Better adherence & outcomes
with **behavioral economics**

Aunty Amy

1991

Type 2 Diabetic

DIAGNOSED 1997

Uncle Roy

1993

Type 2 Diabetic

DIAGNOSED 1970

Chronic disease patients don't follow their care plans

MED ADHERENCE

50% don't take meds as prescribed[1]

TRACK METRICS

50% stop measuring in 3 months, if given a device[2]

HIT GOALS

48% of diabetics have A1c > 7%[3]

1. New England Healthcare Institute. (2009). Thinking outside the pillbox.

2. Volpp et al. J Gen Intern Med. 2014 May; 29(5): 770–777.

3. Casagrande et al. Diabetes Care. 2013 Jul; 36(8): 2271–2279.

Why don't patients stick to their care plans?

Present Bias is the reason why patients are not adherent.

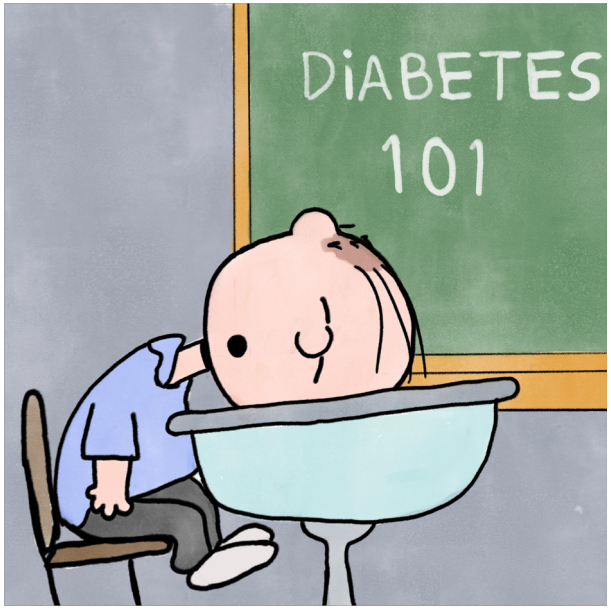
Behavior is motivated by instant gratification.

Previous solutions don't provide the instant gratification necessary to overcome **Present Bias**.

Reminders

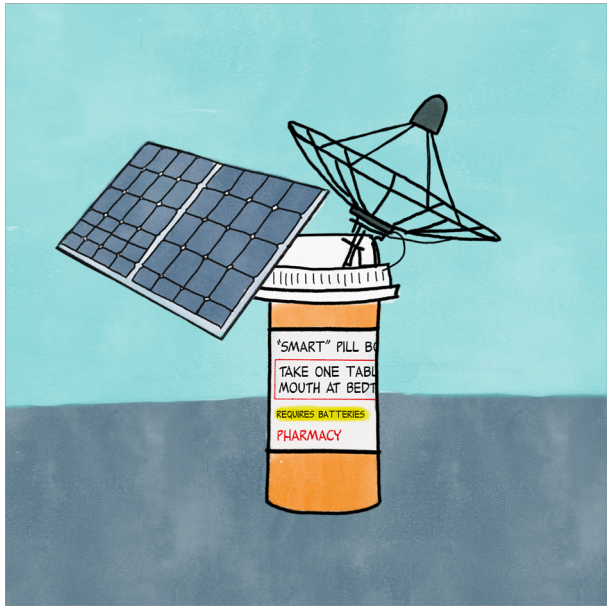
Reminders just become a nuisance over time

Education



Patients already know they should take their meds.

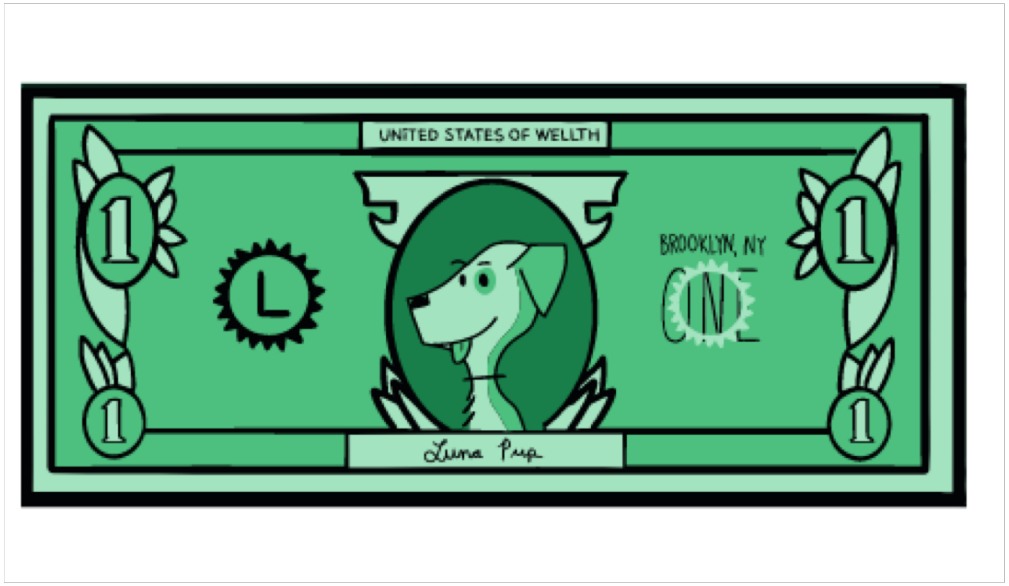
Connected devices



Devices measure adherence but do not improve it.

Paying patients to adhere to their care plan
does overcome **Present Bias**

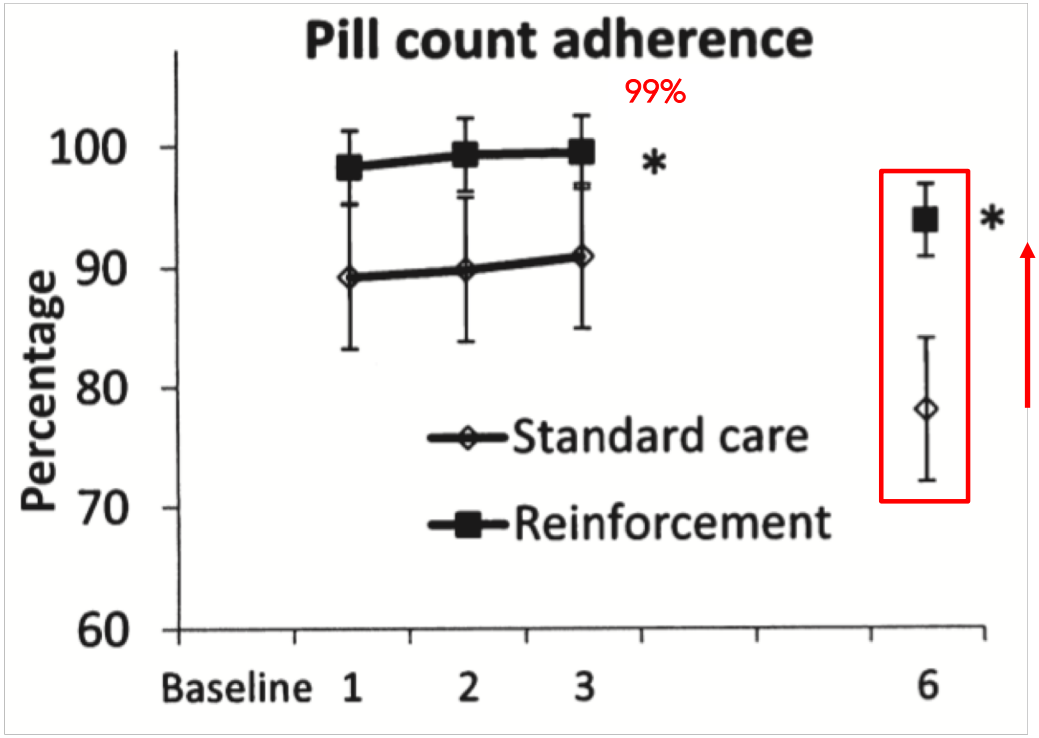
=



This is proven by Behavioral Economic studies and Wellth pilots.

(Well-structured) Incentives produce lasting behavior change

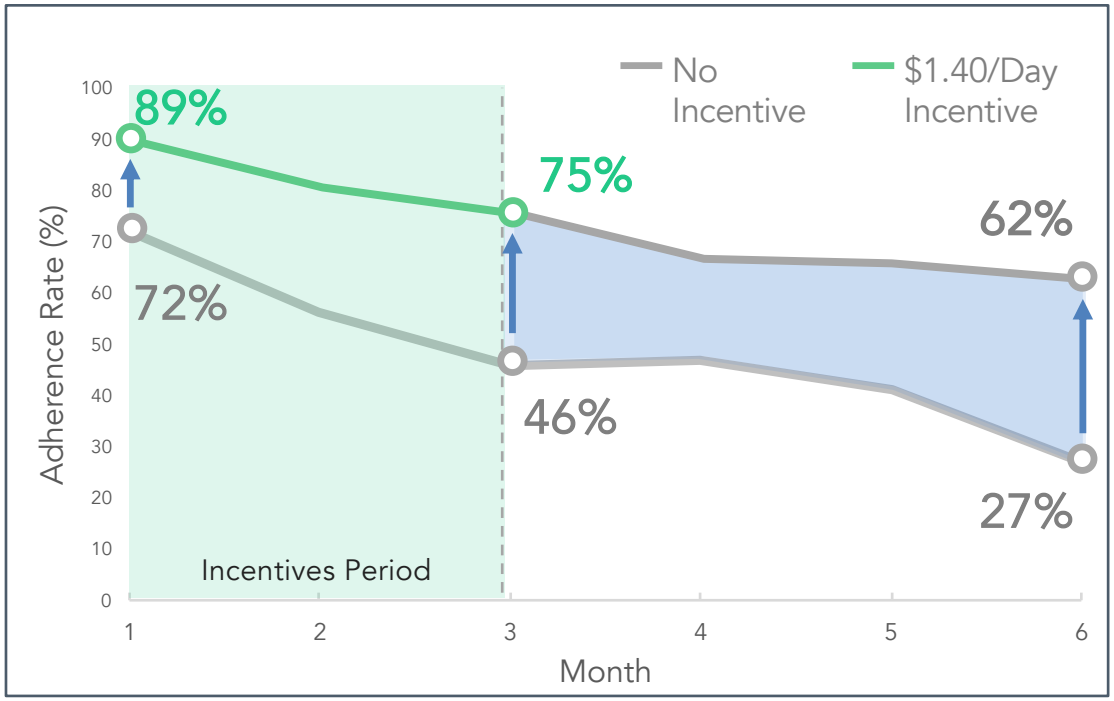
Improvement to med adherence lasts after incentives end



Petry et al. (2015) "Reinforcing adherence to antihypertensive medications." *J Clin Hypertens.* 17.1: 33–38.

Incentives improve adherence for other care plan elements, too

Without incentives, remote monitoring is largely useless



Volpp et al. J Gen Intern Med. 2014 May; 29(5): 770–777.

PATIENT WITH

HEART FAILURE

Roy

Enrollment

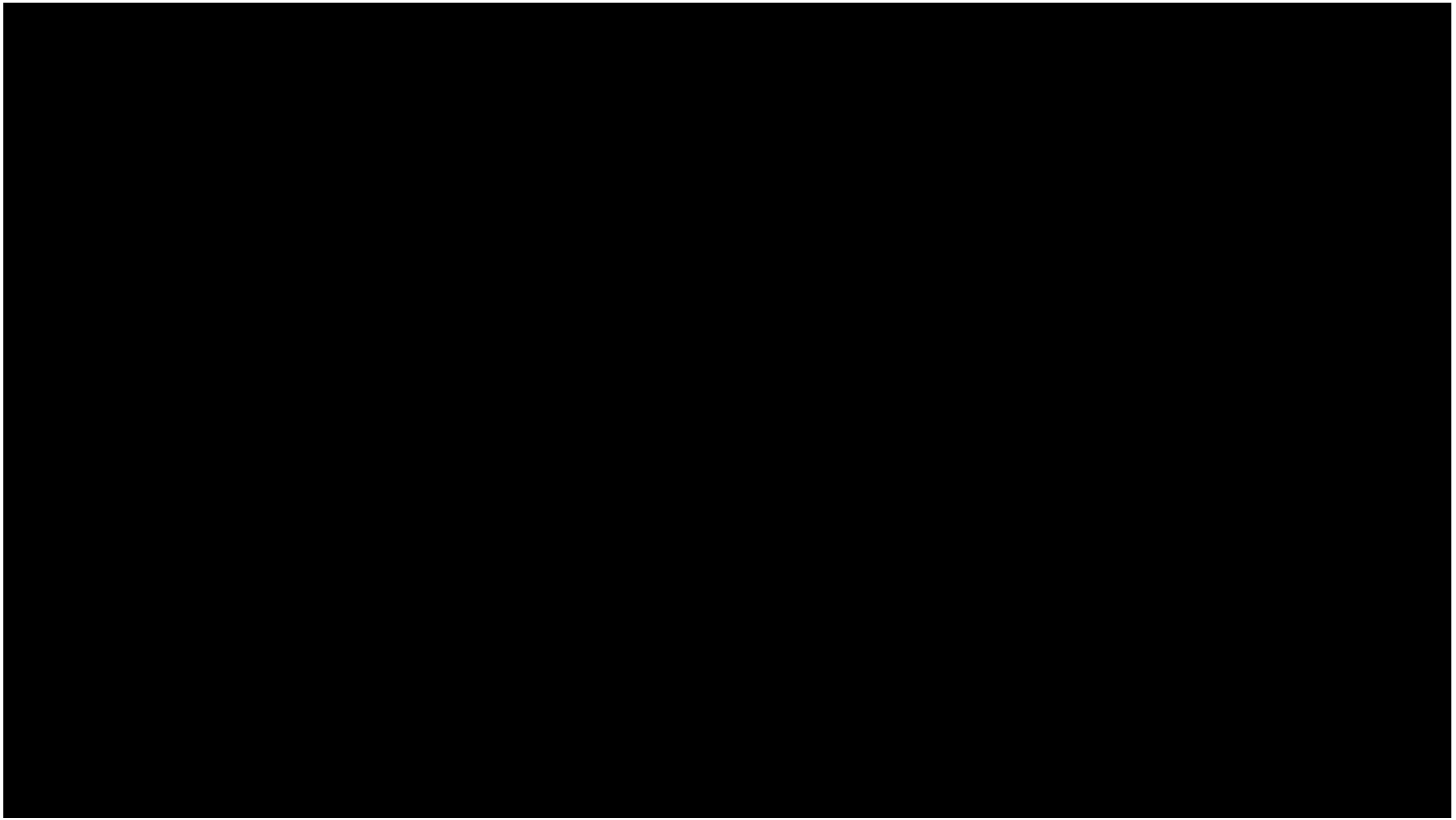
$50 deposited into Roy's account; his first month of possible rewards

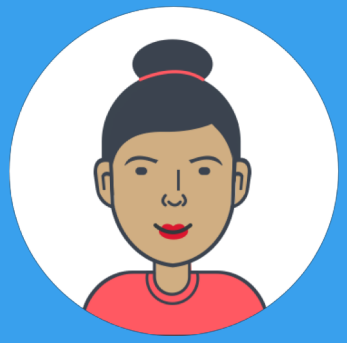
Adherence

Roy becomes 89%+ adherent to his meds and individualized care plan to avoid losing $2/day

Outcome

Roy improves adherence & health, lowers his utilization, produces 4x+ ROI to payer



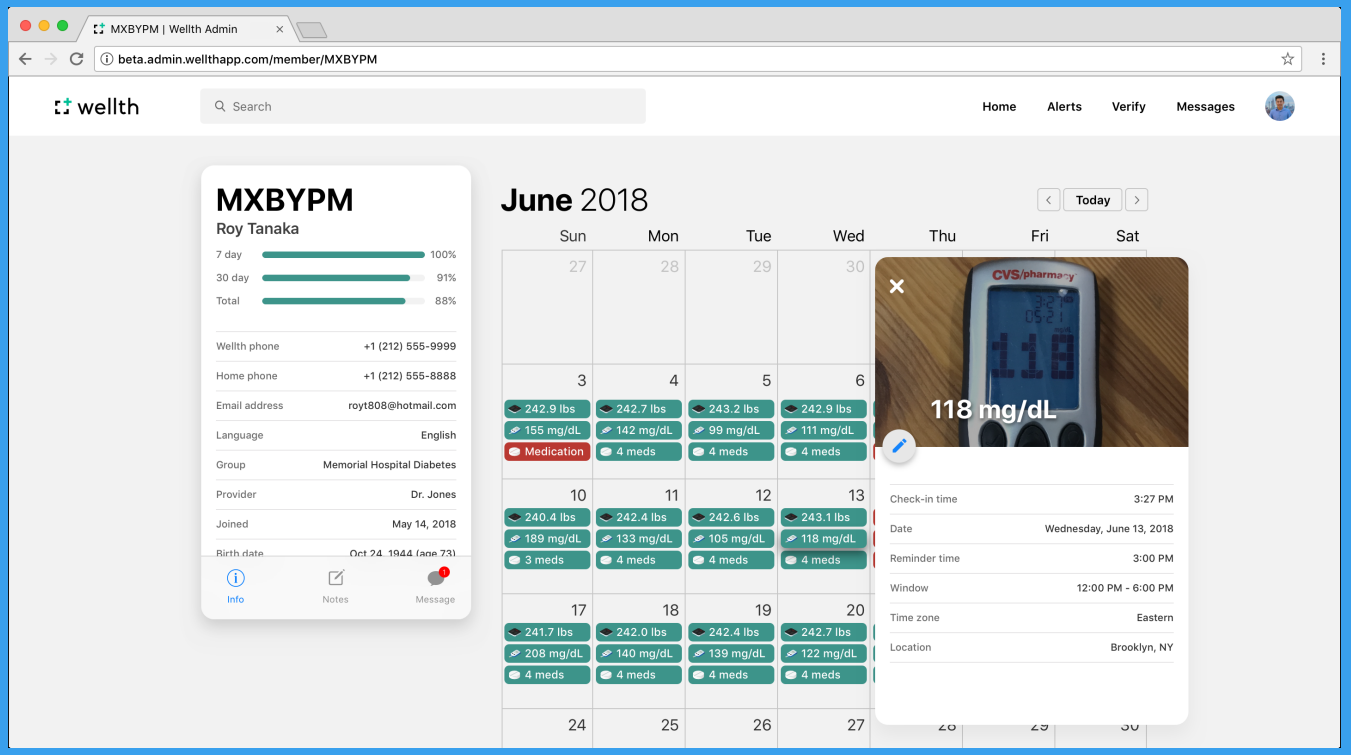


CARE TEAM SUPPORT

Marissa

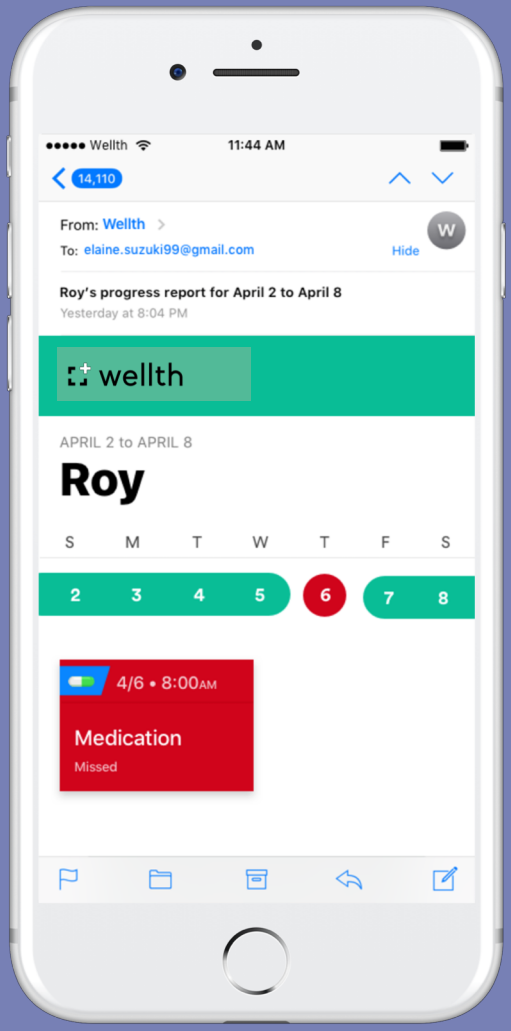
Wellth Member Specialists augment and support existing Care Team workflows

- ✓ Conduct all remote enrollment
- ✓ Monitor adherence and outreach to nonadherent members
- ✓ Provide full live support
- ✓ Send weekly reports to Care Team



SIDEKICK

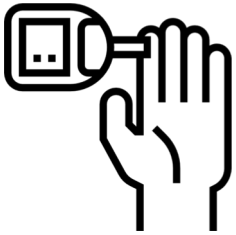
Elaine


●●●●● Wellth
11:44 AM
14,110
From: Wellth
To: elaine.suzuki99@gmail.com
Hide
W
Roy's progress report for April 2 to April 8
Yesterday at 8:04 PM
wellth
APRIL 2 to APRIL 8
Roy
S M T W T F S
2 3 4 5 6 7 8
4/6 • 8:00AM
Medication
Missed


●●●●● Wellth
11:01 AM
W
Wellth
Hi Elaine! Send motivational photos or videos for Roy directly to us here via text message.
Delivered
iMessage

Wellth is able to create data-driven behavior change interventions across a range of complex patient populations

Wellth Core Disease Areas



Diabetes

CVD and Heart Failure

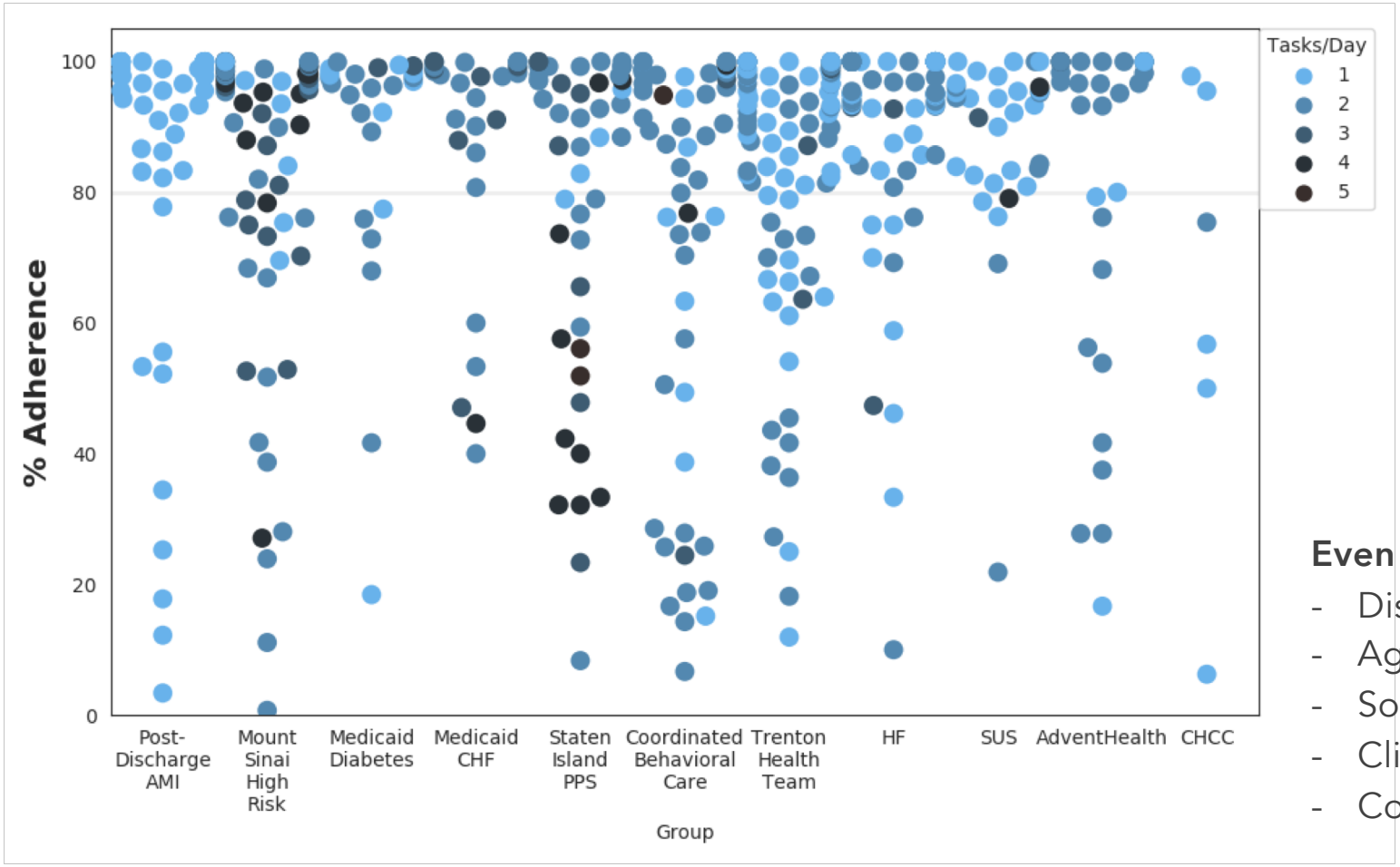
COPD

Behavioral Health

wellth

Outcomes Data

Wellth produces lasting adherence habits



89%

Average Daily Adherence

Even across different…

- Disease states & co-morbidities
- Age groups
- Socioeconomic status
- Clinical settings
- Complexity of care plans

Wellth's Adherence Results Yield Strong Clinical and Quality Outcomes

89%

Average Daily Adherence

Care plan behaviors include:

- Medications
- Glucometer Readings
- Blood Pressure Readings
- CPAP Therapy
- Low sodium meals

Wellth Core Disease Areas

Heart Failure

CV Disease

Type 2 Diabetes

COPD / Asthma

Behavioral Health

- ✓ **0.96% reduction in A1c levels** in poorly controlled, elderly diabetics over a full year
- ✓ **Up to 46% reduction to readmissions** over 90 days post heart attack
- ✓ **100% appointment attendance** at an outpatient behavioral health clinic in enrolled Serious Mental Illness population
- ✓ **92% decrease in avoidable ER utilization** in diabetics (24 reduced to 2)
- ✓ **88% Net Promoter Score**

Case Study 1: Poorly Controlled Diabetics

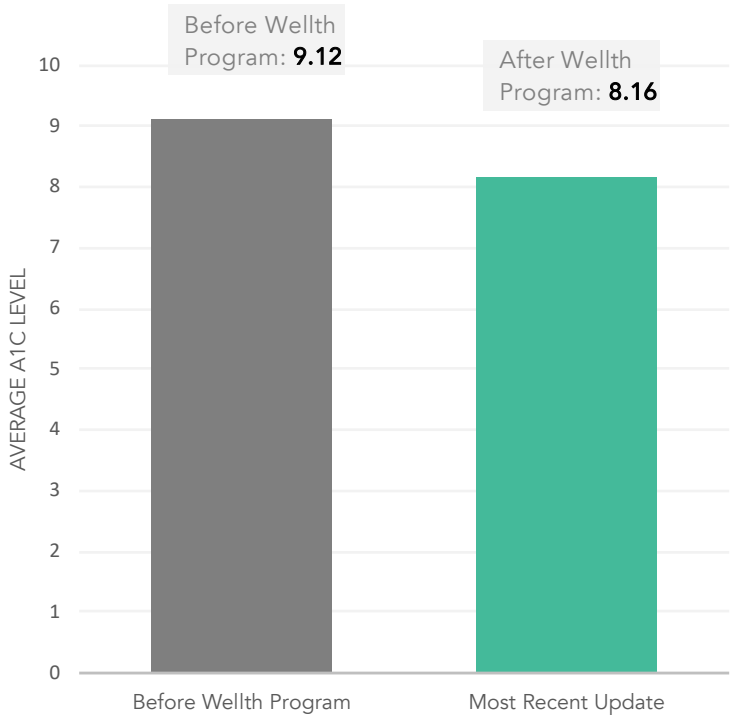
RiverSpring Health™
Featuring the Hebrew Home at Riverdale

- Targeted Dual Eligible members with a history of poor Diabetes management (**baseline A1c > 8%**)
- Average member age was **67 years old**
- Members have now been in the program for two years, **average daily adherence is still 91%**
- 75% of members improved their A1c
- Average **A1c Improvement of 0.96**

91%

Average Daily Adherence over 2 years

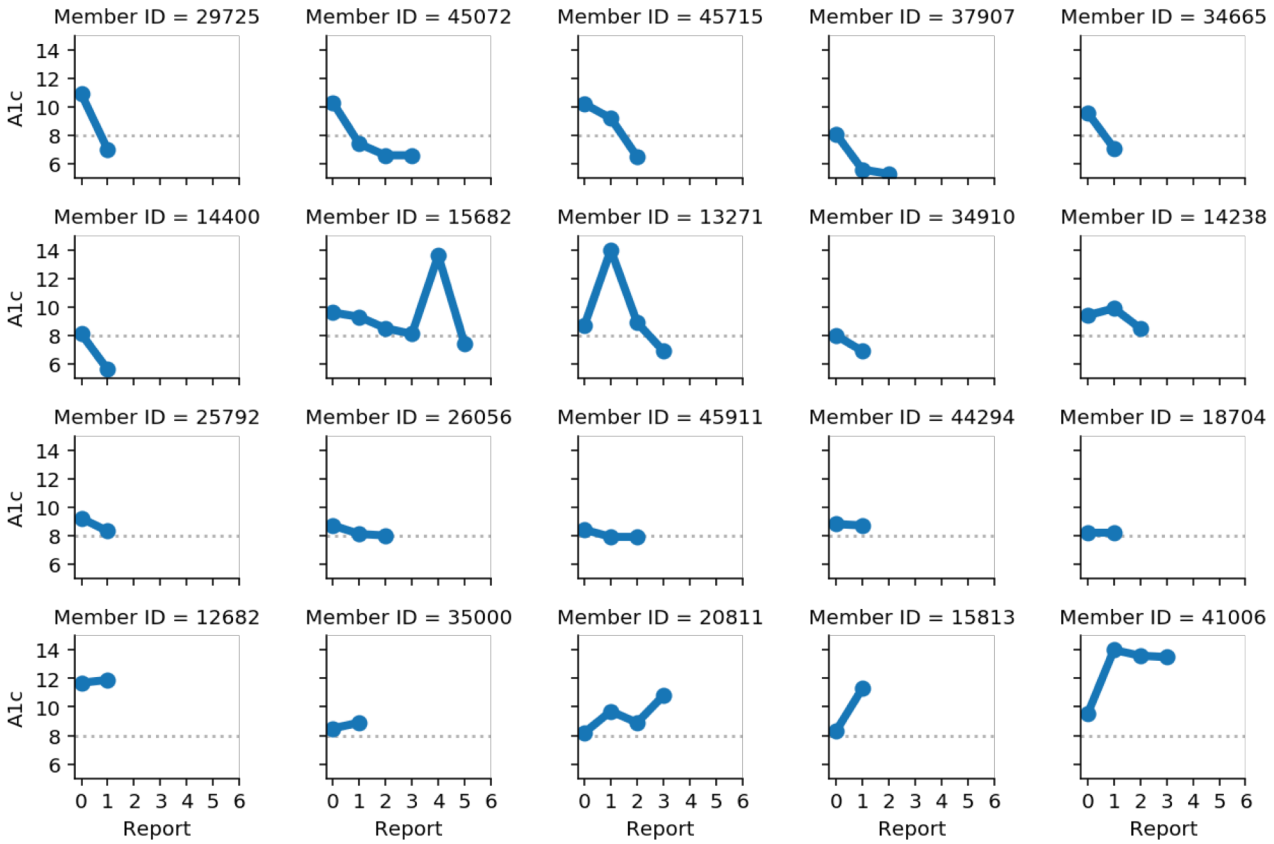
Change in A1c Level After Wellth Program



Health Outcomes: Average A1c change of −0.9 after starting >8%

Updated 2/25/2019

Baseline A1c	Most Recent A1c	A1c Change	Did A1c Improve?
10.9	**7.0**	**-3.9**	**Yes**
10.3	**6.6**	**-3.7**	**Yes**
10.2	**6.5**	**-3.7**	**Yes**
8.1	**5.3**	**-2.8**	**Yes**
9.6	**7.1**	**-2.5**	**Yes**
8.1	**5.6**	**-2.5**	**Yes**
9.6	**7.4**	**-2.2**	**Yes**
8.7	**6.9**	**-1.8**	**Yes**
8.5	**6.9**	**-1.1**	**Yes**
9.4	**8.5**	**-0.9**	**Yes**
9.2	**8.3**	**-0.9**	**Yes**
8.7	**8.0**	**-0.7**	**Yes**
8.4	**7.9**	**-0.5**	**Yes**
8.8	**8.7**	**-0.1**	**Yes**
8.2	8.2	0.0	No Change
11.7	11.9	0.2	No
8.5	8.9	0.4	No
8.2	10.8	2.6	No
8.3	11.3	3.0	No
9.5	13.5	4.0	No



Report 0 represents Baseline A1c measurement before member begins program

Customer now expanding to behavioral health and COPD

Case Study 2: Serious Mental Illness

- Targeted Medicaid eligible patients after recent long term psych hospitalization (**i.e., schizophrenia, psychosis,** etc.)
- Nearly all participants had **physical health co-morbidities**
- **Average daily adherence was 85%** over the course of the 90-day program
- **100% of participants attended a follow-up outpatient Behavioral Health appointment**, 93% attended a follow-up outpatient Physical Health appointment[1]

85%

Average Daily Adherence

100%

Attended follow-up outpatient behavioral health appointment

1. CBC 2018 Annual Report, http://www.cbcare.org/wp-content/uploads/2019/01/CBC-2018-ANNUAL-REPORT.pdf

Case Study 3: Heart Attack Readmission Reduction

Penn Medicine

- Randomized 136 heart attack discharges into a randomly controlled trial
- All payer types, with **half commercially insured**
- Control group given a 'smart' pill bottle to track their adherence, intervention group was given both 'smart' pill bottle and Wellth for 90-days
- **Average daily adherence measured through Wellth was 85%** over the course of the 90-day program. Control group demonstrated 68% average adherence through 'smart' pill bottle
- **The Wellth group had a 45% lower readmission rate within those 90-days.** The readmission rate decreased from 20.8% (control) to 11.4% (intervention)

45%

Reduction to 90-day Readmission Rate

$12-16k

Typical cost per hospitalization

Patient Testimonials: ElderServe

"I thought that before [the Wellth Program], if you don't feel symptoms for diabetes, then everything is ok, but I would get nauseas etc.

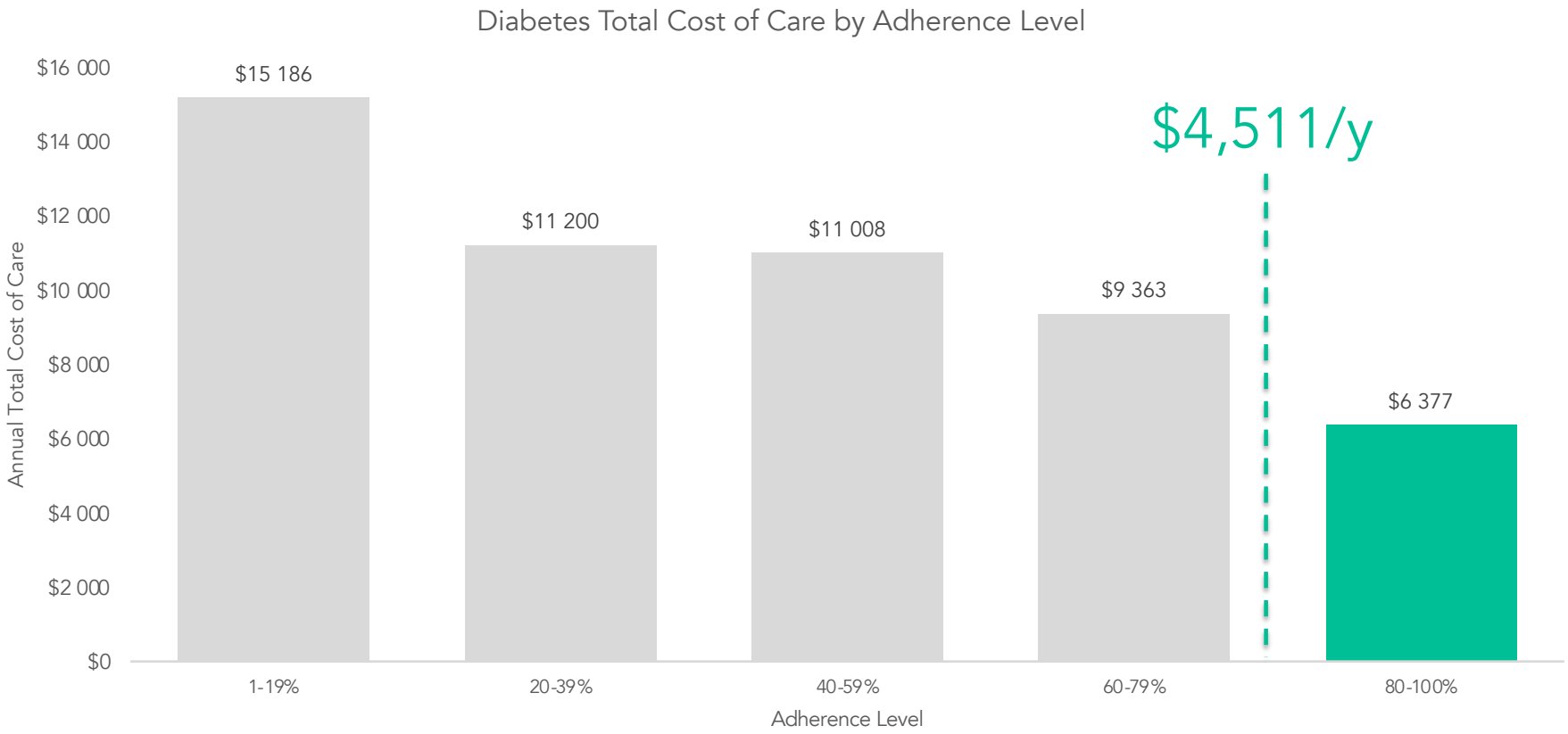
But now, because of the [Wellth] program, I take the medication each day and I do not feel those symptoms anymore.

I really enjoy being paid for taking the medications and my doctor is really happy with my results."

– RSHP member with diabetes

Starting A1c: 10.9

Current A1c: 7.0



The weighted average annual cost difference between a person with adherence ≥80% and <80% is $4,511. Hence the ROI is **$4,511/$700 = 6.4x**.

Sokol et al. (2005). *Medical Care*. 43(6): 521–530.

Wellth Pricing: Nothing up front. You only pay when patients enroll & adhere

We only get paid when patients enroll and remain >80% adherent

Enrollment		Adherence		Max. Annual
$100	+	$50/mo	=	$700
When patient downloads app and completes first check-in		For every patient that remains >80% adherent to required care plan check-ins		Assuming perfect adherence, inclusive of all Wellth fees + patient incentives.

Wellth Partners and Customers

Scalable behavior change will redefine insurance

People don’t make rational choices, which results in premature morbidity and mortality

- Behavioral Economics married to scalable technology provides the toolkit to change client behaviors
- If you can change behaviors, you change outcomes
- If you change outcomes, you change insurance