

Pill Pal

TRANSFORMING THE WAY WE TAKE MEDICINE





Medication Non-Adherence

A \$300B PROBLEM, AND GROWING

THE ISSUE

75% U.S. population

Does not take their medicine as prescribed.
Costs the U.S. Government \$100-300B/year
(Pharma, 2011)

18 <  < 64 years old

60% of those who are chronically ill are between 18-64 years old. 96M are chronically ill and full time employees.
These are our target beneficiaries
(RWJ Foundation, 2010)

\$4,000/patient

wasted on average per chronically ill patient due to low-adherence. Non-adherence can result in higher treatment costs, more hospital visits and deaths.
(Sokol et al, 2005)

OUR VALUE PROPOSITION

save money
be healthy
live well

Reduce healthcare costs
Track adherence progress
Improve treatment regimen

ROOT CAUSES OF NON-ADHERENCE

69% adherence barriers are behavioral

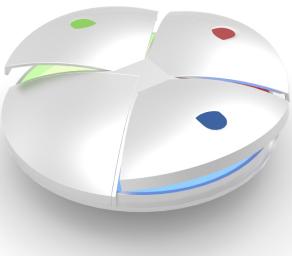
- Forgetfulness
- Demotivation & laziness
- Skepticism/confusion of treatment



Pill Pal | A Smart Companion

A SMART PILL DISPENSER THAT CHANGES THE WAY WE TAKE MEDICINE

PRODUCT | FEATURES & TECH



Reminds (light alarm)
Monitors Intake (yes/no, frequency, time)
Builds Habits (stimuli > action > feedback)



Infrared sensors
Completion lights (LEDs)
GPS Tracking Chip
Logic (tracks streaks of adherence)

**smart pill dispenser
+ mobile app**

pay \$99/year
save up to \$1,500/year

in health-care costs/employee
enrolled in disease mgmt



APP | FEATURES & TECH



Scans Prescriptions (text-recognition, auto-refills)
Set Alarms (push notifications & dosage info)
Tracks Adherence (visual graphs, progress reports)
Compiles Reports (reaction to medicine, adherence levels)
Engages Community (alerts "loved-ones," shares progress)



Text-recognition software (lifts data off pill prescription)
Refill reminders (recognizes pharmacist number & date)
Compiles data (graphs and reports for easy consumption)
Sentiment analytics (reaction to medicine, Python)

FACTORS THAT MOTIVATE & IMPROVE ADHERENCE*

Health Literacy

(dose, regimen)

Social Support

(nudges, loved ones)

Self-Efficacy

(visual progress tracking)

*(Health Psychology, 2006; Patient Education & Counseling, 2007; Family Medicine, 2005)



Target Market

EMPLOYEE 'WELLNESS PROGRAM' EXPENDITURE IS GROWING



CUSTOMER PROFILE

Large companies (50K+ employees) with high expenditure on wellness programs, specifically disease management programs

EMPLOYEE WELLNESS SPENDING

\$6B total

Wellness expenditure by U.S. companies (2014)

Includes healthy eating, exercise, disease mgmt, etc.

\$1,400/employee

Avg spending by companies on wellness investments (2014)

Projected to increase year on year. 15% increase since 2013.

45% of large firms

Offer disease management programs. (Firms with 3,000+ employees). 98% firms (200+ emp) offer wellness programs.

(Fidelity, 2104; Caloyeras et al, 2014; Jama, 2014)

PEPSICO CASE STUDY DISEASE MANAGEMENT PROGRAM



\$1,600/year

Saved/employee by PepsiCo's disease management program. N = 25,000.

400% ROI

and a 26% reduction in hospital visits

POTENTIAL REVENUE

\$7.9M

With # enrolled in PepsiCo's disease management program alone.
 $25,000 \times \$99 \times 3\text{-year contract, r} = 5\%$

Estimated Market Size of
Disease Management \$

\$57.6M



Development Timeline

OUR 6 MONTH APP AND PRODUCT DEVELOPMENT PLAN

KEY ASSUMPTIONS TO VALIDATE/NEGATE:

- % increase in adherence
- Interest of target market
- App & product = seamless?
- Connect community to patient (loved ones, med providers)
- Accuracy of text-recognition software for lifting prescription information
- Response to 'completion lights'
- Gamification methodology of app

DEVELOPMENT TIMELINE

DELIVERABLE	COST (\$)	LEAD	Feb	Mar	Apr	May	Jun	Jul
Prototype product (3D Print)	50	J						
Preliminary Testing prototype	50	S						
Build application specs	0	L						
Design MVP product	0	W						
Build MVP product	1000	J						
Design MVP app	15000	L						
Test MVP 1 (n=10)	100	S						
Iterate & rebuild MVP 2	1000	W						
Test MVP 2 (n=50)	450	S						
	17,650							



The People

OUR PASSIONATE, DEDICATED AND TALENTED DREAM TEAM



SEAON SHIN

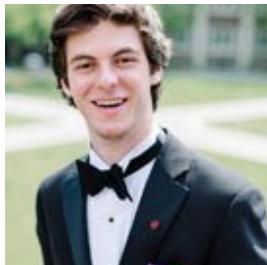
CEO – Chief Exec

Manages business development

Entrepreneurship & Innovation

5 + Years in Social Entrepreneurship & NPO Management

Raised \$250,000 start-up capital



WYATT SHAPIRO

CCO – Chief Creative

Manages product design and development

MEAM (Mechanical Engineering and Applied Mechanics)

2 + Years Experience in Product Design

2 + Years Social impact work



LYLES SWIFT

CPO – Chief Programs

Develops adherence programming

BBB (Biological Basis of Behavior)

Designed & coded AiD application for HIV adherence

2 + Years Adherence (HIV)



CARLA DIANA

Product and Technical Advisor

Faculty, Integrated Product Design at UPENN

Smart Interaction Lab

'Internet of Things' designer
Smart Design Co.



JUSTIN CHANG

CTO – Chief Tech

Manages technical development

MEAM (Mechanical Engineering and Applied Mechanics)

2 + Years in Mechatronics

2 + Years in Manufacturing Experience