



VIRTUAL
2020 NATIONAL
RYAN WHITE
CONFERENCE ON
HIV CARE & TREATMENT

An Innovative Rhode Island Quality Approach Using an mHealth Platform Called TAVIE Red

Session # 16004

Session date and time: Thursday, August 13 10:00 a.m.-10:50 a.m.

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Presenters



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Learning Objectives



1. Address what TAVIE is, the TAVIE Evolution and aspects of the platform in RI
2. Discuss quality goals, QM process, and QI in RI and how they work
3. Speak to how we integrated quality into the TAVIE components of assessments and how the real time data yield facilitates quality
5. Outline mechanics of TAVIE assessments – data in, data management and data out
6. Address why TAVIE Red is vital to sustaining quality performance measures? Here we'll reveal some pre and post data that speak to quality improvement.

More on Today's Session

- ❑ Will essentially expose you to how we work in RI in terms of the HRSA HAB Quality Management program, and how we strive for, achieve and maintain excellent performance measures
- ❑ Introduce you to an innovative digital health project called TAVIE Red and how that dovetails with patient and provider quality





Learning Objective # 1

Address what TAVIE is, the TAVIE
Evolution and quality aspects of the
platform in RI

HRSA HAB Clinical Quality Management



- ❑ Clinical Quality Management is the coordination of activities aimed at improving patient care, health outcomes, and patient satisfaction.
- ❑ Under the Ryan White HIV/AIDS Treatment Modernization Act of 2006 (Public Law 109-415), all Ryan White HIV/AIDS Program recipients are required to establish clinical quality management programs to:
 - ❑ Assess the extent to which HIV health services are consistent with the most recent Public Health Service guidelines for the treatment of HIV disease and related opportunistic infections.
 - ❑ Develop strategies for ensuring that such services are consistent with the guidelines for improvement in the access to and quality of HIV services.
 - ❑ Clinical quality management activities should be continuous and fit within and support the framework of grant administration functions. Components of a clinical quality management program include: infrastructure, [performance measurement](#), and quality improvement.

What is Quality Improvement?

- ***“Quality improvement entails the development and implementation of activities to make changes to the program in response to the performance data results. To do this, recipients are required to implement quality improvement activities aimed at improving patient care, health outcomes, and patient satisfaction.”****
- ** From PCN 15-02 (as revised 11/30/2018), p. 4*

TAVIE Red was a child of Reform and the Triple Aim

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.

Birth Process: Triple Aim to TAVIE Red



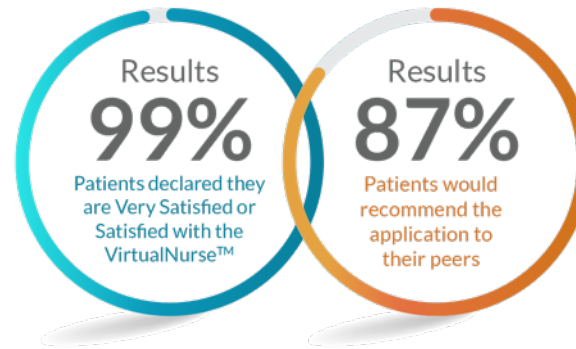
- ❑ Understanding the nuances necessary to implement the Triple Aim and how to directly benefit our patients/client population via TAVIE was paramount
- ❑ Soon you'll see a slide that addresses the evolution of the digital technology and how adaptable 360MedLink was in getting us from there to here
- ❑ Keep in mind that vulnerable people living with HIV do not ordinarily receive cutting edge digital technology (including Smartphones) to advance patient experience, to create better health outcomes, to increase their well being, or to maximize behavior change

Scientific Background

Randomized clinical trials demonstrated positive results



16 Articles Published in peer-reviewed literature



Findings:

Raises adherence. As effective as in-person coaching.

Video-based coach appealing, friendly, and makes technology approachable. People felt like they had “someone” to rely on.



Selected as
“Sole Source”
vendor
by HHS Rhode Island.



Platform Evolution

ADAPTED FOR RYAN WHITE PART B

The goal of the platform is to help case managers and clients:
Improve health and wellbeing
Improve social determinants of health



CLINICALLY VALIDATED
VIRTUAL NURSE

Developed and validated by the teaching hospital of Montreal, Chair on New Nursing Practices



SECOND GENERATION OF APP
FOR INCREASED CLIENT VALUE

Increased engagement, support and hopefully, delight



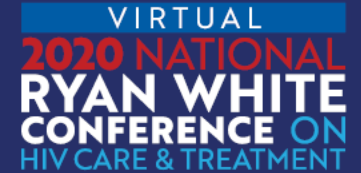
NEW UPGRADE OF APP FOR INCREASED ENGAGEMENT AND CLIENT VALUE

Boost of engagement, New Modules, New Quests, New experience!
Physical Activity, Insomnia, Mental Health
COVID-19



Gamification, SoDH integration, Behavioural Economics at work

The Challenge



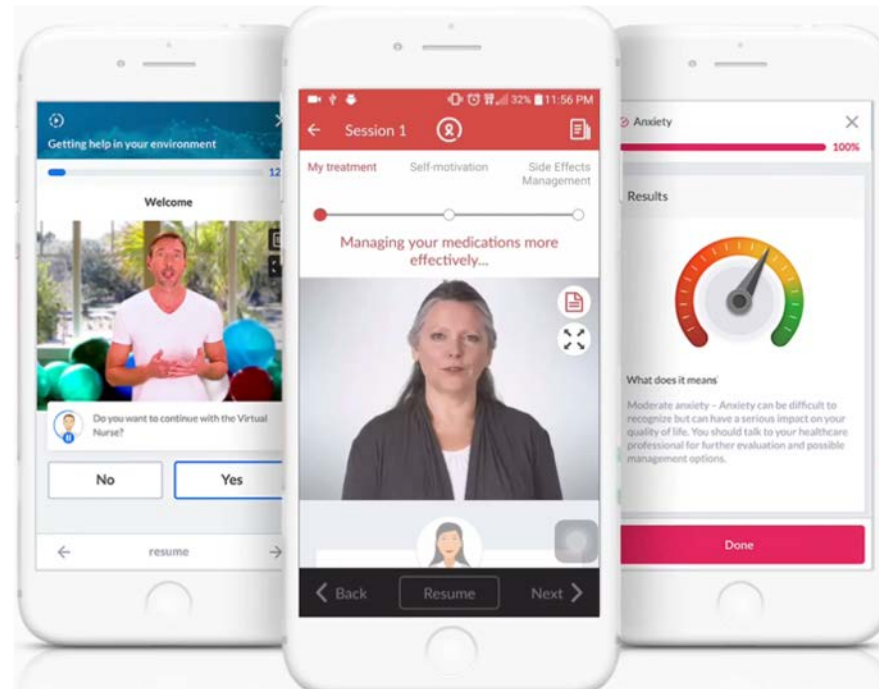
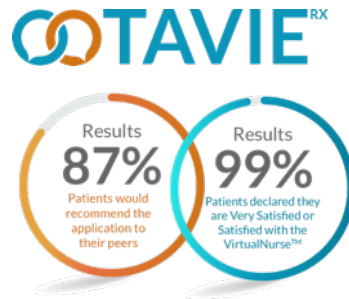
In a recent state study RI identified barriers to care with physicians, nurses and case managers - they said:

- 1) “We have **little time** to spend with patients”
- 2) “We **can’t capture every patient’s story** or their set of beliefs about health”
- 3) “**Motivating patients** to take action about their health is difficult, complex and time consuming”
- 4) “**Proper health assessments** are available but they are not all connected to each other and sometimes are unusable”
- 5) “We understand **SDoH** are critical to a patient's success, but **where do we start** with these?”



The Solution

TAVIE is the clinically validated digital platform that meets patients where they are...



Helps the Patient Day-to-Day to Make
New Behaviours Routine

TAVIE Platform: A Modular Design



1. Virtual Coaching

- Built in Assessments
- Treatment adherence
- Patient education
- Side-effect management

3. Whole Health & Holistic

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



2. Trackers and Feedback

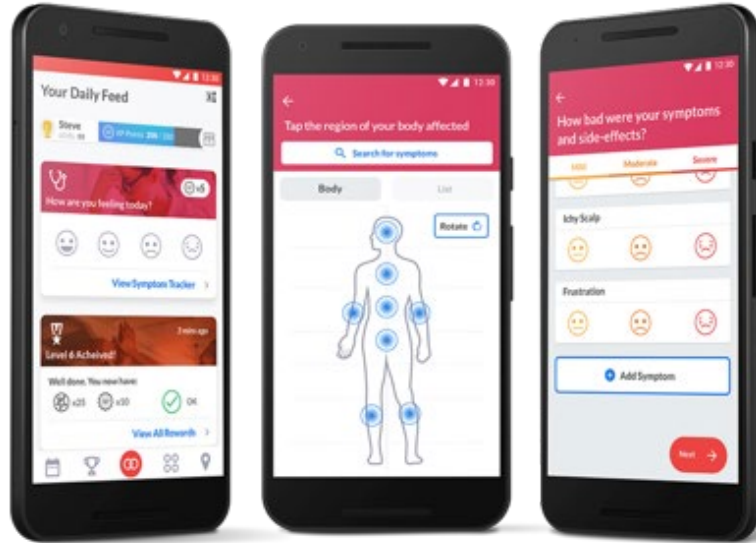
- Symptom assistance
- Treatment reminders
- Physical activity
- Viral load, weight, BP, +

4. Gamification

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

Building on the RI Experience

A Portfolio of Treatment Companions



Red



Women



Cardio



Vital



Diabetes



Pso

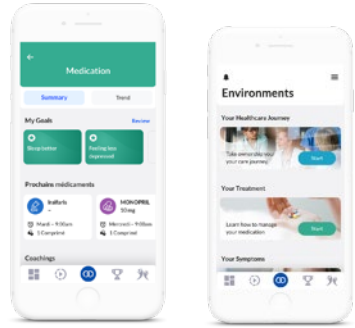


Transplant



Cancer

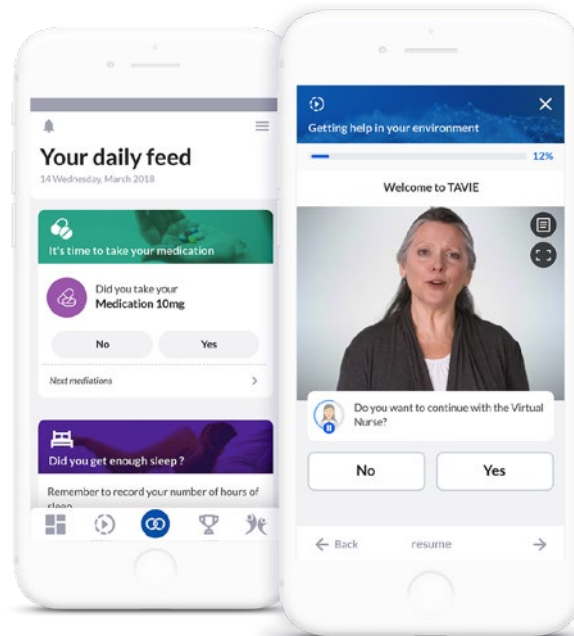




 TAVIE RED

 TAVIE Pso

 TAVIE Plus



Current
TAVIE
Therapy areas

 TAVIE Skin

What is TAVIE Red 2020?



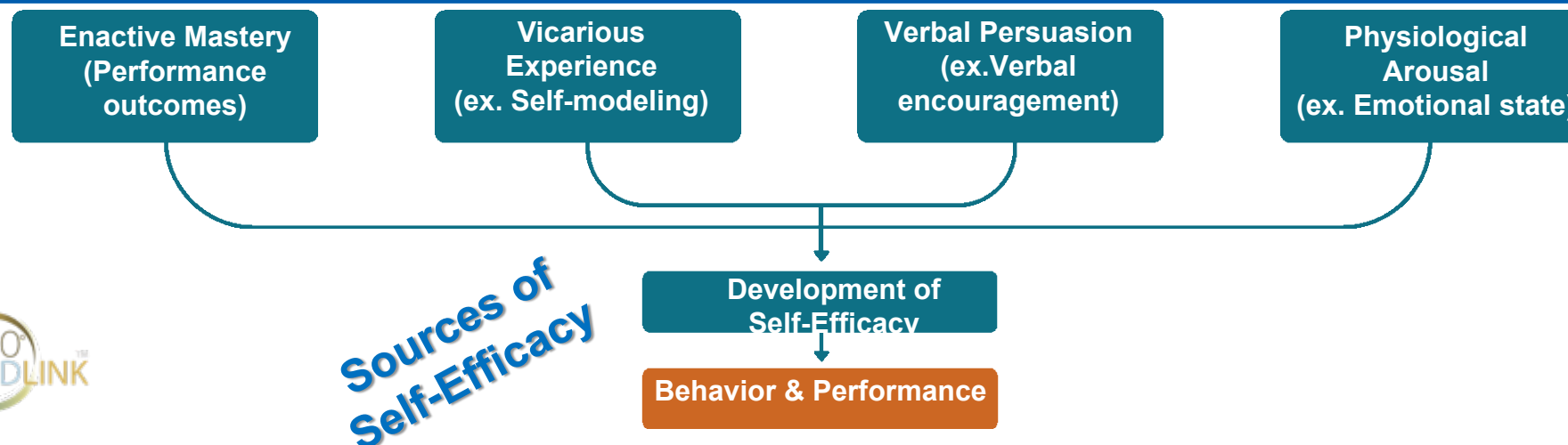
- ❑ An advanced digital solution to **End The Epidemic**
- ❑ A client/patient companion that is interactive and framed around gamification theory and **behavioral economics**
- ❑ Hits **SDoH** head on
- ❑ **Integrates critical health** and medical related self assessments, tracking components (e.g., quests inputs and outputs, etc.), **engagement**, and built in evaluation methods to describe needs, analyze data and enhance patient/client outreach via **case management** and clinical providers
- ❑ A flexible, generalizable and easily transferable platform for use anywhere by anyone
- ❑ **Quality is integral to what TAVIE does and stands for...**



Methodology and Approach...

Goal: An estimated 599 Rhode Island patient population with established HIV infection (covered by Ryan White Part B) are screened by the OHHS-RI.

- ✓ Eligible patients receive an android phone pre-loaded with the TAVIE-RED application.
- ✓ Case managers receive access to the professional platform on a desktop and in some cases, tablet devices to use the application in the field for communication, remote-monitoring and early intervention if needed.
- ✓ Three generations of the platform were deployed over a two-year period. Participants completed a survey at baseline and follow-up on paper and digitally through the application. **Thus far 250 people LWHIV have participated in this program along with their case managers, and recruitment is still open and ongoing.**
- ✓ The multidisciplinary team provide ongoing care and support between clinical visits.
- ✓ A clinically-validated virtual nursing intervention based on user-centered design and behavior change theory. ***The application targets constructs known to increase self-efficacy to perform self-management behaviors:***



Learning Objective # 2

Discuss quality goals, QM process, and QI
in RI and how they work

RI Quality Goals



- Improving the health and overall well being of PLW/A
- Assuring PLW/A receive the best care possible
- Continuous improvement of care delivery processes to achieve service excellence and optimal clinical outcomes
- Improving the knowledge, skill, and competency of the workforce
- Foster collaboration, cooperation, teamwork among sub-grantees to assure a seamless, continuous system of care in the state
- Addressing the **Triple Aim**

- Statewide RW Part B with collaboration of other RW parts
- Leadership provided by EOHHS Medicaid team
- Participation of all funded agencies
- QI assistance from QM consultant @ RI College



How QM Works in RI - Structure



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QM Plan (Statewide, agency)



QM committee meets monthly with all sub-grantees represented



Agendas include : review of PM's, identification of opportunities for improvement, updates on QI initiatives, identification of training needs, state wide improvement initiatives



Additional subgroups, teams as needed



Quarterly meetings of case managers



Monthly meetings between medical and non-medical providers



CAB statewide and agency specific

How QM Works in RI - Agency Roles



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- Attend and Participate in QM meetings
- Submit PM's quarterly basis
- Lead QI projects in their agencies and share progress
- Participate in statewide QM projects, initiatives
- Assure staff receive ongoing training in QI
- Submit agency QM plans that are individualized to their RW service categories and agency
- Consumer Involvement



RI QMC Continued

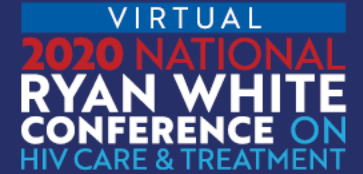


- **Membership** – Predominately Case Management agencies (both clinical and non-clinical) . For this first time we now have agencies on the QMC that are doing EIS, Housing, Intensive Case Management, Behavioral Health integration, HIV workforce development, public institutions of higher education, mobile clinic outreach, etc.



- ***Focus on participating in discussions about selecting HRSA Part B Performance Measures***, developing standards of practice in the field, sharing stories of clients, barriers to care/treatment, system issues, challenges to case managers and other providers, opportunities, discussing trauma based and crisis management, addressing system and client threats, creating innovative models (e.g., LifeSaver – a list serve for case managers who can post available resources like housing slots, residential care, food banks, etc. and to request needs.), etc.

RI Quality Management Programmatic Features



- Leadership Training and Development: CEOs, CMs, State staff, consumers
- TA, and Capacity Building for agencies
- QM Monitoring Standards & Reporting (6 month and quarterly reports)
- HRSA Performance Measures
- PM Reporting and Analysis
- Provider review of QM Report Findings
- QM Planning
- QM Training
- Facilitation of QI Teams
- Measurement of Consumer Needs/Expectations





Learning Objective # 3
Speak to how we integrated quality into
the TAVIE components of assessments
and how the real time data yield
facilitates quality

The TAVIE Ecosystem is Integrative to Healthcare Quality



Provider Integration Facilitates Care Coordination



TAVIE Care

CAREGIVER APP
Involvement in their patient care pathway



TAVIE



TAVIE Sponsor

PAYOR DATA & ANALYTICS ENGINE
Real-time Patient Reported Outcomes. Personalizes dashboards. Population health insights and management.



AI & DATA ANALYTICS



TAVIE Pro

HEALTHCARE PROVIDER CONSOLE
Supporting remote monitoring, communications, and care coordination



EMRs
Epic

PATIENT COMPANION
Personalized coaching, and self-efficacy

“Behavioral economics provides a framework to understand when and how people make errors.”



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Behavioral Economic Principles



Social proof (the bandwagon effect) – Tendency of people to assume the actions of others reflect the correct behavior in a given situation. We look for cues in how others behave and copy their behavior in unknown situations.



Status quo or knowledge bias – Tendency of people to choose the option they know best rather than choosing the best option. Sometimes called the IBM effect in business (people would choose the IBM PC because IBM was a well known commodity – although not always the best choice).



Zeigarnik effect – Uncompleted tasks are more prevalent in your mind than completed ones. Uncompleted tasks occupy a significantly larger portion of our cognitive attention than do completed tasks (we ruminate about them more).

Quality Enhancement: Behavioral Economics & Gamification Phenomena in Motion

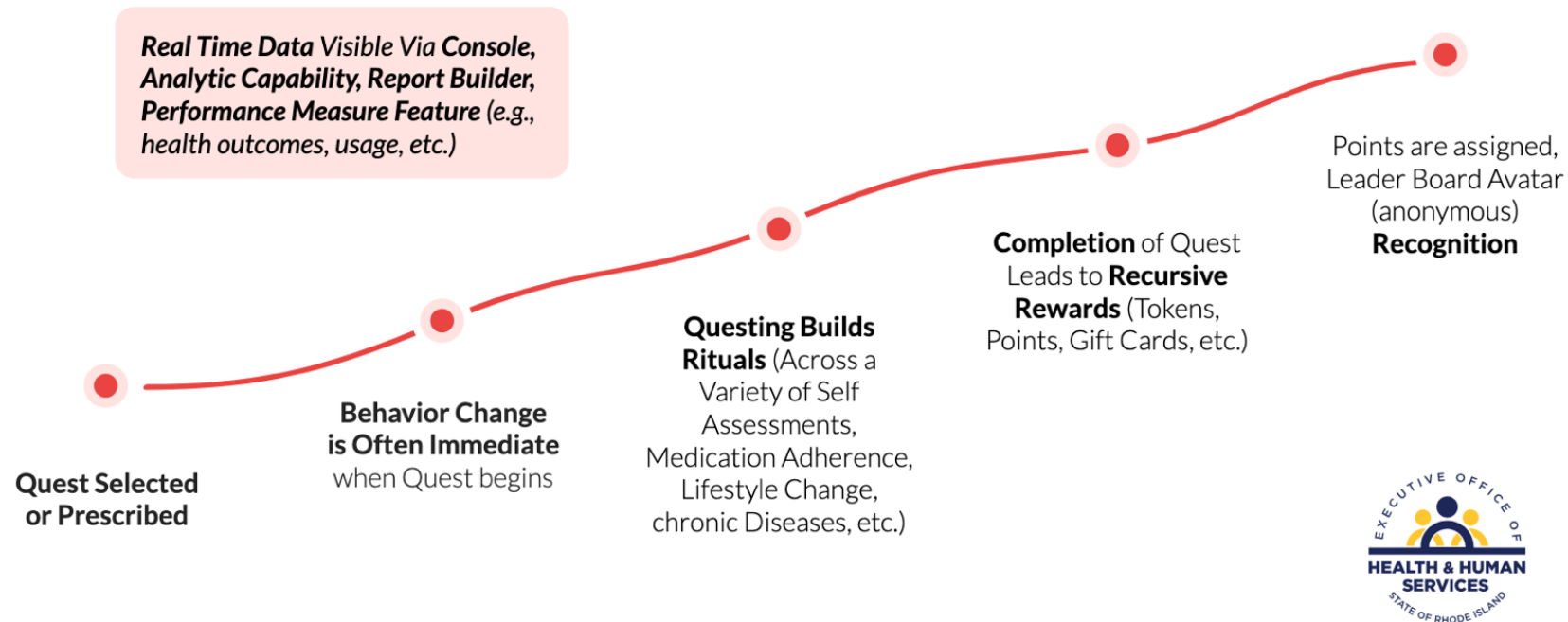


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Gamification Phenomena: Process and Flow of Incremental Behavior Change

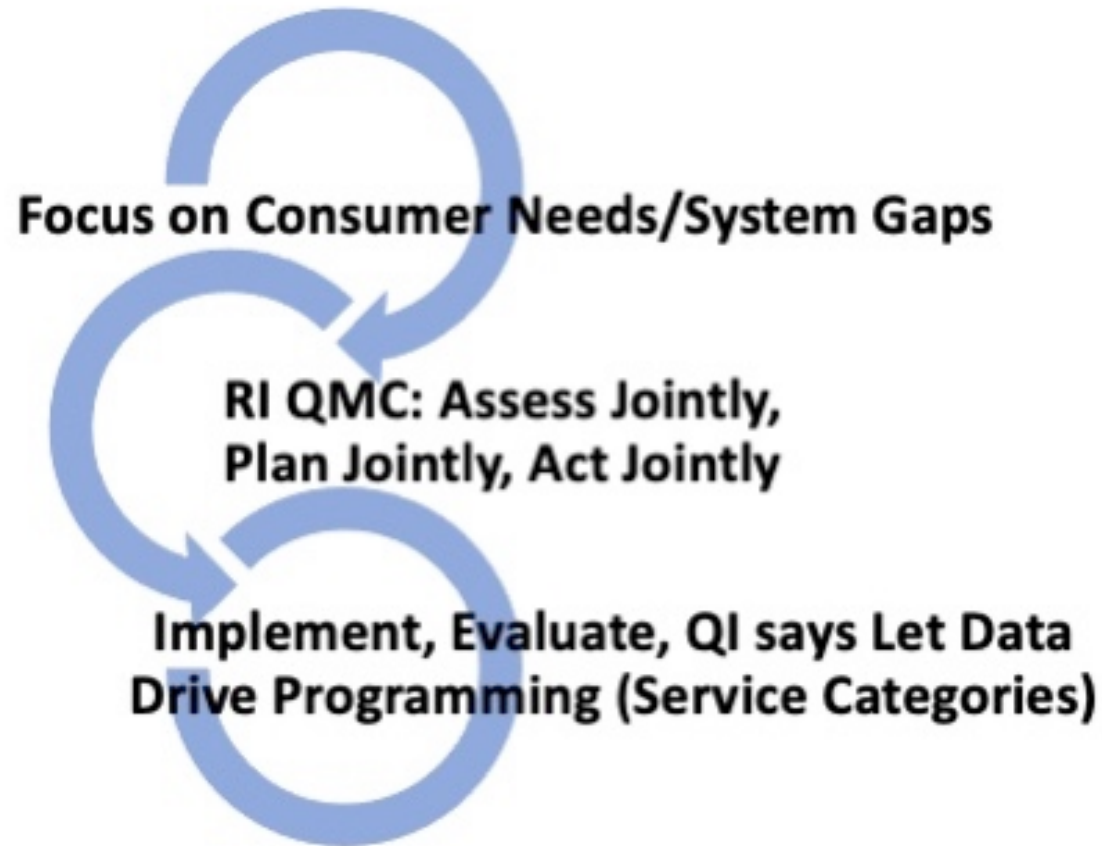
Process and Flow of Incremental Behavior Change with **TAVIE Red**



TAVIE Red & Aspects of Continuous Quality Improvement



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TAVIE and Q Performance Measures



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- Viral Load Suppression
- Medical Visit Frequency
- Gap in Medical Visits
- Complete Assessment
- Complete Reassessment
- Care Plan
- Face-to-Face Contact
- Monthly Case Manager Contact
- Housing Status



Learning Objective # 4

Outline mechanics of TAVIE assessments – data in, data management and data out



User-Centered Design

- ❖ In- Participants enter data via Quests
- ❖ Management -Data becomes real time to provider (case managers) and RI EOHHS
- ❖ Out- Reports, care planning

Rhode Island TAVIE Red is based on an iterative, user-centered design. A cohort of over 300 people living with HIV are enrolled.



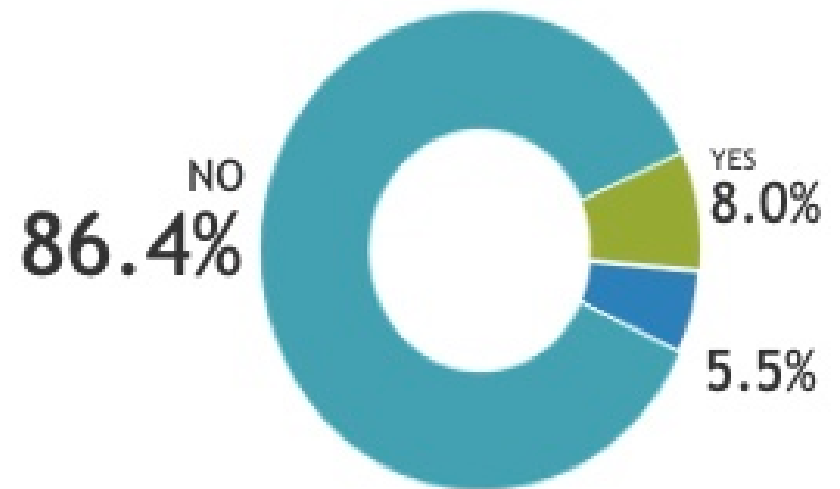
TAVIE is Capable of Quick Studies

Interesting Facts from our Analytics



- 1. Quick study re:** Why viral suppression wasn't happening in some - Domestic violence does influence treatment adherence rate and viral suppression rates.
- 2. Quick study re:** Unstable housing- it influences retention in care.
- 3. Quick study re :** Depression rates. Found a significant number of users had moderate to severe depression. Under diagnosed rates of clinical depression in vulnerable populations ?
- 4. Quick study re:** Lack of Internet Connectivity impacts quality/intensity of care

Presence of Domestic Violence



Medication Adherence Self-Reported Barriers

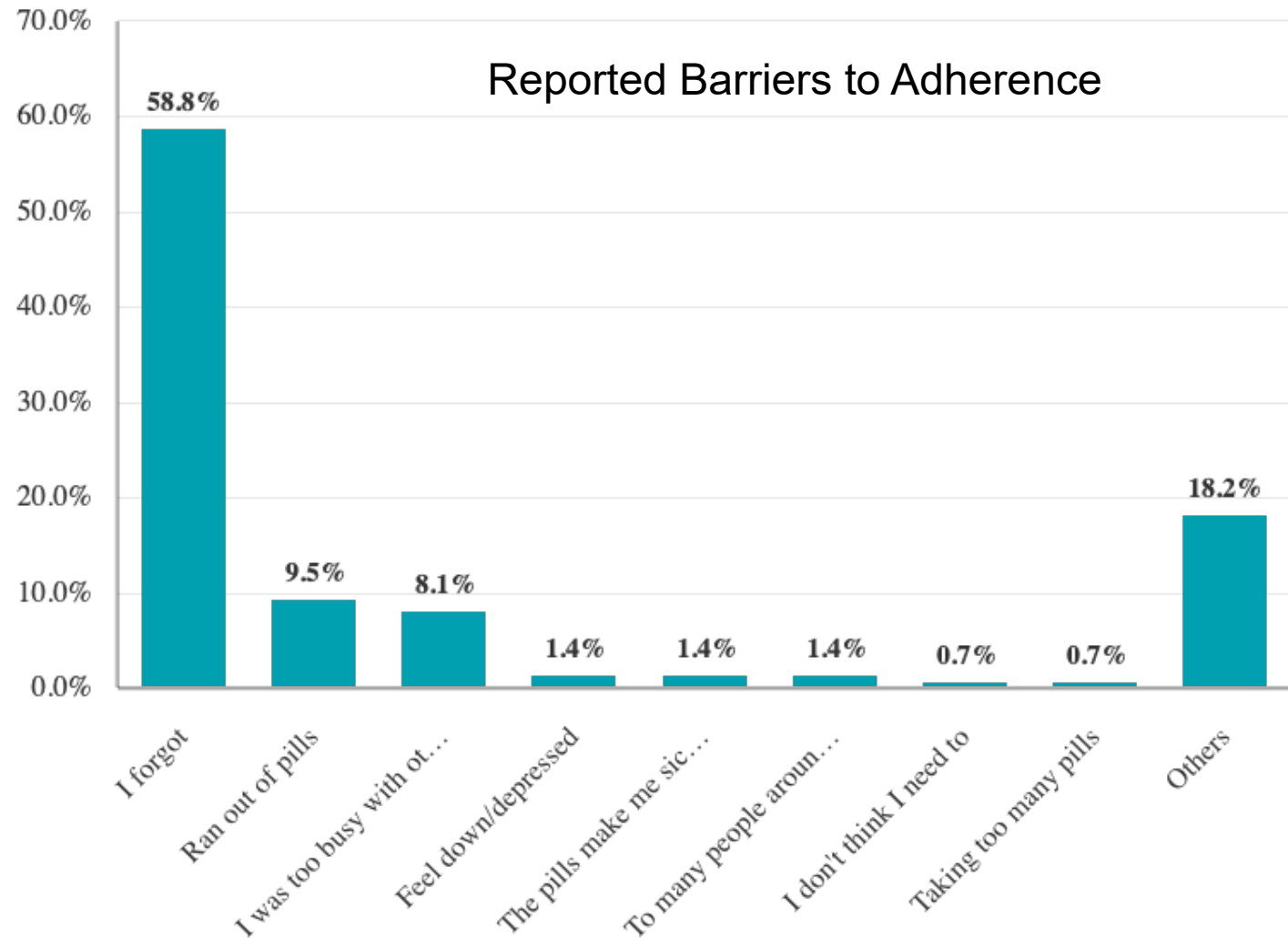
Baseline



Medication Adherence
(87%)

Timeline: Sept 2018 - Sept 2019

Total Participants = 215



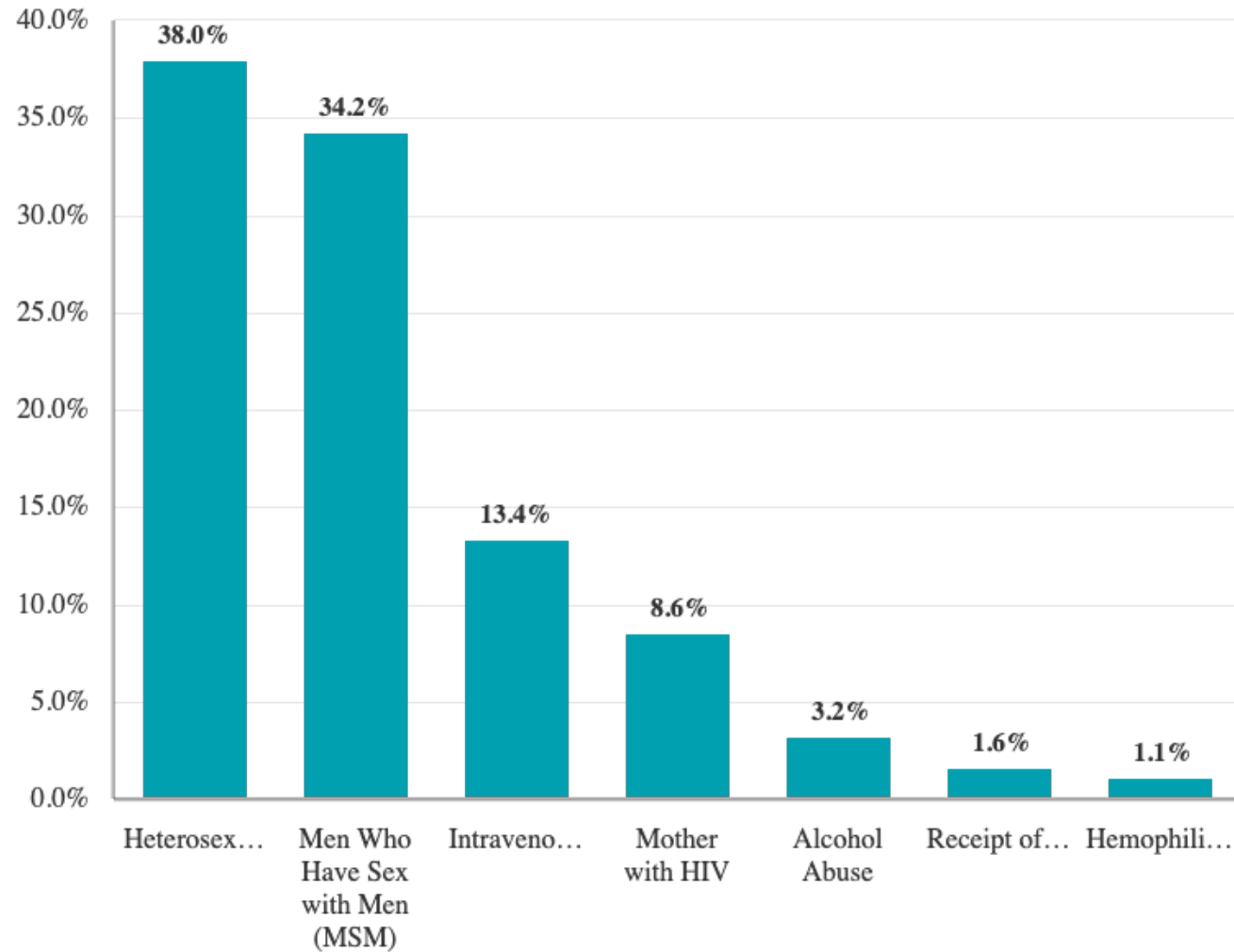
Results: Risk Factors



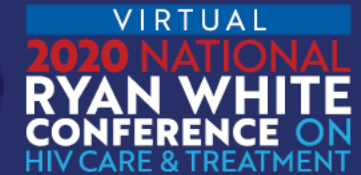
Risk Factors & Comorbidities

Timeline: Sept 2018 - Sept 2019

Total Participants = 215



Results: Risk Factors and Comorbidities



Risk Factors and Comorbidities

Timeline: Sept 2018 - Sept 2019

Total Participants = 215

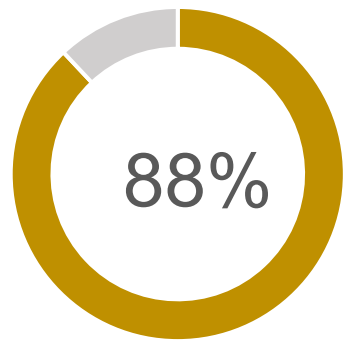
High Levels of Comorbidities

Most Reported Health Issues	
Mental Health	89
Hypertension	46
Hepatitis C	29
Diabetes	22
Cardiovascular Diseases	19
Hepatitis B	17
Cancer	10
Others	35

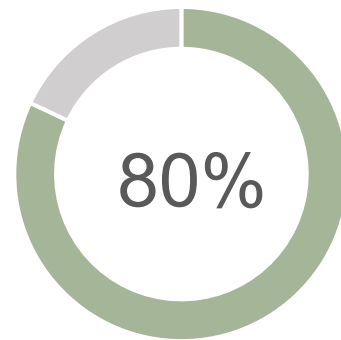
Number of patients reporting having comorbidities



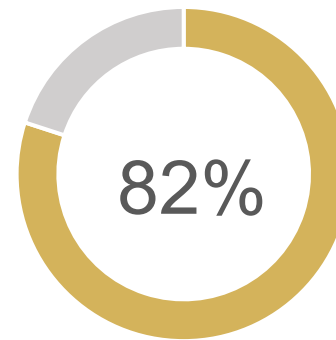
Results: Quality Measures Increased Satisfaction



Would Recommend



Agree Helps Manage Medication

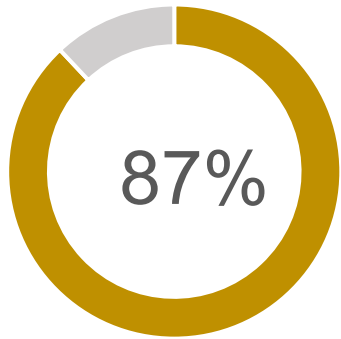


Agree Helps Manage Condition

High rate of **adoption, satisfaction, and perception of value** are high. Despite having little experience with technology.



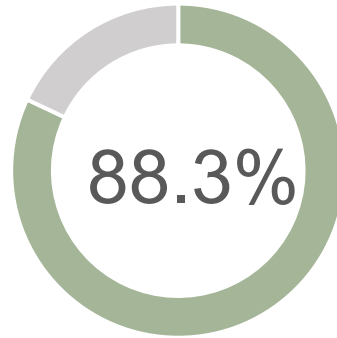
Results: Quality Measures Increased Medication Adherence



87%

At start

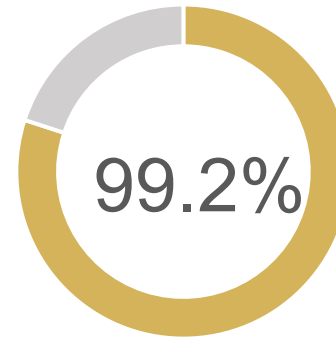
TAVIE-HIV



88.3%

After 3 months

 TAVIE RED

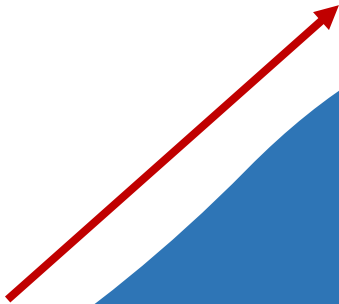


99.2%

After 9 months

 TAVIE RED

Medication
Adherence follow-up
at 3 months & 9
months with TAVIE
Red – Gamification
works!



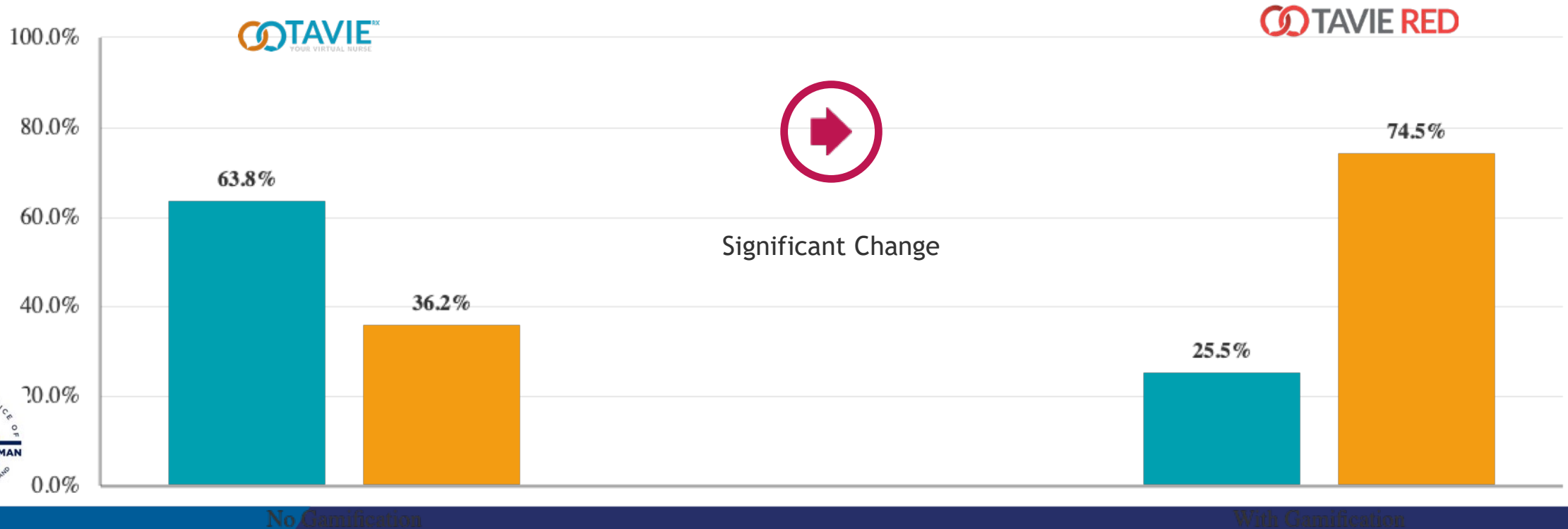
+12%
Adherence!

Pre and Post Gamification: Outcomes Improve with Gamification

TAVIE HIV represents the initial app, without gamification. TAVIE Red is revised app with gamification.
Initial Cohort (N=47)

Viral Load Suppression

● Not Suppressed ● Suppressed

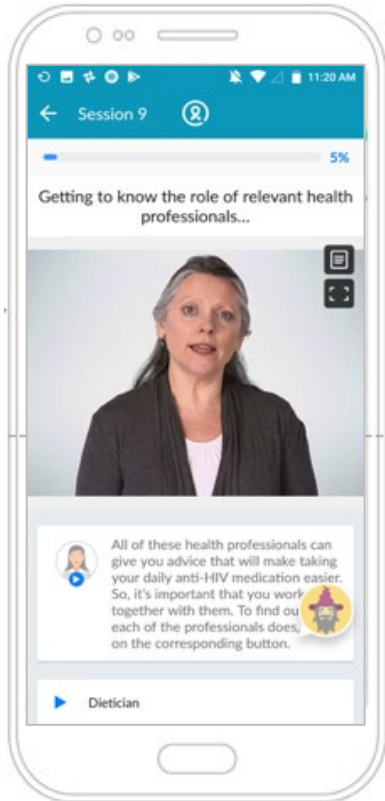


Learning Objective # 5

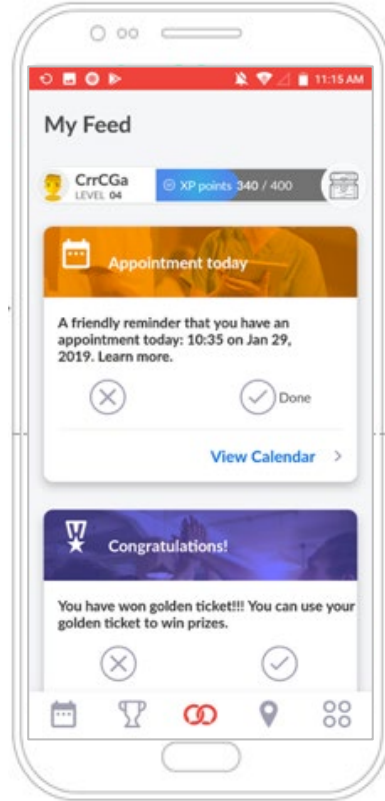


□ Address why TAVIE Red is vital to sustaining quality performance measures? Here we'll reveal pre and post data that speak to quality improvement.

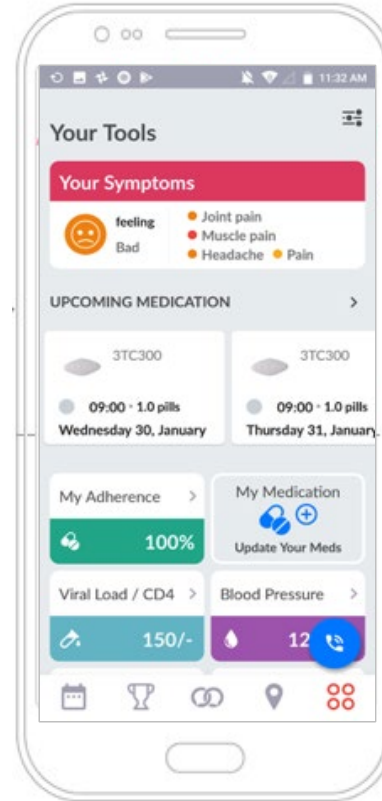
Supporting Healthy Choices and Behavior...



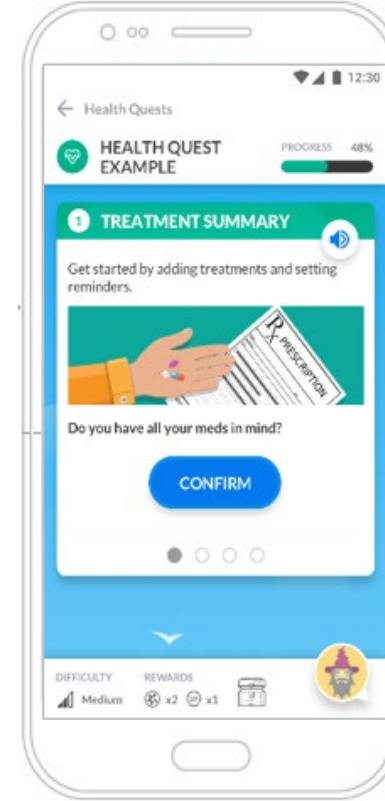
Personalized coaching



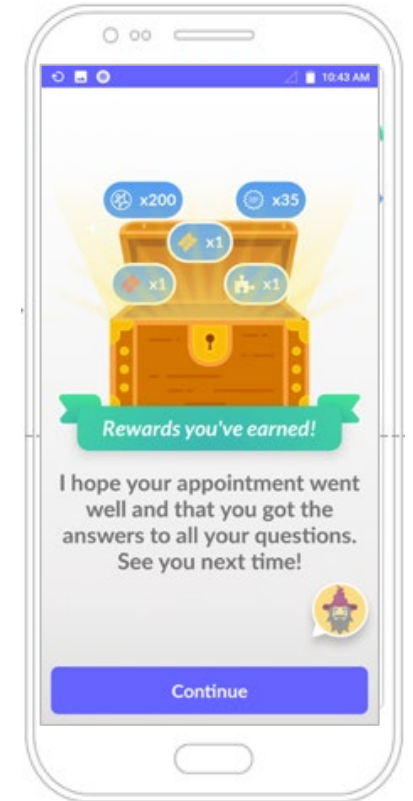
Feed of upcoming events and tasks



Patient dashboard



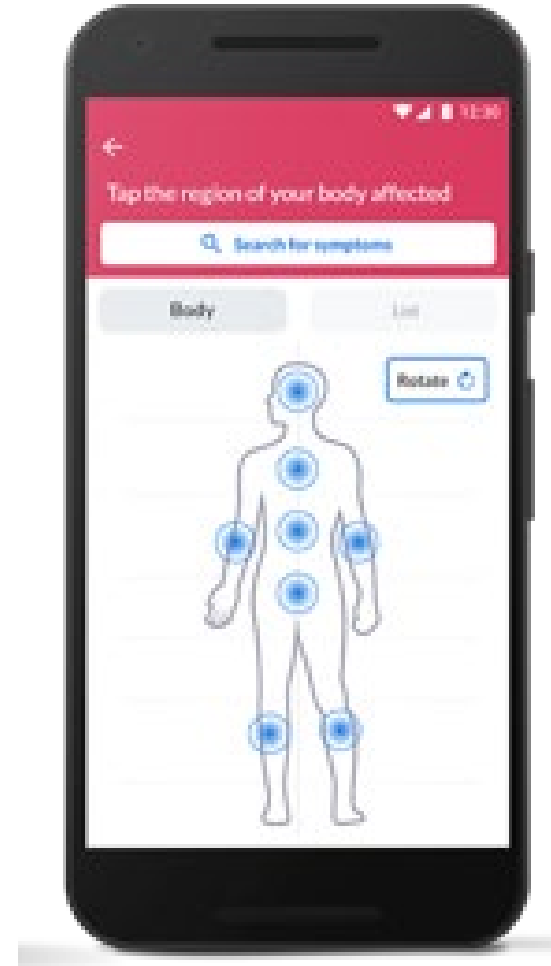
Health quests to support behavior



Serious gaming, rewards, and feedback



- ❑ **Symptom Tracker/Assistant**
- ❑ Medication Tracker
- ❑ Treatment Reminders
- ❑ CD4 and Viral Load Charting Tool

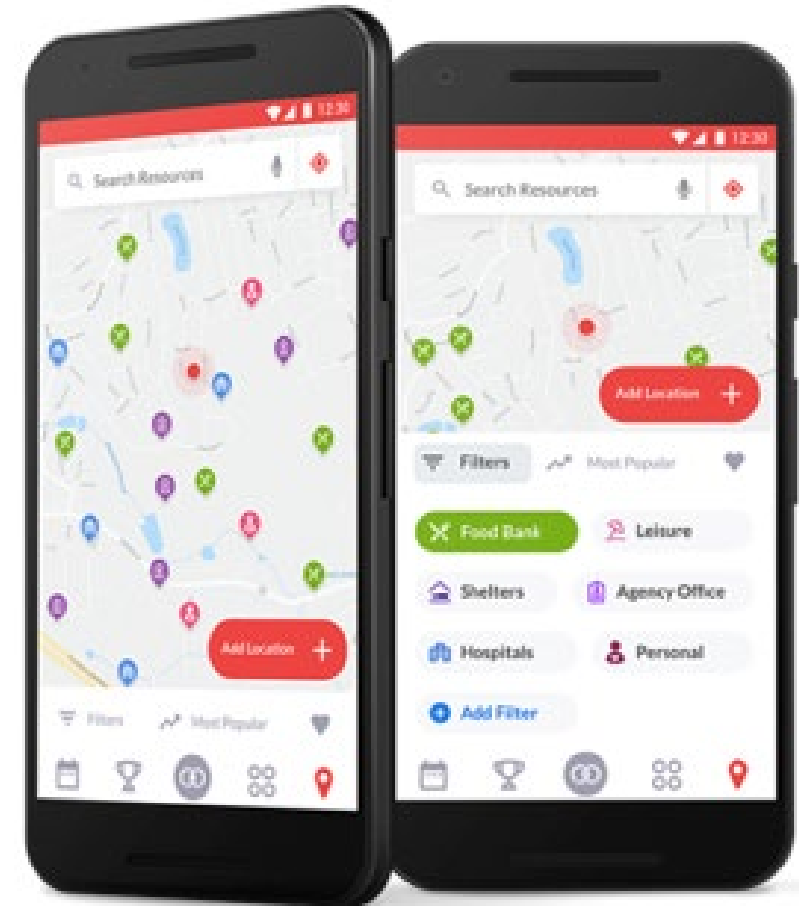


Resource Map



Clients can locate services recommended by Case Managers:

- Food**
- Medical services**
- Housing**
- Counseling**
- Other**



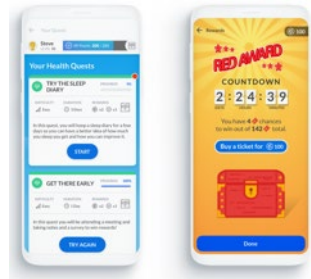
Results: Usage and Engagement



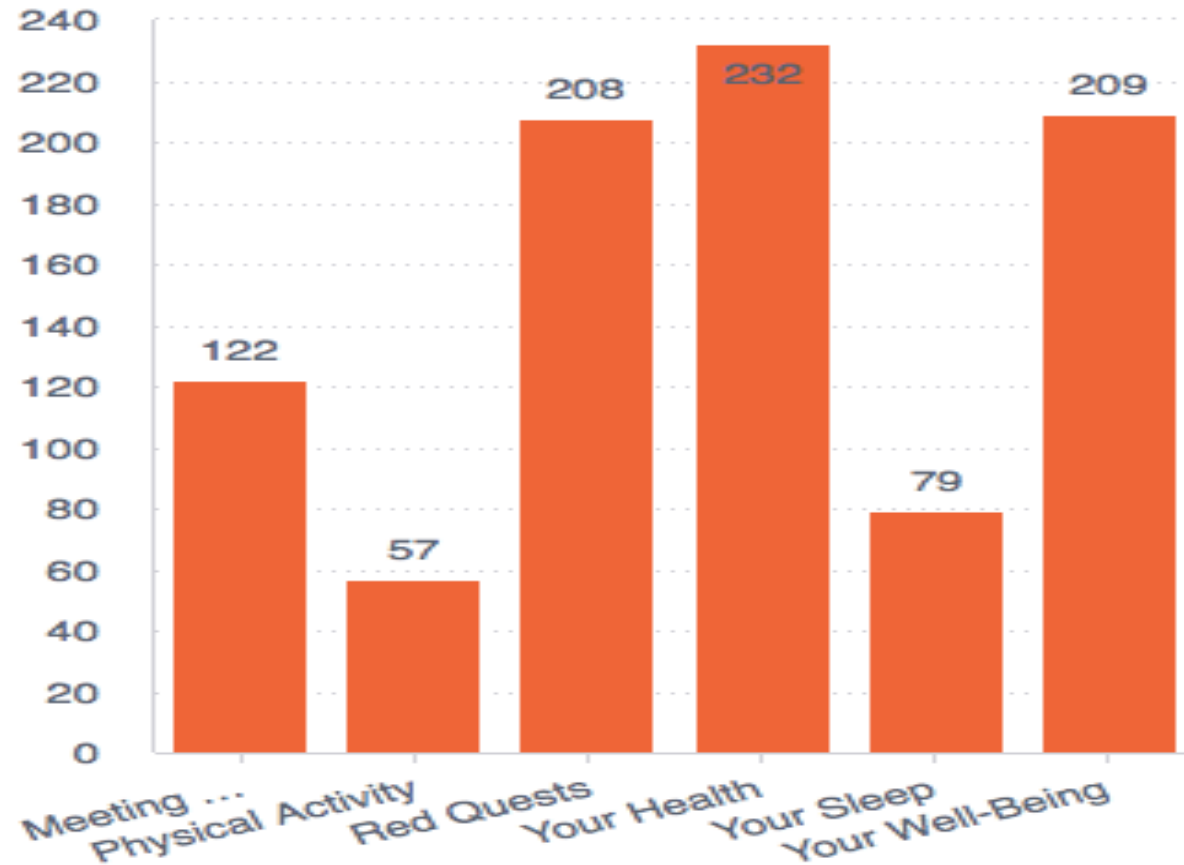
Usage and Engagement - Quests

Timeline: Sept 2018 - Sept 2019

Total Participants = 215



Number of Users Completing a Quest per Category



As of July 2020

Healthcare Provider Console

Bi-directional information exchange



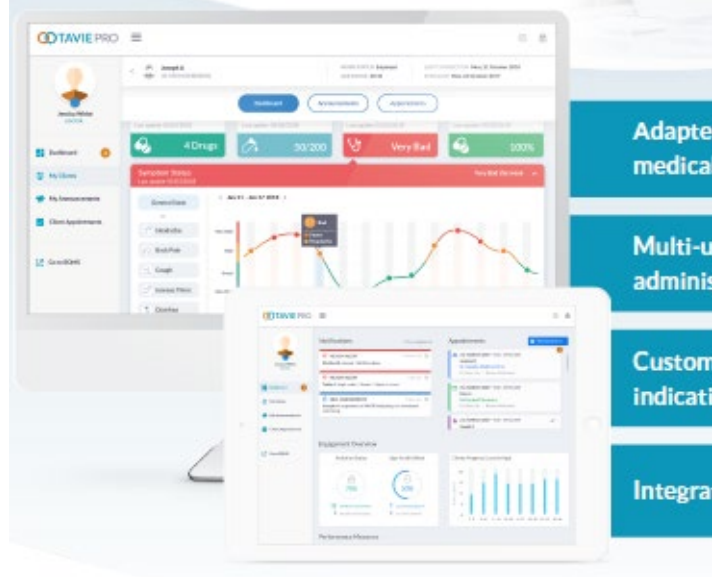
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Healthcare provider console that supports remote monitoring, communication, and care coordination.



Via a Console/Dashboard the Case Managers can...:



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

Built-in Real-Time Data and Analytics

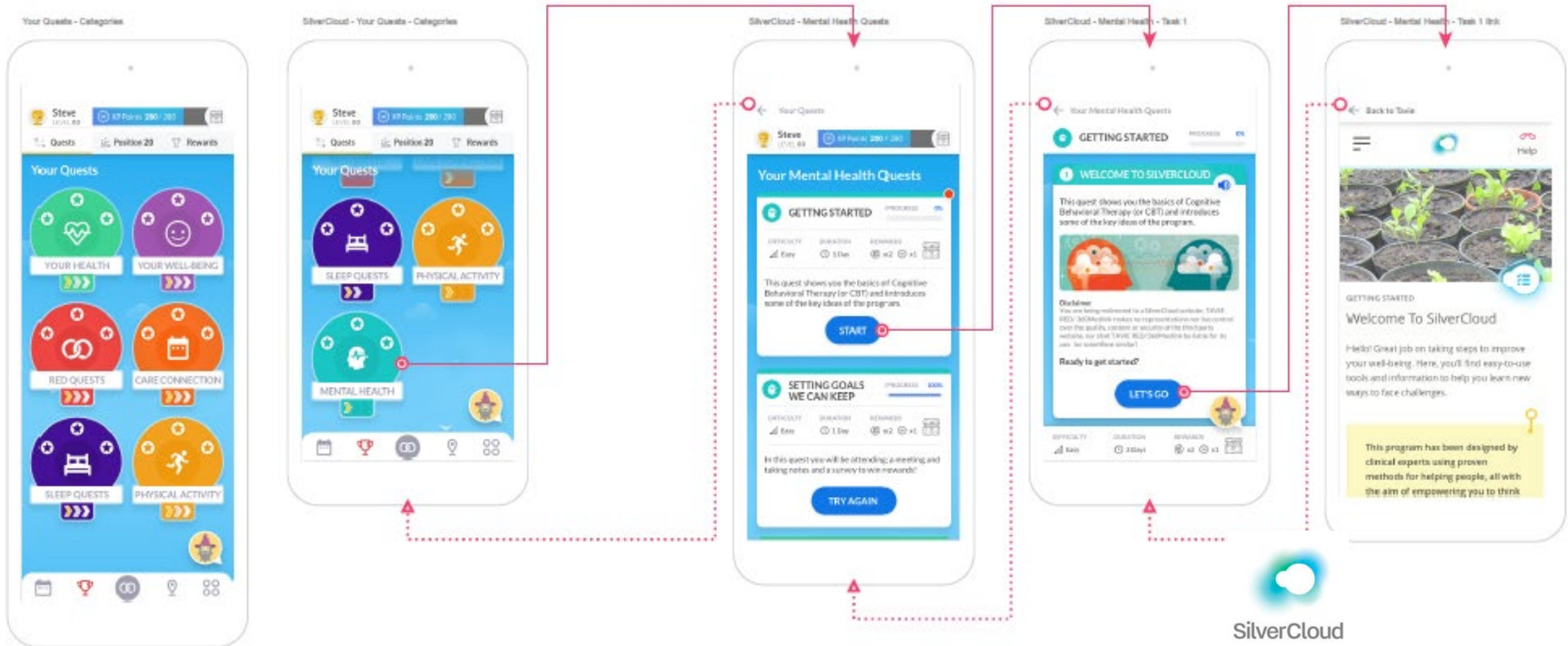
1. Data sophistication
2. Actionable real-time data and reporting
3. Interlinked reporting



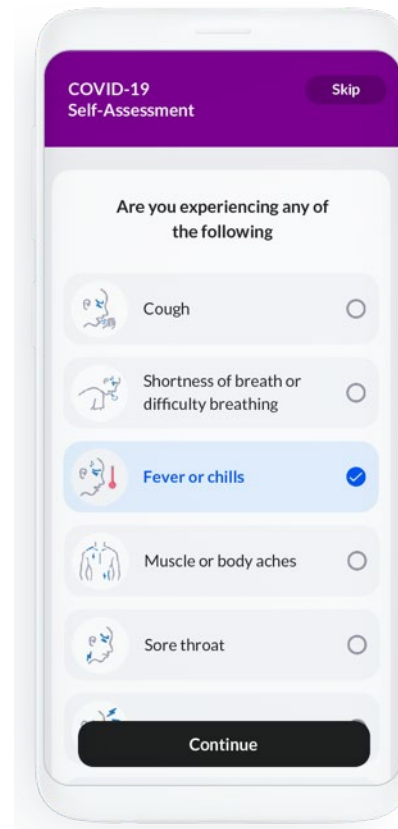
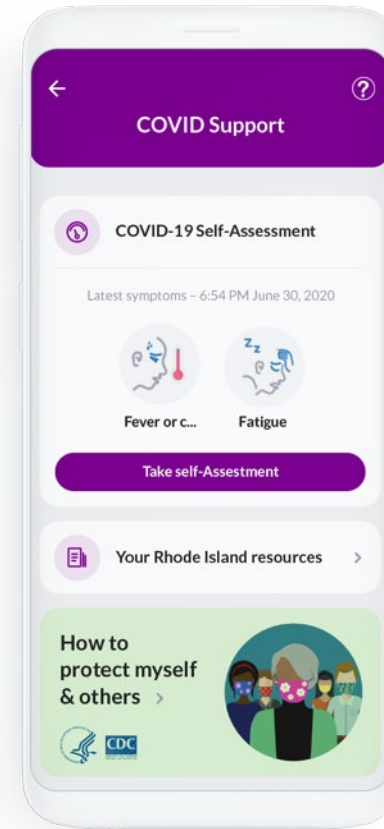
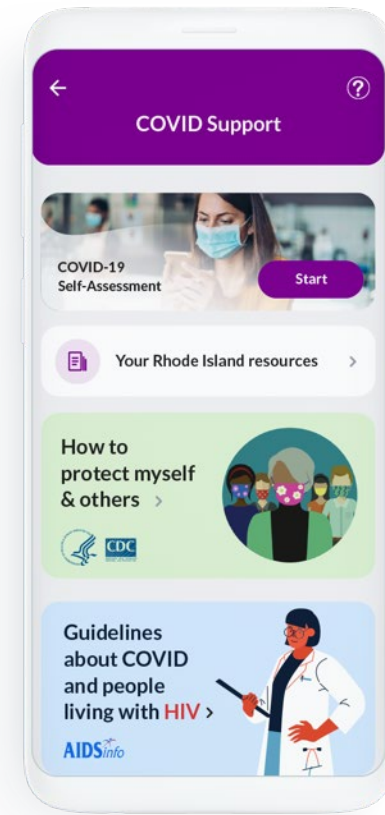
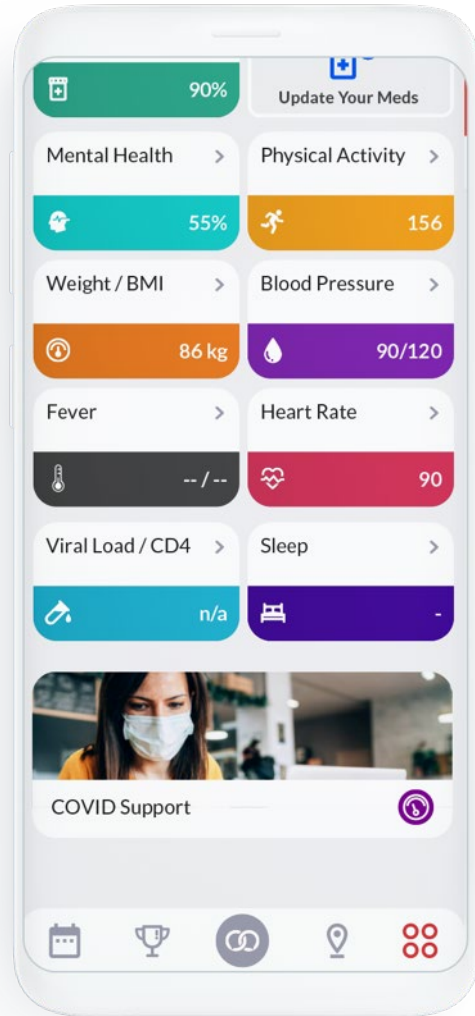
Expanding Mental Health Support



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COVID19 Support and Beyond...



Emergency Preparedness

Conclusion & Thank You!!!



Opportunity

- **TAVIE** meets quality head on and can be easily implemented into existing quality programming for Ryan White.
- Additional modules for many chronic conditions, wellness, BH and COVID19 and emergency preparedness

Solution

- The **TAVIE** platform: scientifically validated, exceptional user satisfaction, high performance measures that are clinically adaptable, etc.
- Assisting highly vulnerable people with difficult behavior change challenges

Options

- Off the shelf (Use of existing TAVIE resources)
- Hybrid approach
- Special adaptation or customization

Based upon the Rhode Island HRSA Supplemental grant experience and best practice observations