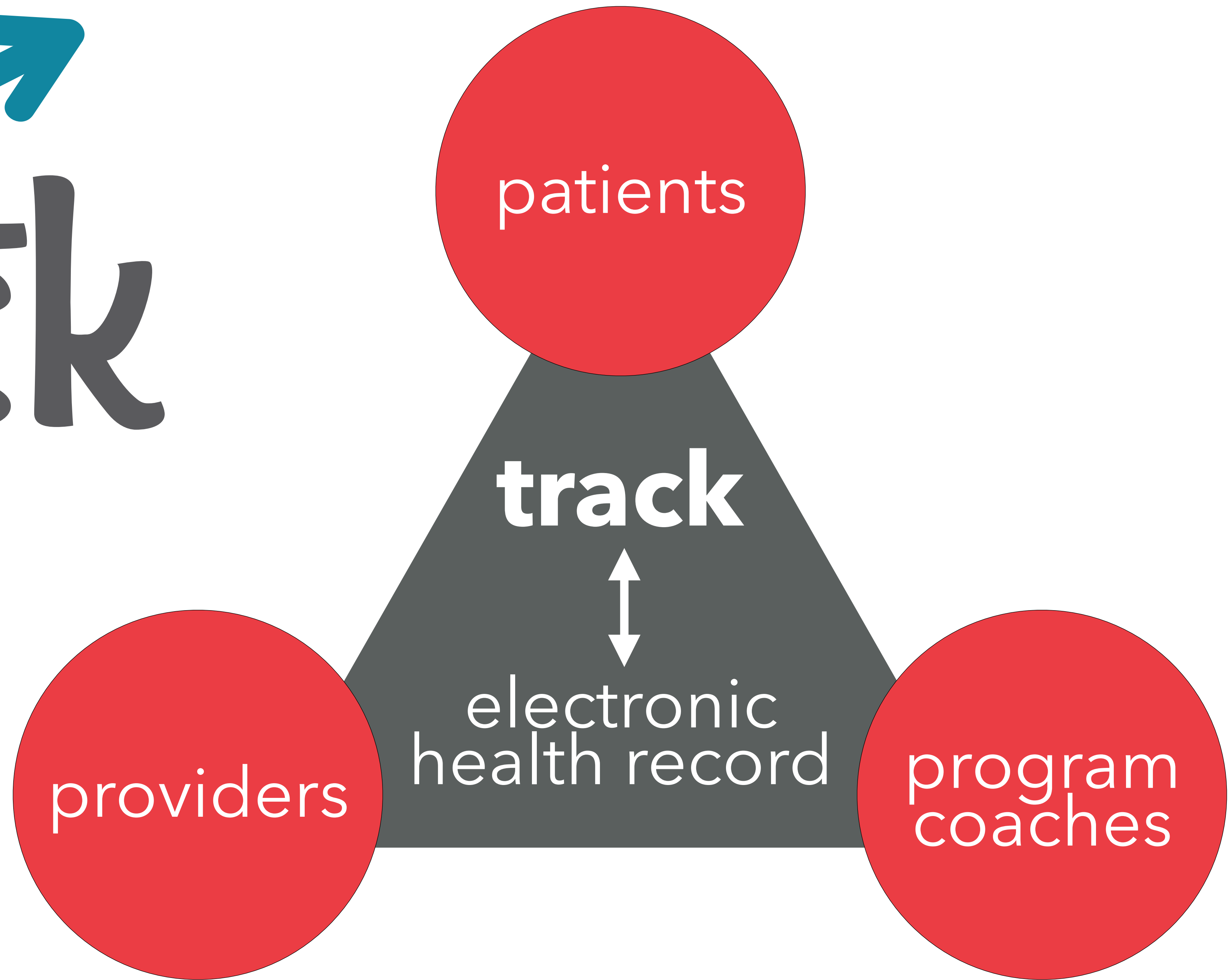




involving clinicians  
can improve  
outcomes



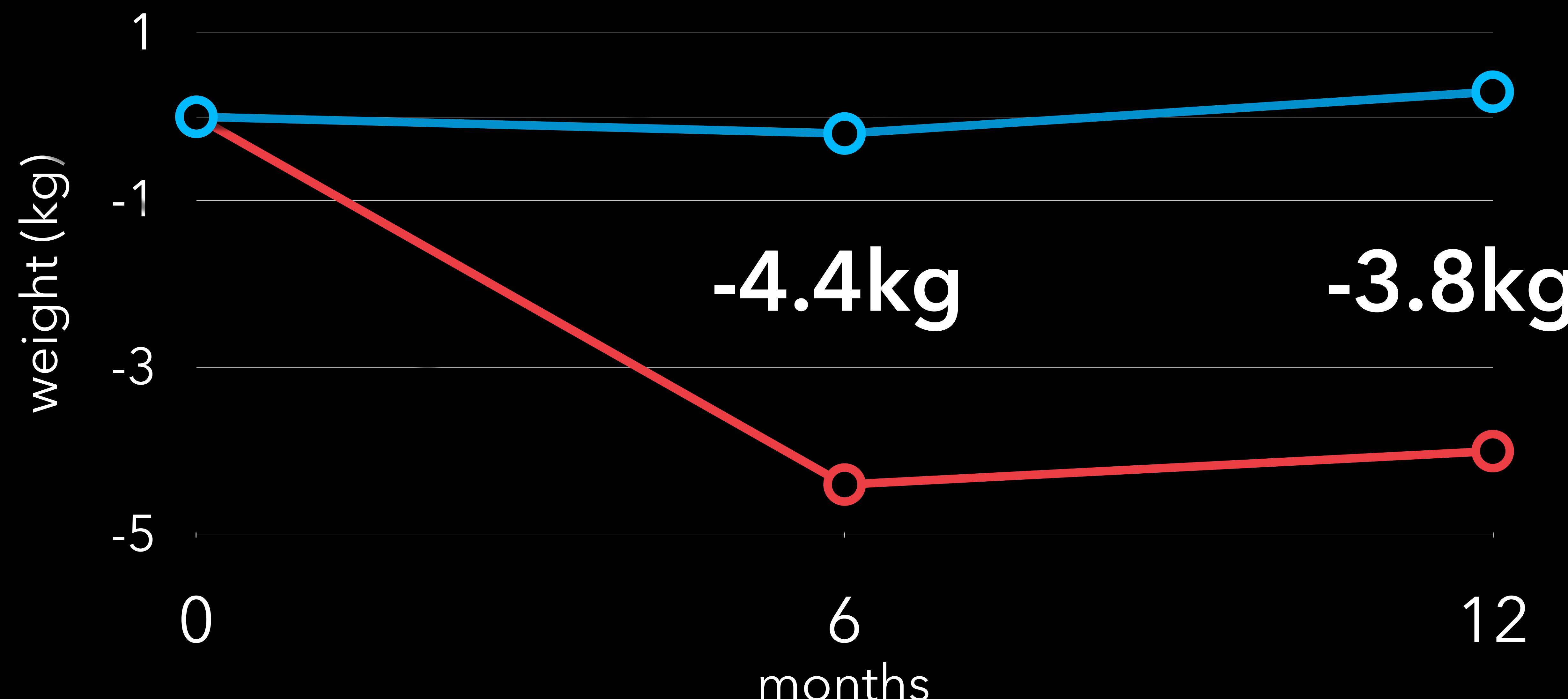
  
**track**





# weight change

- usual care
- intervention





diet

exercise

track = 4.4kg

New Document

Documents

Edit Sign Append Route Organize

Document View: All

	0	Date ▾	Summary
		01/03/2014 10:20 AM	Phone: Track Update
		12/05/2013 2:25 PM	Phone: Track Update
		11/25/2013 12:57 PM	Phone: Track Update
		11/08/2013 5:00 PM	Phone: Track Update
	0	11/07/2013 12:00 AM	Clin Updt: ARMC Birads 2
		10/23/2013 10:55 PM	Phone: Track Update
		10/14/2013 1:38 PM	Ofc Visit: Good BP, good wt loss; flu shot; F/U 6

Doc ID: 48 Properties: Phone Note at SIL on 01/03/2014 10:20 AM by Ashley Brewer RD

-- Converted from Care Alert ----

-- 12/05/2013 2:25 PM, Ashley Brewer RD wrote:

██████████ is in the Track study. ██████████ has lost 20.0 lbs since 2013-08-21. ██████████ goal is to lose 15.0 pounds to be at their goal weight of 199.6 pounds by 2014-08-21. ██████████ needs encouragement to take the weekly automated Track calls. ██████████ is doing well on: Portion Control, No Sugary Drinks. Please reinforce: Brisk Activity, No Sweet Snacks. Please reinforce continued participation in Track.

Electronically signed by Ashley Brewer RD on 01/03/2014 at 10:20 AM

Chart Desktop



digital can  
help reach,  
engage, and  
treat those  
**highest risk**







(the new)

# digital divide

own mobile phone

send text message

take picture/video

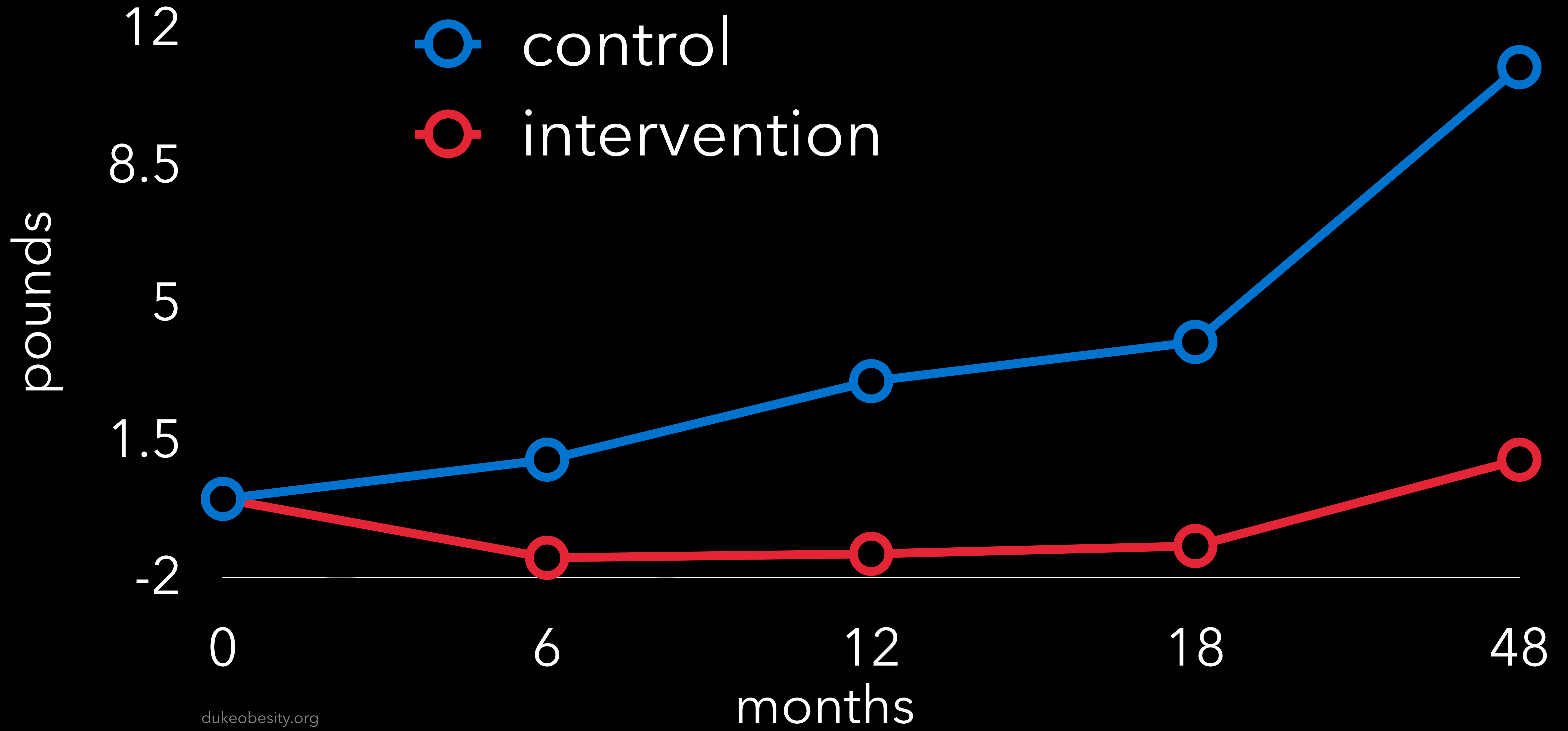
play game/music

use social media app

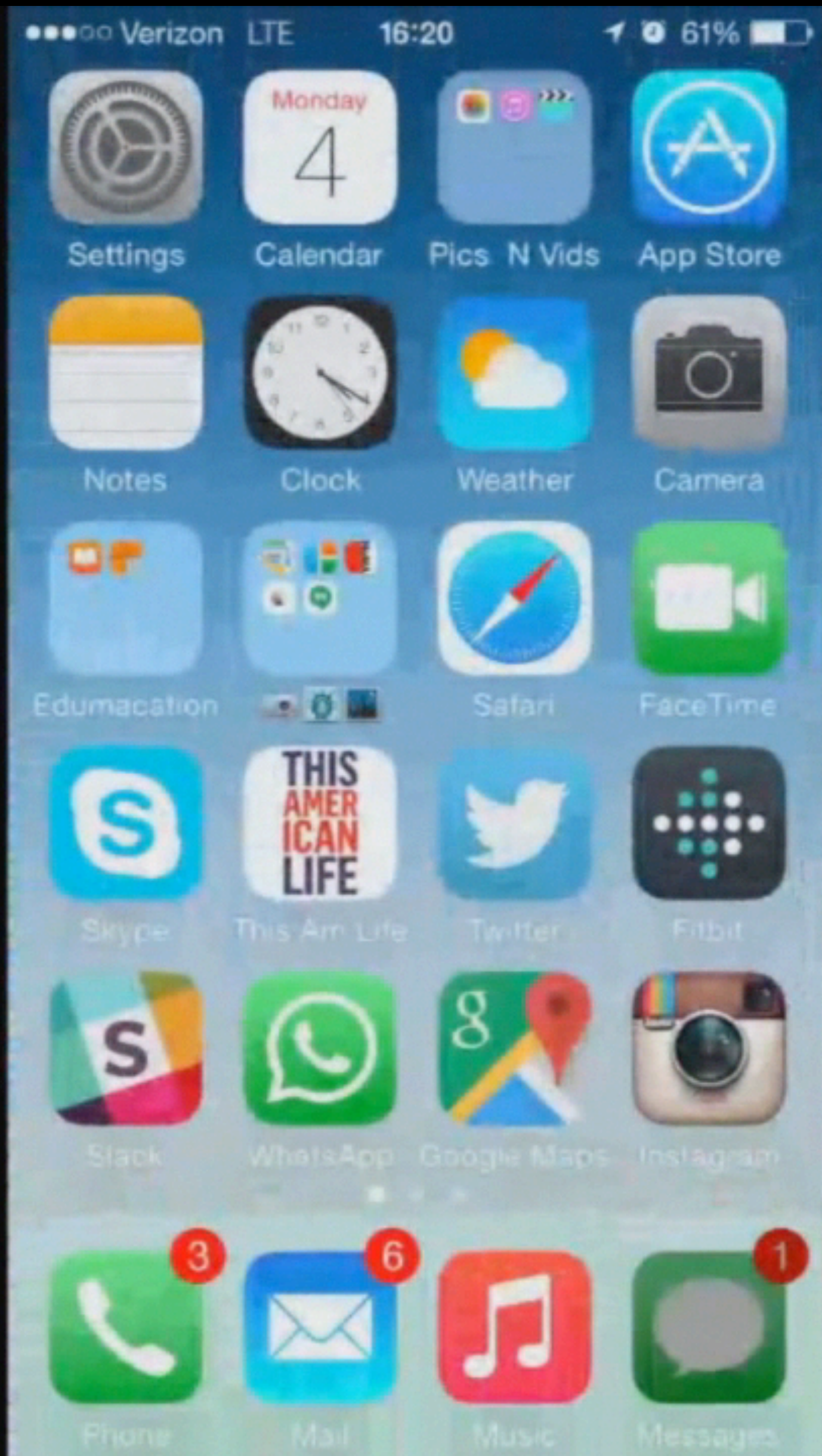
send email



# app prevents weight gain over 4 years







use app once  
weekly for  
**one year**

**93.2%**





data-driven remotely  
delivered care

data will improve  
counselor quality,  
efficiency, cost

what's  
**next?**

we will reach high  
risk populations



@drgarybennett

drgarybennett.com

dukedigitalhealth.org

# questions?

