2018 NATIONAL RYAN WHITE CONFERENCE ON HIV CARE & TREATMENT

Social Marketing Campaign to Identify MSM Unaware of Their HIV Infection in Providence, RI

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The Miriam Hospital Center for Infectious Disease

EXECUTIVE OFFICE OF HEALTH & HUMAN SERVICES STATE OF RHODE ISLAND

RI COEXIST HIV

RIPHI Mission

To promote community health and to reduce health disparities in Rhode Island and beyond.

We develop innovative public health programs, conduct translational and policy research, and train students and public health practitioners.

Partner Agencies

RIPHI RHODE ISLAND PUBLIC HEALTH INSTITUTE

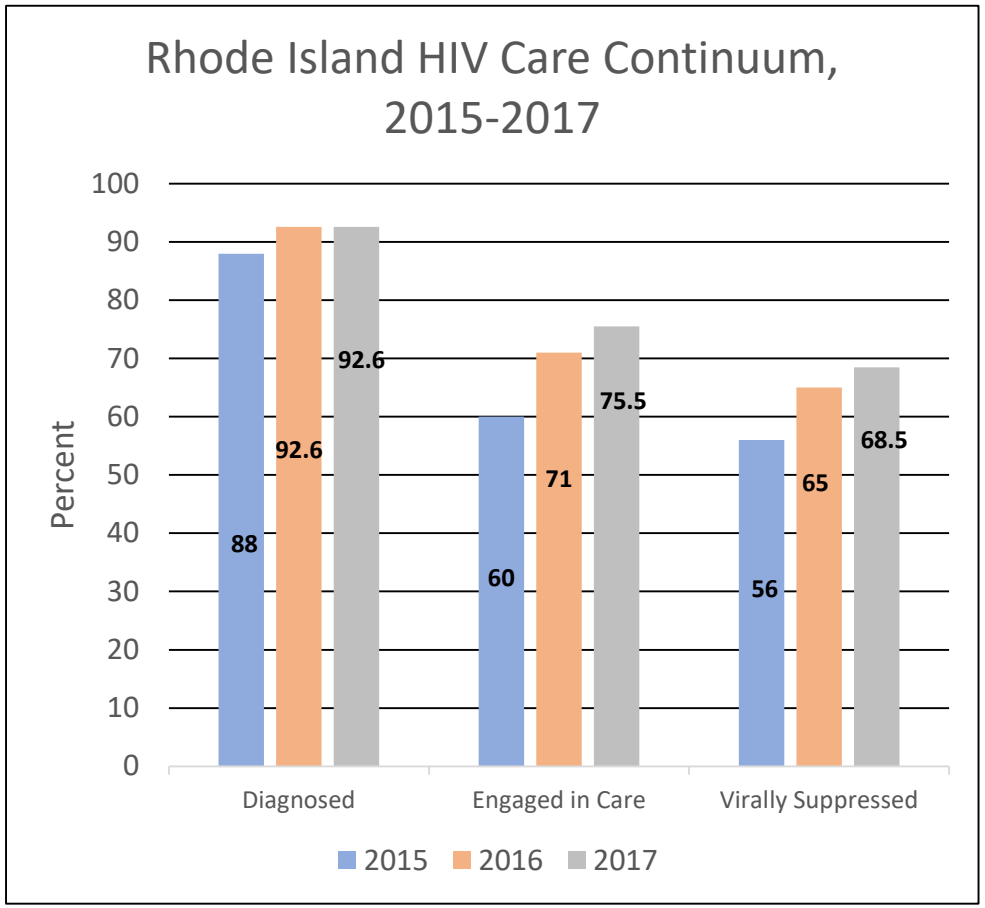
The Rhode Island STD Clinic

A collaboration between RIDOH and The Miriam Hospital

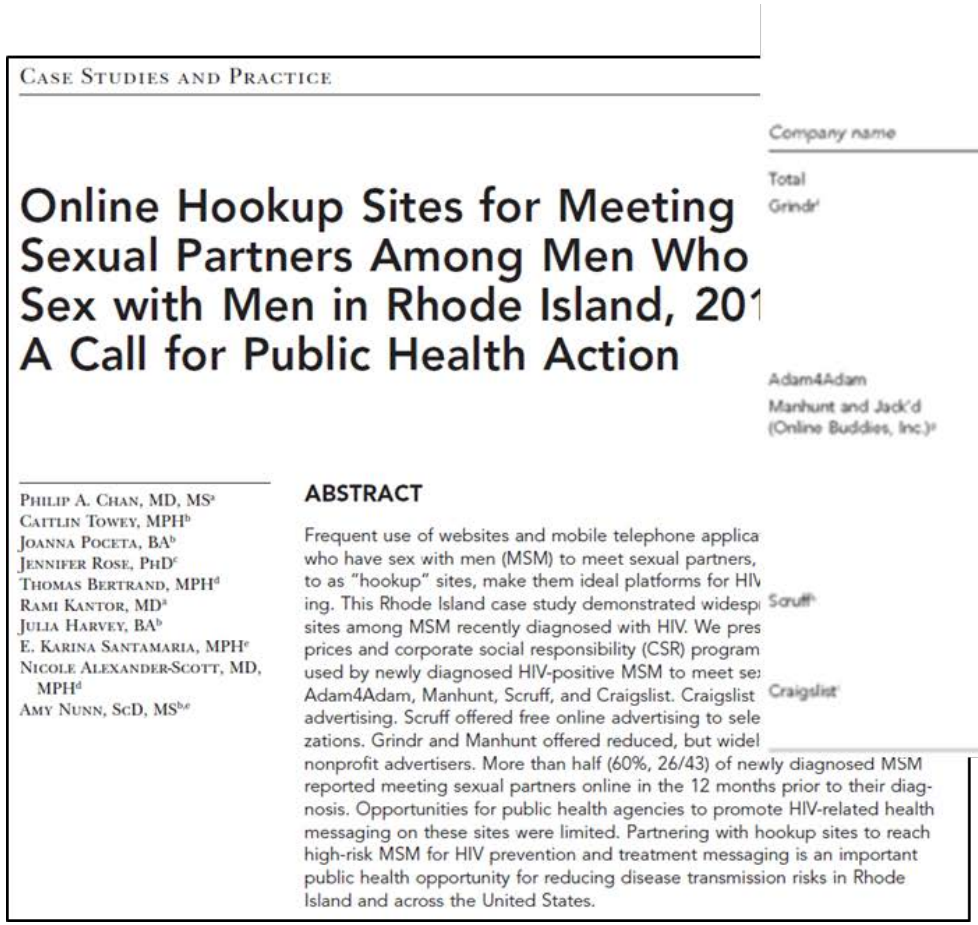
Testing for HIV and other STDs
Wednesday, Thursday, and Friday
12:30-3:30pm

RIPHI CoEXIST Background

- Approximately 400 Rhode Islanders are living with HIV and are unaware of their infection.
- There is currently no integrated tracking system to identify these individuals, link them to care, and follow them to viral suppression and beyond.
- The majority of people who are newly diagnosed with HIV meet their partners online.



RI DOH, 2018



CASE STUDIES AND PRACTICE

Online Hookup Sites for Meeting Sexual Partners Among Men Who Sex with Men in Rhode Island, 201 A Call for Public Health Action

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CAITLIN TOWEY, MPH[b]
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JENNIFER ROSE, PhD[c]
THOMAS BERTRAND, MPH[d]
RAMI KANTOR, MD[a]
JULIA HARVEY, BA[b]
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ABSTRACT

Frequent use of websites and mobile telephone applica
who have sex with men (MSM) to meet sexual partners,
to as "hookup" sites, make them ideal platforms for HIV
ing. This Rhode Island case study demonstrated widespr
sites among MSM recently diagnosed with HIV. We pres
prices and corporate social responsibility (CSR) program
used by newly diagnosed HIV-positive MSM to meet se
Adam4Adam, Manhunt, Scruff, and Craigslist. Craigslist
advertising. Scruff offered free online advertising to sele
zations. Grindr and Manhunt offered reduced, but widel
nonprofit advertisers. More than half (60%, 26/43) of newly diagnosed MSM reported meeting sexual partners online in the 12 months prior to their diagnosis. Opportunities for public health agencies to promote HIV-related health messaging on these sites were limited. Partnering with hookup sites to reach high-risk MSM for HIV prevention and treatment messaging is an important public health opportunity for reducing disease transmission risks in Rhode Island and across the United States.

Company name	Number of newly diagnosed MSM reporting meeting sexual partners on the hookup site in the previous 12 months (percent)[a,b]	Number of newly diagnosed MSM who believe the sexual partner who infected them was met on this site (percent)[b,c]	Availability of corporate social responsibility programs[d]	Reduced public health advertising costs[e]
Total	26	22		
Grindr[f]	14 (54)	4 (18)	Reduced pricing for nonprofit organizations Grindr for Equality promotes lesbian/gay/bisexual/transgender rights; no CSR policy listed related to disease transmission	Banner advertisements (RI users): $4 CPM at 25% share of voice = $400/day Pop-ups (RI users): $150/day for one pop-up per day
Adam4Adam	15 (58)	5 (23)	Did not return inquiries	Did not return inquiries
Manhunt and Jack'd (Online Buddies, Inc.)[g]	8 (31)	7 (32)	Reduced pricing for nonprofit organizations	Manhunt banner advertisements (RI users): $2,000/month at 25% share of voice. Manhunt Monthly e-mail (RI users): $4,000/month Jack'd Mobile banner advertisements (RI users): $3,000/month
Scruff[h]	5 (19)	2 (9)	Free advertising for selected nonprofit organizations	Free for selected nonprofit companies who apply through Benevolads
Craigslist[i]	5 (19)	1 (5)	Craigslist Foundation; donates to philanthropic organizations	Always offers free advertising

New Frontiers: Online-to-Offline Linkage to Care

Chan, Nunn, et al. Public Health Reports, 2016

A Network Analysis of Sexually Transmitted Diseases and Online Hookup Sites Among Men Who Have Sex With Men

Philip A. Chan, MD,† Christina Crowley, MPH,* Jennifer S. Rose, PhD,‡ Trace Kershaw, PhD,§ Alec Tributino, BS,* Madeline C. Montgomery, MPH,* Alexi Almonte, BA,* Julia Raifman, ScD,¶ Rupa Patel, MD,** and Amy Nunn, ScD†*

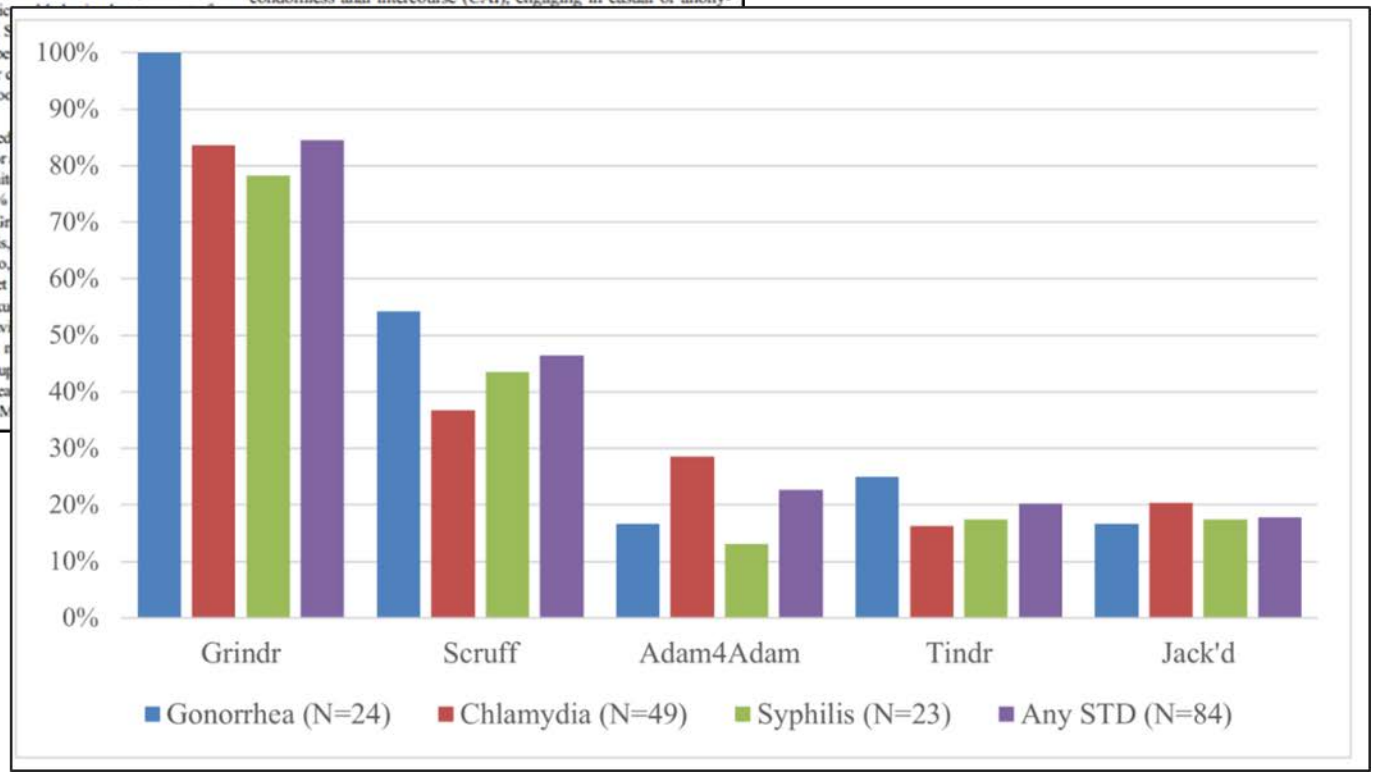
Background: Sexually transmitted diseases (STDs) are increasing among gay, bisexual, and other men who have sex with men (MSM). Little is known about the use of websites and mobile phone applications to meet sexual partners ("hookup sites") and association with STD diagnoses.

Methods: We performed a demographic
415 MSM presenting to the Rhode Island S
variable analyses assessed associations be
testing positive for syphilis, gonorrhea, or
tion networks were created to evaluate hoo
with STD diagnoses.

Results: Among 415 MSM, 78% reported
last 12 months, and 25% tested positive for
partners online were more likely to be whit
have more than 10 lifetime partners (87%
commonly used hookup sites included Gr
Tinder (22%). In the multivariable analysis,
with testing positive for an STD (odds ratio,
1.09–4.94). However, among men who met
agnosed as having an STD had met a sexu
100% of those who were diagnosed as havi

Conclusions: Use of hookup sites was
undergoing STD screening. Specific hookup
ated with STD diagnoses among MSM. Grea
STD screening and prevention among MSM

have a disproportionate impact on gay, bisexual, and other men who have sex with men (MSM).[1] In 2015, MSM accounted for 60% of all syphilis and 42% of gonorrhea cases, a 13% and 15% increase from 2014, respectively.[1,2] Among MSM, behaviors such as condomless anal intercourse (CAI), engaging in casual or anony-



Chan, Nunn, et al. Sexually Transmitted Diseases, 2018

RIPHI Objectives

1. Develop an EIS program designed to serve all of Rhode Island;
2. Raise awareness about HIV screening and linkage to care services on “hookup apps” among MSM who may be unaware of their HIV infection, with a focus on promoting screening at partner locations;
3. Screen 400 MSM annually;
4. Link newly diagnosed MSM who meet their partners online to HIV care and treatment services within 24 hours of diagnosis;
5. Achieve viral suppression in 100% of people who are diagnosed.

HIV Screening & Linkage to Care

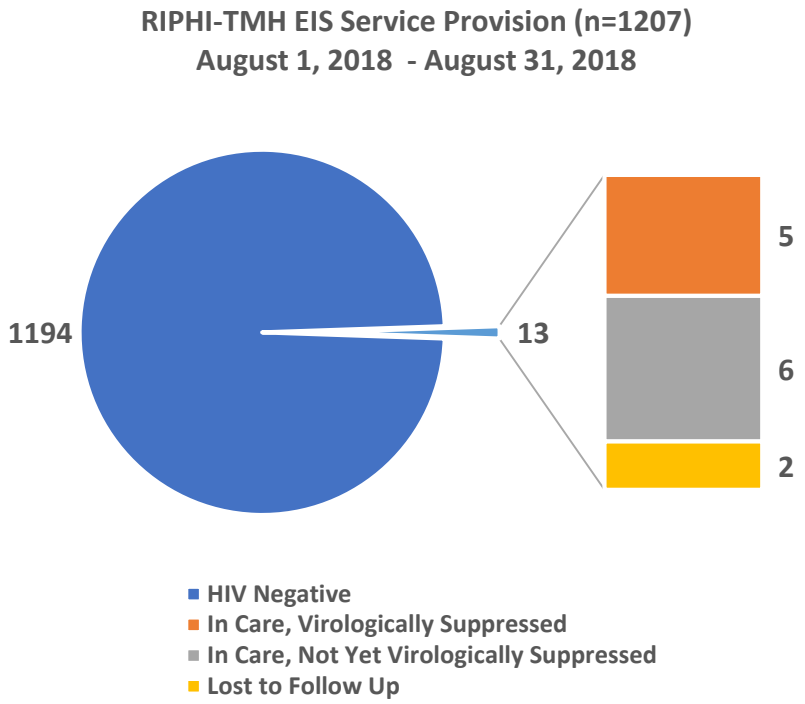
Table 1. Demographics and key characteristics of MSM screened for HIV between August 1, 2017 and August 31, 2018 (n = 1207)

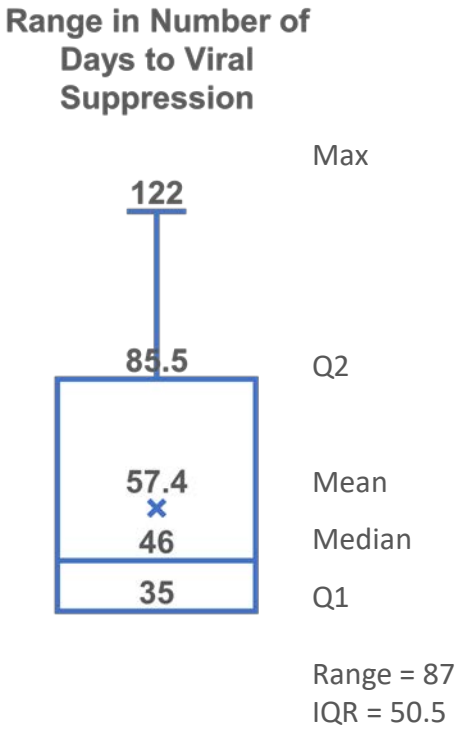
		n (%)
Age		
	15-19	44 (4.0)
	20-29	535 (44.0)
	30-39	304 (25.0)
	40+	308 (26.0)
Hispanic/Latino		258 (21.2)
Race		
	Black/African American	146 (11.9)
	White	809 (66.0)
	Other	272 (22.1)
Sexual Orientation		
	Heterosexual	25 (2.0)
	Gay	931 (75.9)
	Bisexual	190 (15.5)
	Other	81 (6.6)
Met Partners Online		502 (42%)

Table 2. Demographics and key characteristics of MSM receiving a reactive HIV test between August 1, 2017 and August 31, 2018 (n = 13)

		n (%)
Age		
	15-19	0 (0)
	20-29	7 (53.8)
	30-39	5 (38.5)
	40+	1 (7.1)
Hispanic/Latino		6 (46.2)
Race		
	Black/African American	2 (15.4)
	White	6 (46.2)
	Other	5 (38.5)
Sexual Orientation		
	Heterosexual	1 (7.7)
	Gay	10 (76.9)
	Bisexual	2 (15.4)
Ryan White Eligible		1 (7.7)
Rapid Test Location		
	TMH	7 (53.8)
	Other	6 (46.2)

Clinical Outcomes





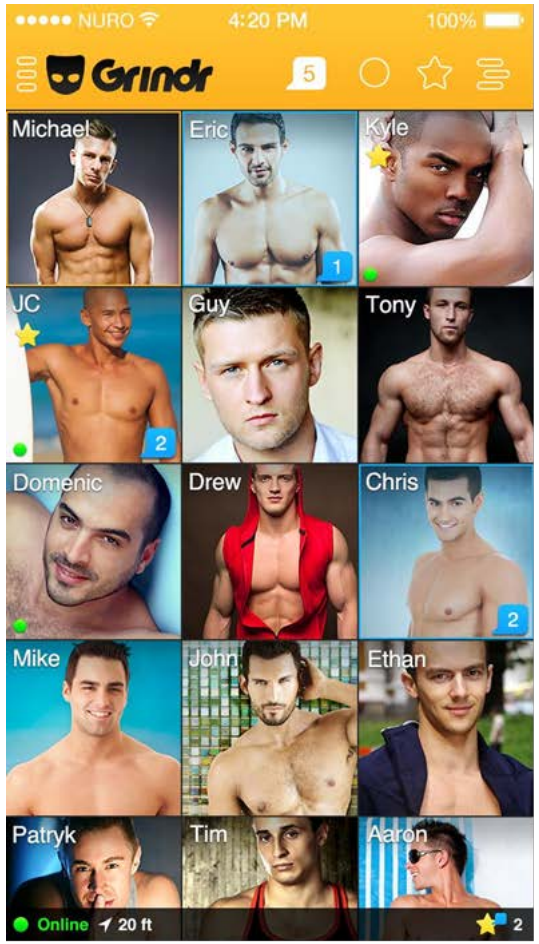
Social Marketing Campaign Focus Group Outcomes

Characteristic	Total (n = 18)
Age (average)	30.2
Hispanic/Latino	4 (22.2%)
Black/African American	4 (22.2%)
White	10 (55.6%)
Sexual orientation	
Heterosexual	1 (5.5%)
Gay	13 (72.2%)
Bisexual	1 (5.5%)
Other	3 (16.7%)
Met partners online	15 (83.3%)
Housing	
Stable/Permanent	15 (83.3%)
N/A	3 (16.7%)

Men in focus groups reported a desire for:

- A bold, hip, sex positive campaign
- Messaging with facts about HIV incidence & HIV screening
- Imagery of real men "living life," not cute couples or erotic beauty
- Concepts promoting HIV prevention for others' health as well as their own
- Tools to act and information on safe places they can go for EIS services

Hookup Apps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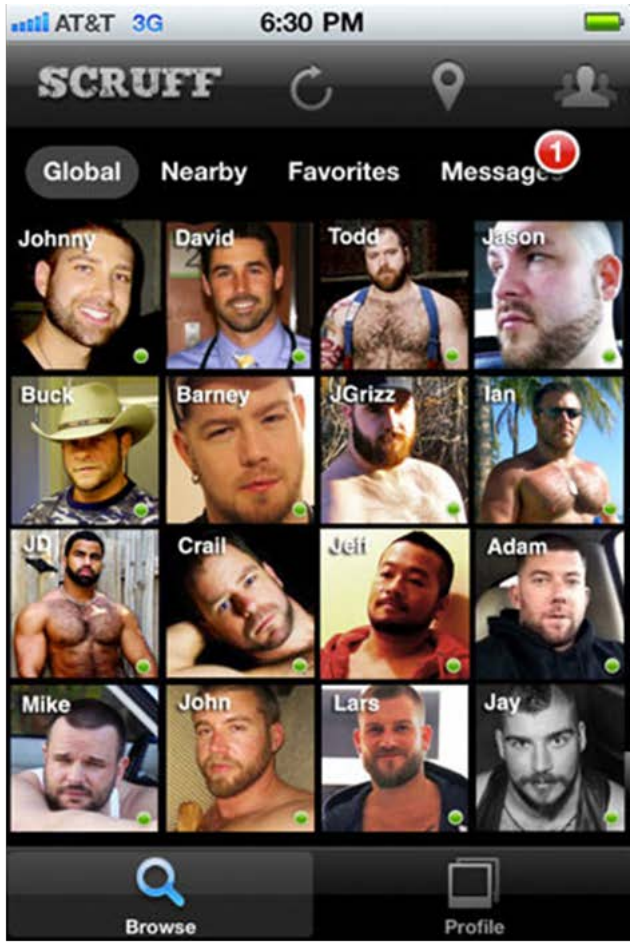
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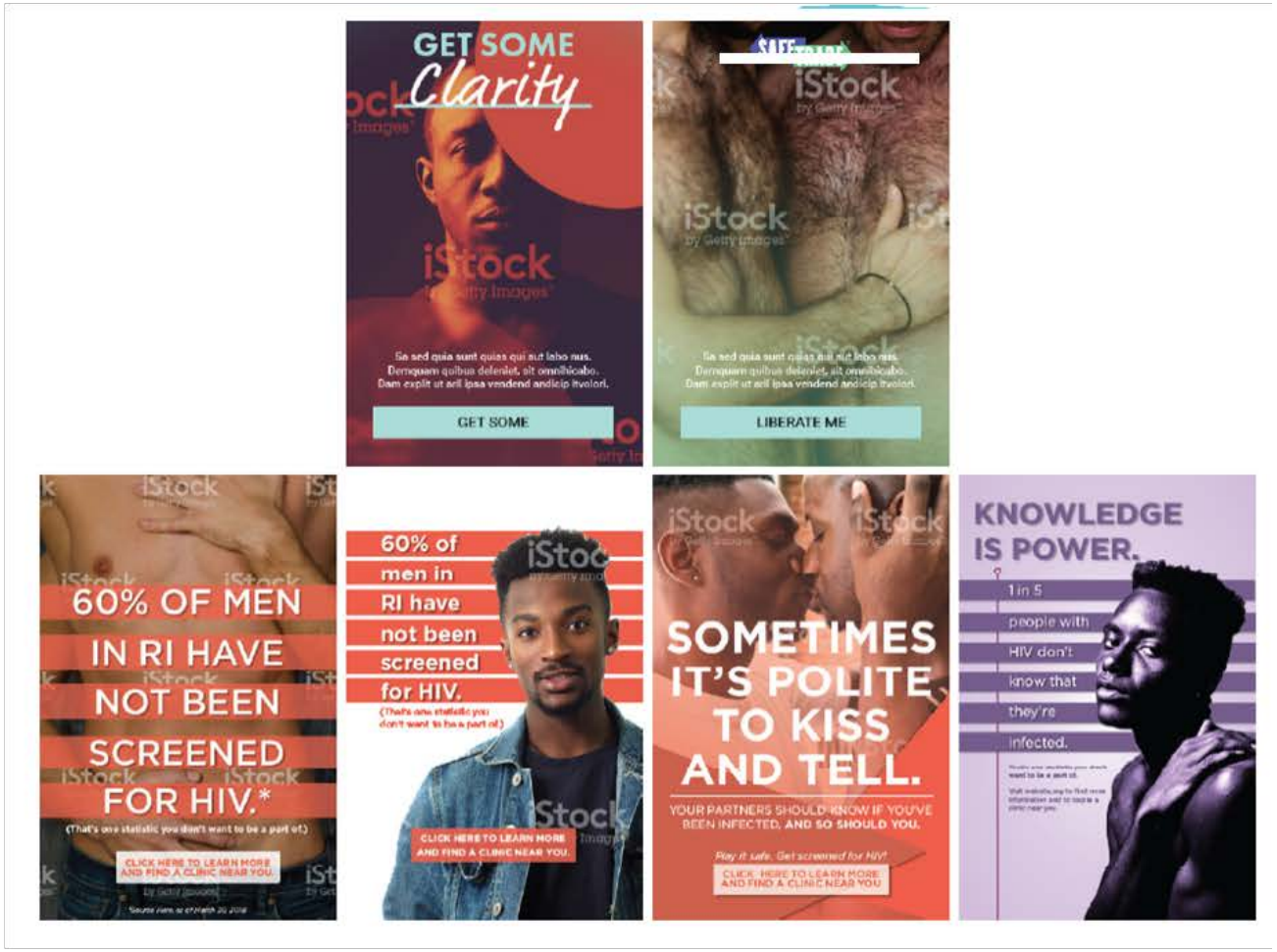
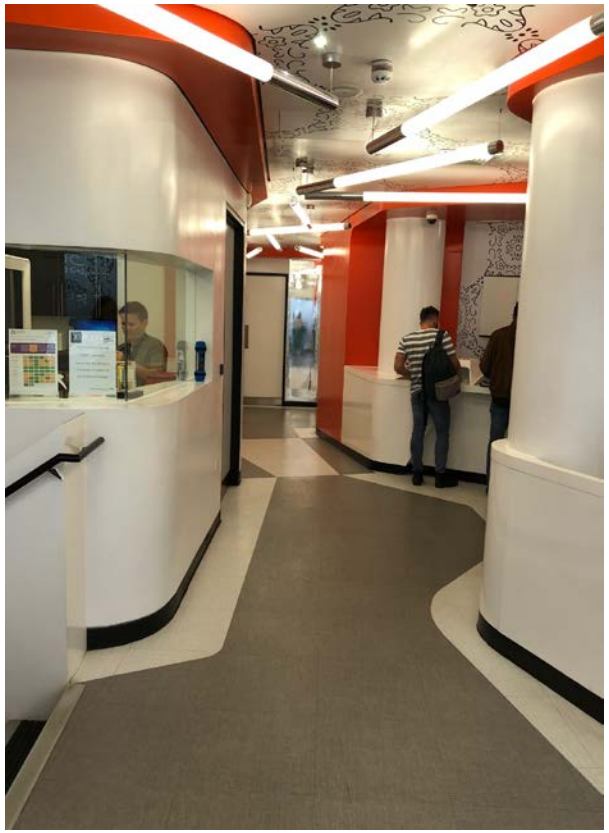
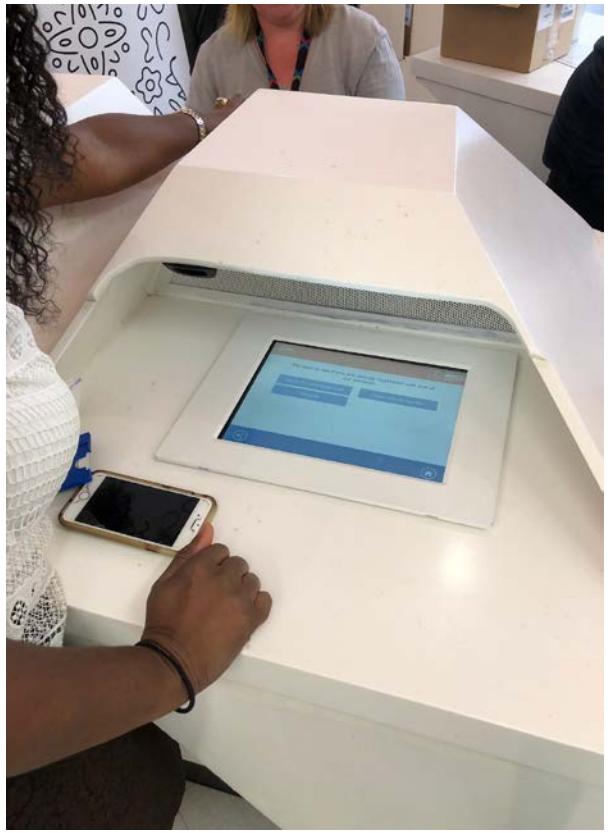
EIS Online

Worldways®
Social Marketing







Diagnose individuals who are unaware of their HIV infection and immediately link them to HIV care, with the ultimate goal of achieving HIV virological suppression

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2018 NATIONAL RYAN WHITE CONFERENCE ON HIV CARE & TREATMENT

Development and Pilot Testing of a Mobile Application to Support Vulnerable HIV+ Patients

Paul Loberti, Administrator for Medical Services, RI Executive Office of HHS

Jeana Frost, Director of Research, 360Medlink

Talk: Evolution of a Platform

1. Background and motivation for the work
2. Approach and platform
3. Experience and lessons learned

Team

Paul Loberti, MPH

Administrator

For Medical Services

RI Executive Office of HHS

Andre Parker

Principal Management & Methods Analysis RI EOHHS

Ezzat Saad, PhD, MD

Chief Med. Officer

Jeana Frost, PhD

Head of Research

Claire Kamoun, MPH

Sr. Dir. Patient & Med-Affairs

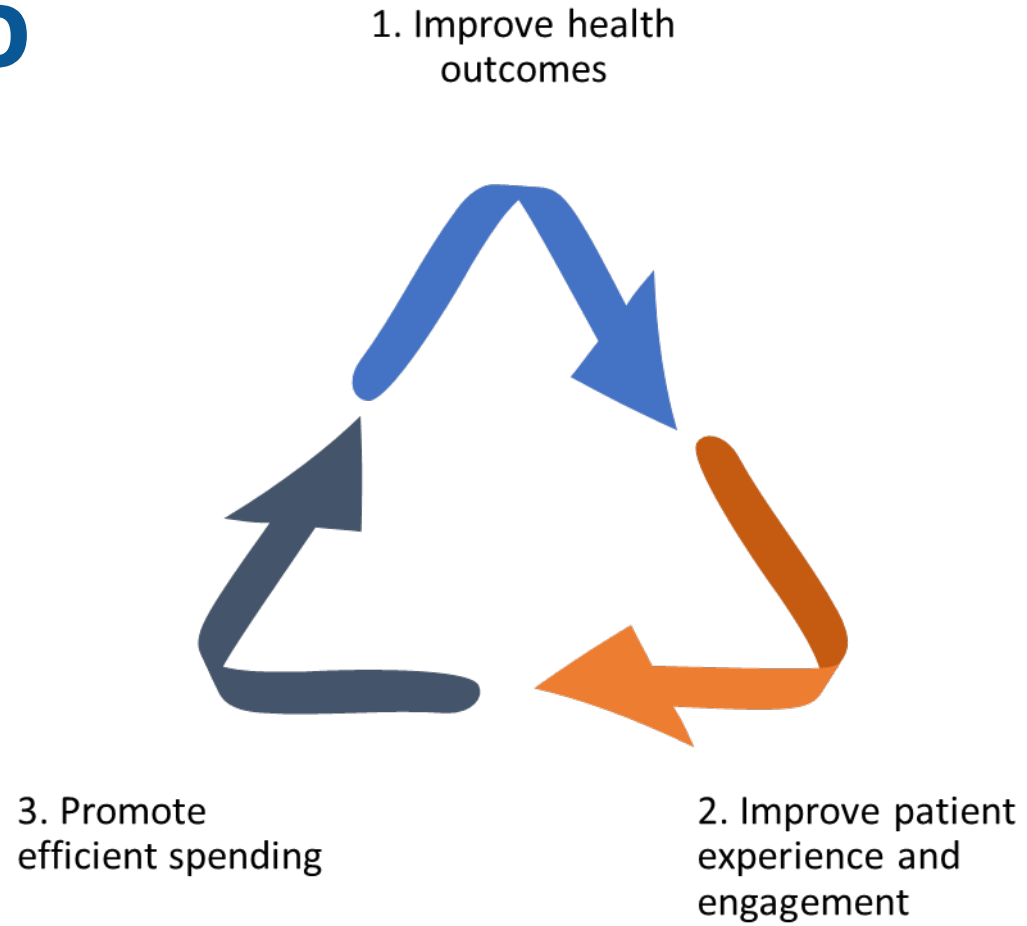
Our Goal: Programs to achieve Triple Aim

Improve:

1. Health outcomes.
2. Patient experience and engagement.
3. Efficient spending.

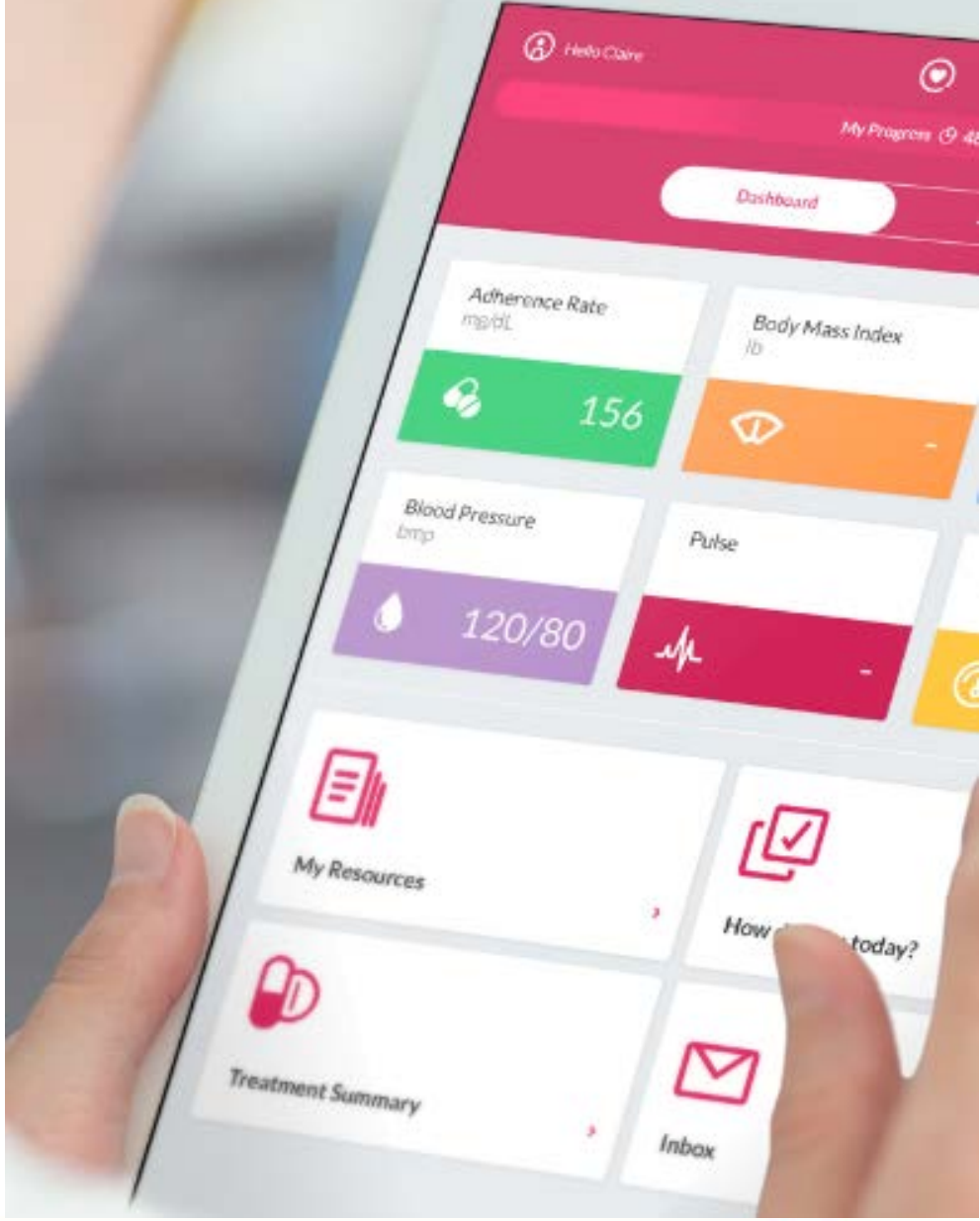
RI **Medicaid** and the **Ryan White** program adopted these measures proactively, pre PPACA, and they continue to be in place today.

Medicaid benefits from Ryan White Part B performance measures, and Ryan White Part B benefits from the Medicaid efficiency measures.



A Bi-Product of Reform:

The opportunity to harness Digital Health Innovation



Project History

RI state government search around PPACA implementation to effectively:

Communicate monitor/enhance health outcomes

Engage in telehealth opportunities

Evaluate performance measures.

Conducted a 12 month review of existing products and smart phone applications.

We were looking for more than an application – specifically we wanted a hybrid model of an innovative application coupled with a programmatic bent that directly interfaced with our consumers.

After research stage, RI procurement allowed for a Sole Source with TAVIE^{RX}.

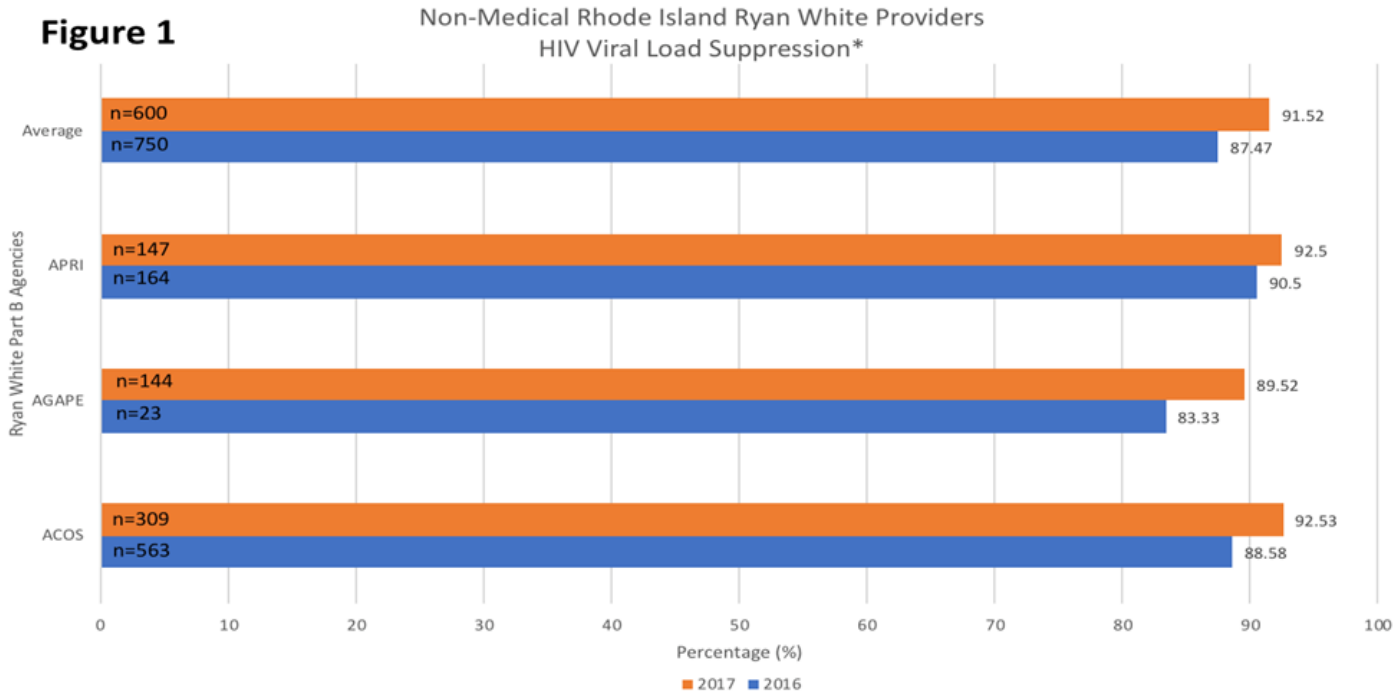
Some good news about This population:

Most clients are viral load suppressed and going to HCP

91.5% have a viral load below 200 copies/mL

Based on clinical assessment used for Quality Management Performance Measures.

Figure 1



* The number of clients with a HIV viral load less than 200 copies/mL at the last HIV viral load test within the last 12 months.

Numerator is defined as, the number of clients in the denominator with a HIV viral load less than 200 copies/mL at last HIV viral load test within the last 12 months.

Denominator is defined as, all Ryan White Part B non-medical case management clients, regardless of age, with a diagnosis of HIV.

Need:
Psychological, QOL, Technological, and for Connection

Clients report being socially isolated, struggling with mental health, and burdened with symptoms of pain, sleep issues, and fatigue.

They report low self efficacy in getting help from the community and managing symptoms

Source: Baseline assessment

- 50% report symptoms. Most people report low self-efficacy managing symptoms
- 33% Clinically depressed
- .5% have a smartphone. Tech literacy is low

Background and Context

- Desire to provide the best possible solution for our clients.
- Clients typically left behind with technology.

We asked: What can happen if this population has this technology?

Approach

Approach: Provide clients with a constant “companion”

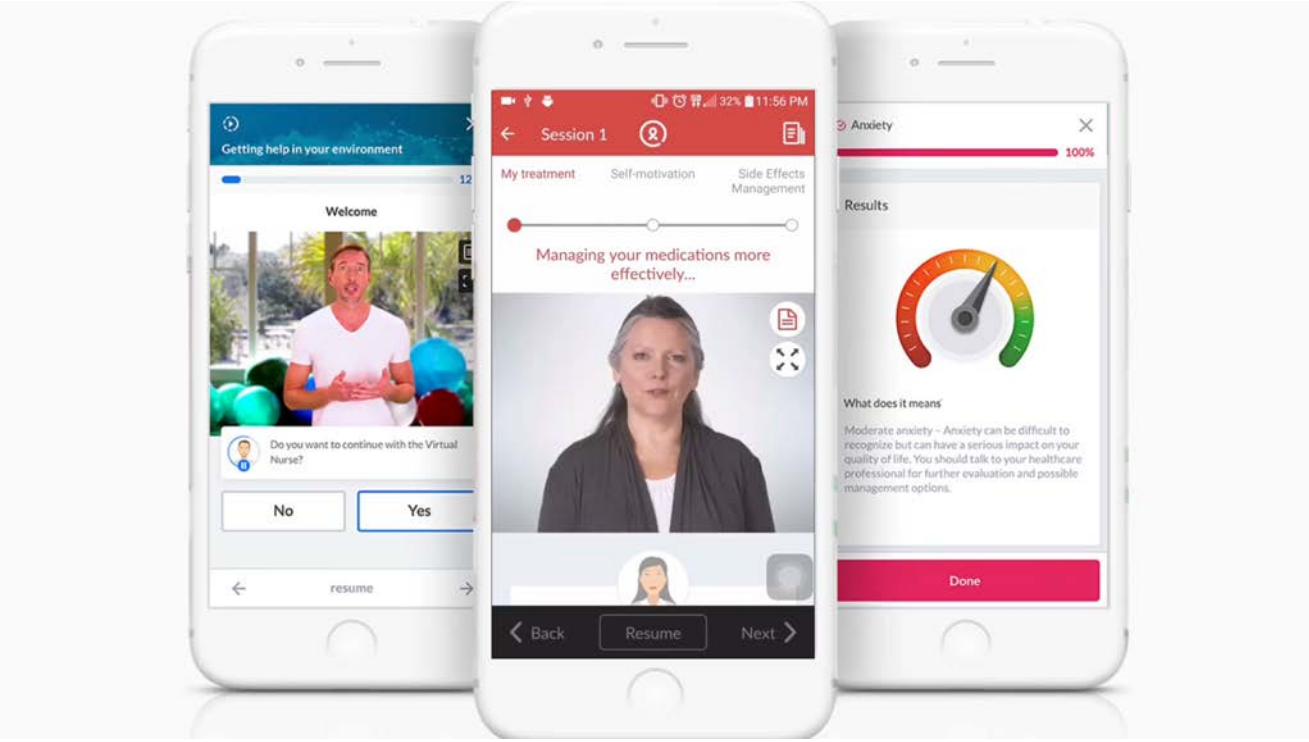
- An application on a smart phone that links into other OHHS programs
- Application is always available to the client. Link is always available to the case manager.
- Intervention is clinically validated for an HIV+ population
- Evidence-based behavioral health interventions

User-centered iterative design methods

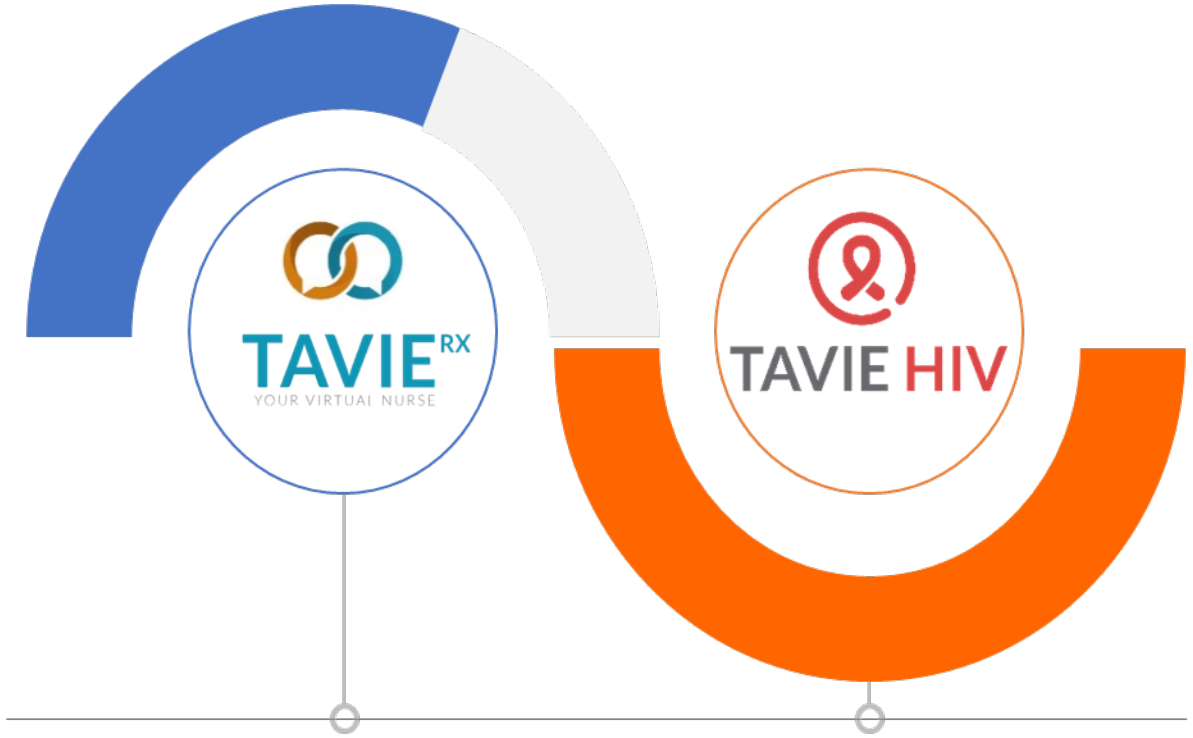
Approach:

The First Clinically Validated Virtual Nurse Interactive Coach, TAVIE.

- Customized PRO collection
- Tailored virtual coach for each user
- Treatment reminders
- Symptom tracking



Approach: Adapt the Tool to User Need



1. Validated Platform

Developed and validated at University of MTL Medical Center

2. Initial Adaptation

Adapted the content and trackers for U.S. vulnerable population

Approach:
Platform connects clients and case managers. Progress reviewed through analytics.

Clinically Validated Virtual Nurse App for Patients. Users receive personalized coaching sessions, treatment reminders and tracking tools

Provider Console to Monitor and Intervene. An interface for case managers and providers to stay in touch and assist patients.

Stakeholder Analytics. Customizable dashboard to **track performance measures**, view clinical outcomes and track engagement to inform decision-making.

First deployment: TAVIE HIV

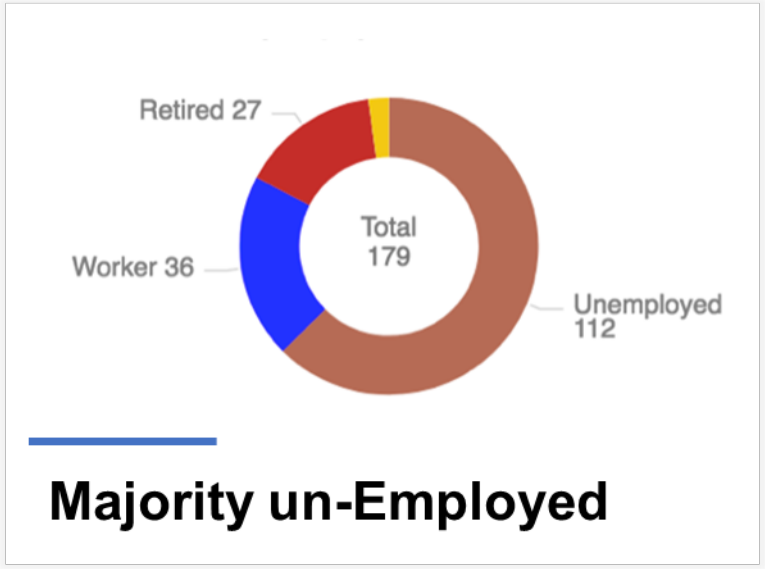
- All clients in the ADAP program eligible for the program
- 150 provided with phones pre-loaded with the TAVIE application
- Case managers trained to use TAVIE Pro
- General satisfaction with the platform
- Increased understanding of patient need

However, not a comprehensive solution

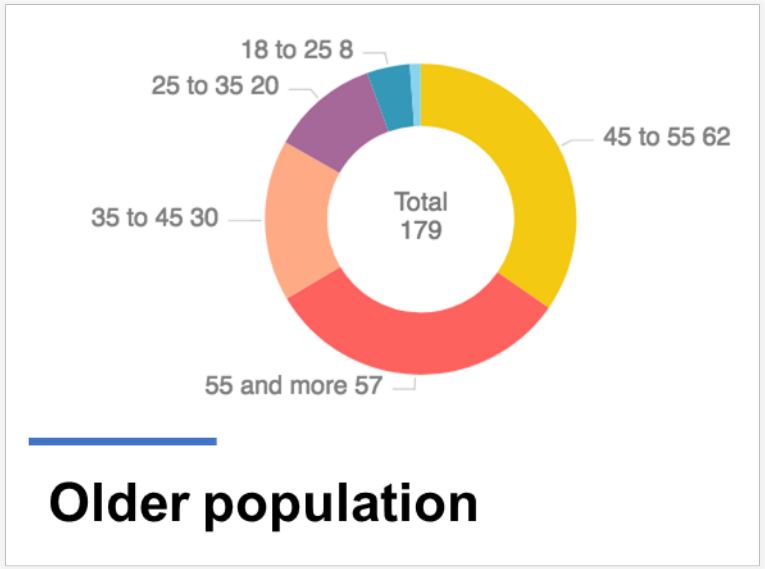
Greater Understanding: In-App reporting

Reporting through the application provides additional insight on the needs of this population

- Most unemployed
- 21% in unstable housing
- 57% over 55 years old
- 80% of users single divorced or widowed
- 33% Clinically depressed
- Only 22% college educated



Majority un-Employed

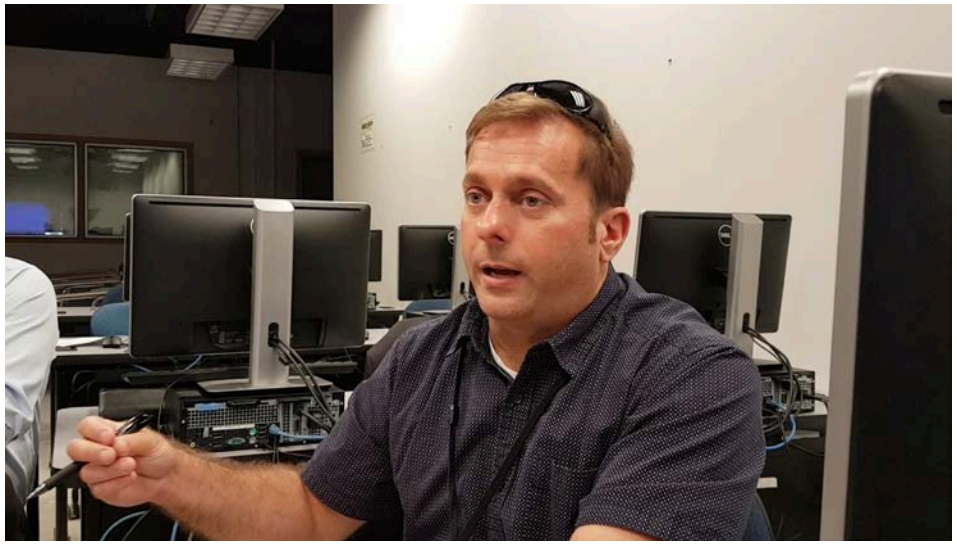


Older population

* Source: Application analytics and confirmed by Needs Assessment (2015) and OHHS-360MedLink joint research findings

User-Centered Design

- Consumer Advisory Board committee meets monthly to provide input (27 people)
- Focus-groups with case managers provided input
- Needs assessment surveys provided a more complete picture of user-base
- Ongoing, in app assessments inform design



Platform Evolution

1. Validated Platform

Developed and validated at University of MTL Medical Center

2. Initial Adaptation

Adapted the content and trackers for U.S. vulnerable population

3. Second Release (9/2018)

Based on input and need to address SODH, increase engagement and delight

Approach:
Same Hybrid platform but Tailored to the Identified Needs

Clinically Validated Virtual Nurse App for Patients. Users receive personalized coaching sessions, treatment reminders and tracking tools

Provider Console to Monitor and Intervene. An interface for case managers and providers to stay in touch and assist patients.

Stakeholder Analytics. Customizable dashboard to **track performance measures**, view clinical outcomes and track engagement to inform decision-making.

Modular Design

1. Virtual Coaching

- Treatment adherence
- Patient education
- Side-effect management

2. Trackers and Feedback

- Symptom assistance
- Treatment reminders
- Physical activity
- Viral load, weight, BP, +

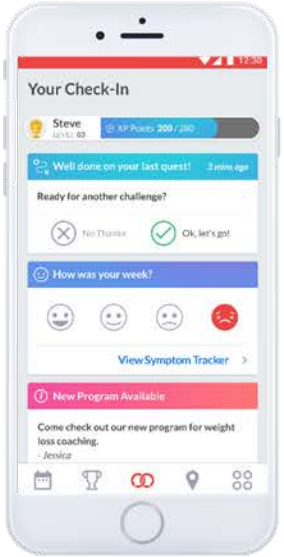
3. Whole Health

- Psycho-social support
- Symptom management
- Service acquisition (food insecurity, housing, engagement with healthcare)

4. Gamification

- Interactive Quests
- Dynamic Feed
- Upgrading reminders and notifications
- Alerts for care managers

TAVIE Red: A Client Companion



Engage

A “feed” page shows interactive content and announcements from case managers

Assist

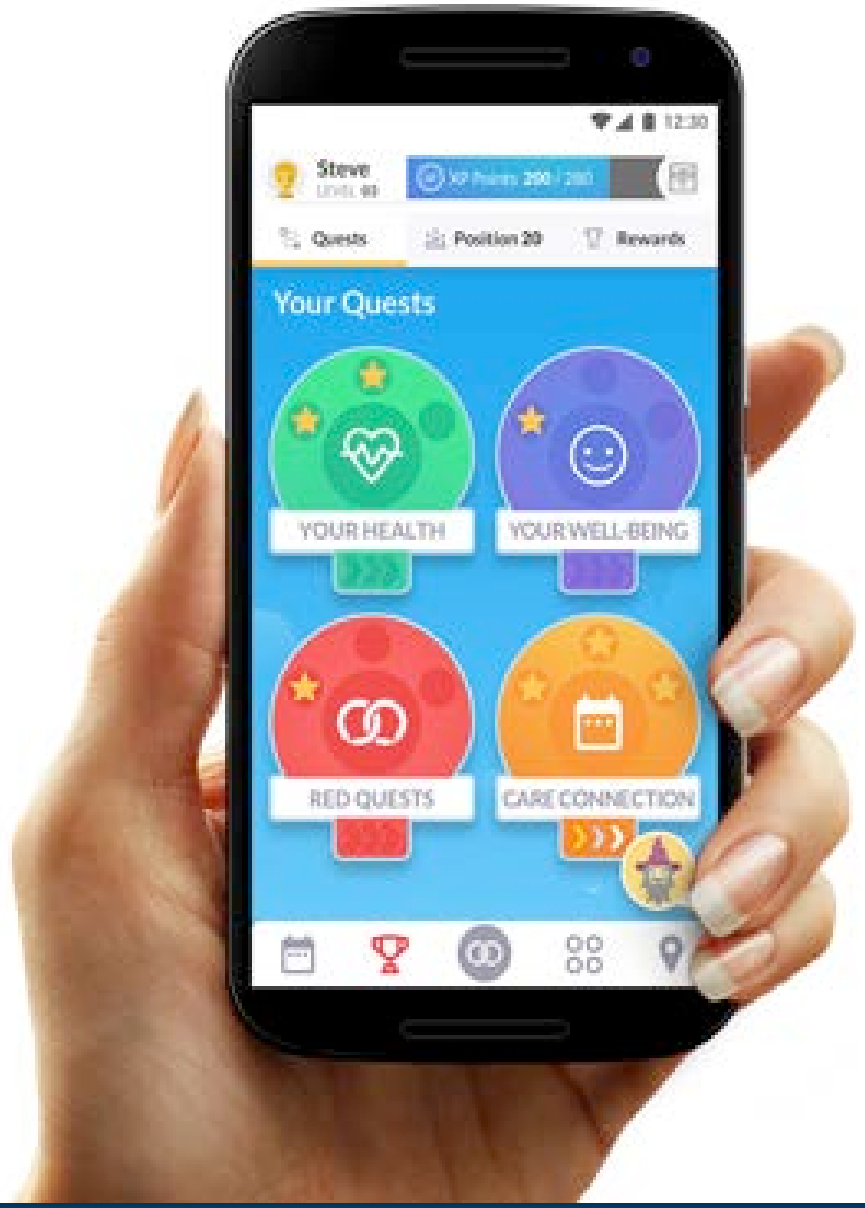
Virtual nurse coach, a resource map, announcements, and calendar with reminders help users manage care day-to-day

Delight

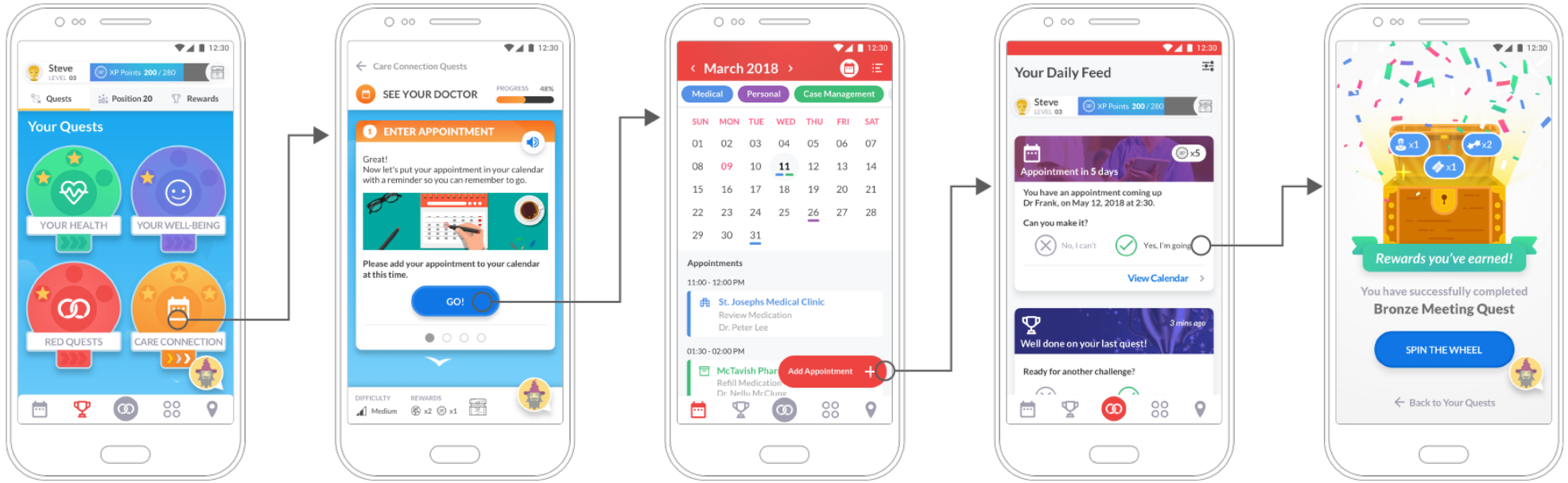
Users practice and solidify skills through health-related “quests” and gain rewards as they progress

Gamification

- User actions are incentivized through points and rewarded through raffles.
- User rehearse healthy behaviors as they complete quests.



Example Quest



Client chooses the prepare for a doctor visit quest

Quest is launched to help the client create and prepare for the appointment

Appointment is saved in the in-app calendar

Client receives reminders for the appointment in the feed

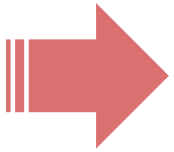
Quest Completed!

TAVIE Pro

Case managers can:

- Send announcements
- Schedule appointments
- Review progress to encourage and support
- See assessment progress

Experiences to Date



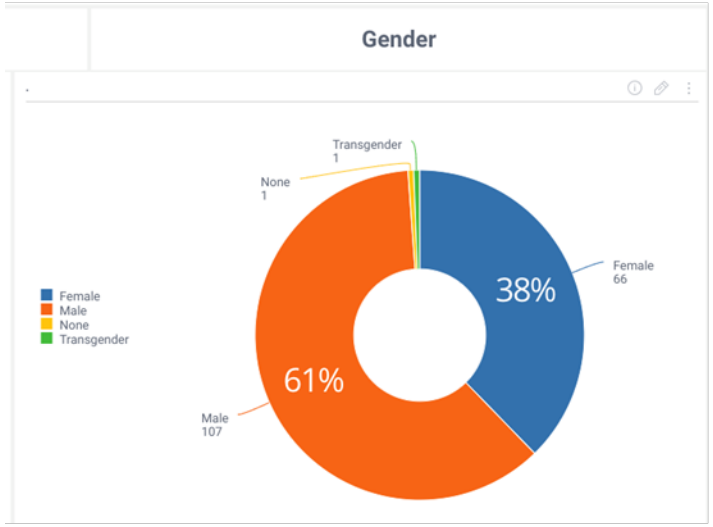
Protocol:

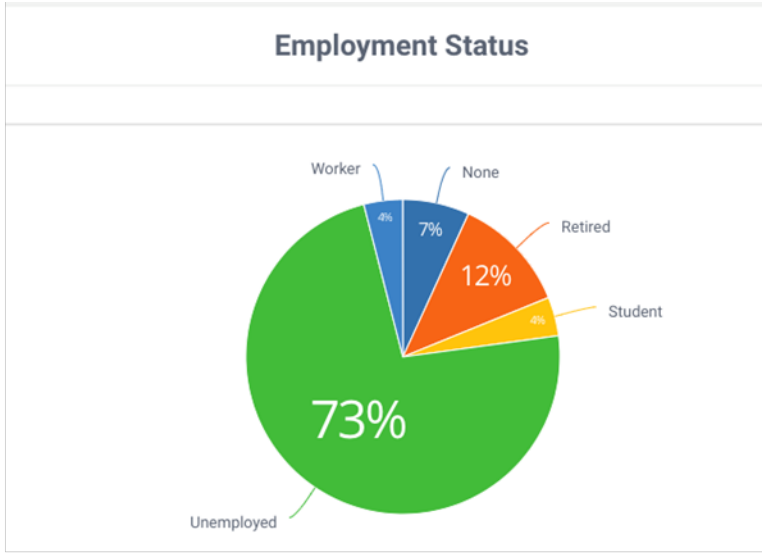
- Targeting 600 ADAP clients
- Clients receive phones preloaded with the application.
- Case managers track progress and follow-up with clients

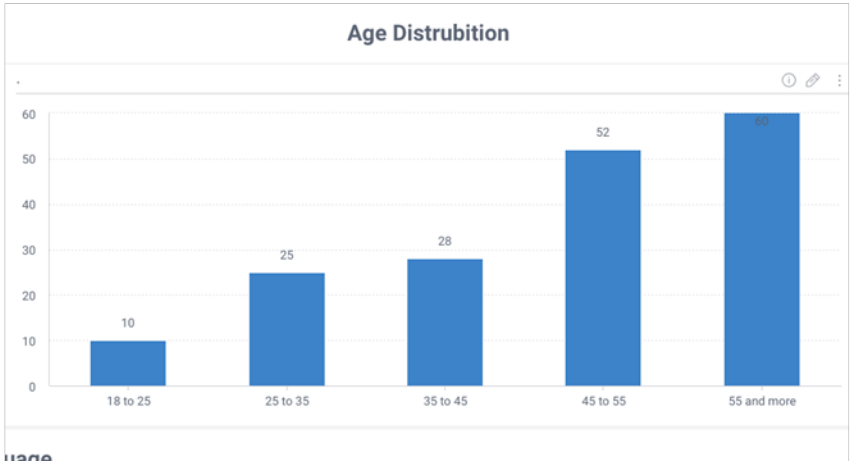
Project Status:

- 50% to our target:
  - 150 users of a first version of the app (TAVIE HIV)
  - 167+ users of TAVIE RED
- Feedback gathered through:
  - In-app assessments
  - Analytics

Demographics (from metrics)







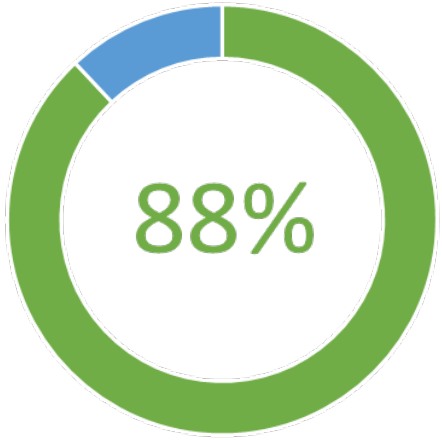
- 61% male
- 73% unemployed and 12% retired
- 33% over 50 years old

Findings: Engagement

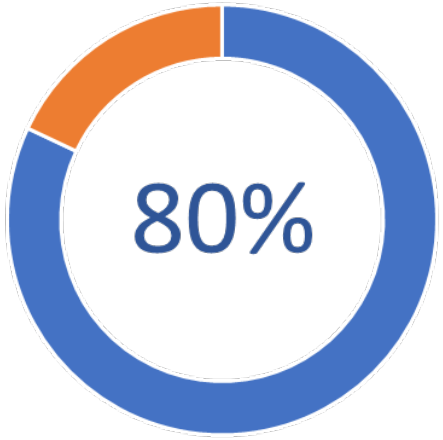
146 users at time of analysis

- 84% have logged on
- 77% have XP points (indicating they have participated)
- 45% more the 200 XP points
- 41% have “Red Tickets” to play for out-app rewards

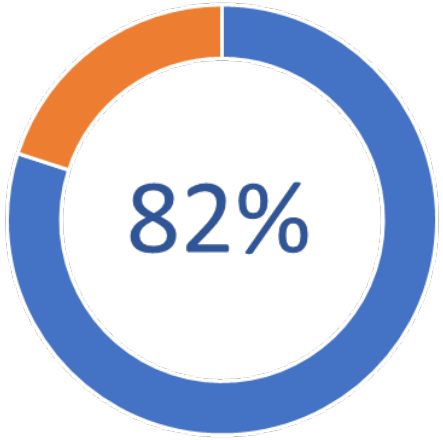
Findings:
User Response Through In-App Assessment



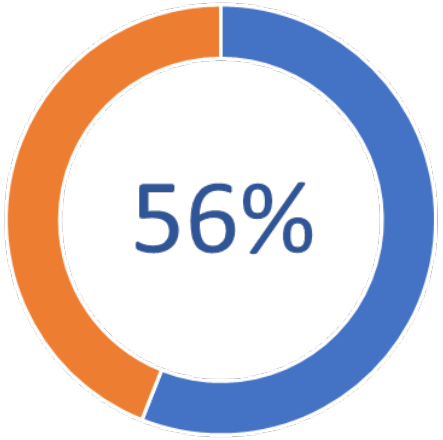
Would Recommend



Agree Helps Manage Medication



Agree Helps Manage Condition



Agree Helps with Managing Appointments

41 users completed, 68% male, 29% female, 2% trans, Distributed across age, 61% unemployed

97% of RI clients Virally Suppressed (up from 92%), need more work to establish causality

Positive Reactions in interviews

Highlights

Ability to design to needs & performance measures

- New mechanisms to improve CM-client communication
- Vehicle to achieve performance measures
- Social determinants are inextricably linked to the performance measures – moving from isolation of a SDoH to a solution

Greater understanding of the population

- In-app assessments
- Patient-reported outcomes
- Contextual data
- Performance measures
- Greater understanding of clients' needs, challenges and abilities

Lessons Learned

1. Implementation reveals barriers & challenges
2. Iterative user-centered design improves satisfaction with the platform
3. Unexpected cost saving: Evaluation and Performance measures
4. Procurement in state government is critical

Vulnerable populations deserve and thrive with advanced technology

Thank you!

Paul Loberti
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