Adapting and Adopting
Telehealth Systems for Individuals with
Serious Mental Illness

The College for Behavioral Health Leadership
March 2015
Vinfen – A Community Based Health and Human Services Organization

37-Year-Old 501(c)(3) Non-Profit Corporation

Serves About 7000 Individuals Annually

Over 197 Community Based Programs for People with:
  • Psychiatric Conditions, IDD, Other Disabilities

Staff of Over 2700

Annual Operating Budget of over $135 Million

Psychiatric Services Include:

18 Outreach Teams in “ACT Lite” Model – 2500 individuals

TAY Outreach Team serving 100 individuals in NE Mass
Two Projects

1. Adopted the Bosch “Health Buddy” system for older individuals with SMI and Chronic Medical Conditions- Started in January 2013.
   - Imbedded in a Center for Medicare and Medicaid Innovation Grant
   - One of 3 interventions added to outreach teams in a project evaluating a Community Based Behavioral Health Home model
   - Project has targeted 450 individuals, but 75-100 for Health Buddy use.

2. Developed and Launched with Wellframe a Smartphone App for use by Transition Aged Youth with SMI – Started in January 2015
   - A Pilot for 20 TAY with SMI
   - Imbedded in an outreach team program model using the Transitions to Independence Process Model (Clark et al)
Vinfen
Center for Medicare and Medicaid
Innovation Grant:

Community Based Health Homes
for People with Serious Mental Illness

The project described was supported by Cooperative Agreement Number 1C1CMS330983 from the Department of Health and Human Services, Centers for Medicare & Medicaid Services. The contents of this presentation are solely the responsibility of the authors and do not necessarily represent the official views of the U.S. Department of Health and Human Services or any of its agencies.
Behavioral Health Home Target Population: DMH SMI Population

2500 Individuals with SMI in DMH Services (of 12,500 in State)
Served in 18 “ACT-Lite” Outreach Teams (Higher Client to Staff Ratios)
Across Eastern Massachusetts

Average Ann Cost of SMI:

- **National Data**: $43,792
- **Vinfen Data**: $68,000

Percent with Chronic Conditions:

- **National Data**: 25% have 5 or more conditions or risk factors
- **Vinfen Data**: 48% have 4-9 conditions or risk factors

*National data: 2010 Medicare data compiled by Avalere Health and released by the SCAN Foundation*
Community Based (in “PACT Lite” Outreach Teams vs Clinics)
Health Homes for Individuals with Serious Mental Illness

**Health Buddy System**
A telehealth system developed by BOSCH
Psychiatric Modules by S. Bartels and S. Pratt of Dartmouth

**Community Based Rehabilitation and Recovery Teams**
Multidisciplinary outreach teams:
- Licensed clinicians,
- Registered nurses
- Addictions coordinators
- Housing specialists,
- Benefits coordinators,
- Employment specialists,
- Peer specialists,
- Outreach Workers

Staff ratio ~1:12

**Care Coordination**
+ Nurse Practitioner
+ Health Outreach Worker (HOW)
  A bachelors level community outreach worker

**Integrated Illness Management and Recovery (IIMR)**
A health self management tool developed by S. Bartels et al Dartmouth
Health Management Programs For The Most Complex, High Risk Individuals for Physical and Psychiatric Conditions

<table>
<thead>
<tr>
<th>Physical Health Programs</th>
<th>Psychiatric Health Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td>Depression</td>
</tr>
<tr>
<td>COPD</td>
<td>Bipolar Disorder</td>
</tr>
<tr>
<td>Hypertension</td>
<td>Schizophrenia</td>
</tr>
<tr>
<td>Asthma</td>
<td>Schizoaffective Disorder</td>
</tr>
<tr>
<td>Heart Failure</td>
<td>PTSD</td>
</tr>
</tbody>
</table>
Using the Health Buddy: The Health Outreach Worker:

• Trains and supports participants to use the Health Buddy
• Monitors the Dashboard, sends alerts to NP or Team staff as appropriate

Participants using the health buddy
Using the Health Buddy

The Dashboard is reviewed daily by the Health Outreach Worker and/or Nurse.
Technology helps provide the right care at the right time:

Case Example:

**Warning of an emerging problem**

47 year old man with COPD and Depression
Frequent user of ED in winter months due to respiratory issues
HOW noted a number of yellow alerts relating to difficulty breathing and sleeping and escalated the problem to the NP
NP went to his day program, diagnosed pneumonia, prescribed antibiotics which the HOW helped him fill.

**Outcome:**
Averted an ED and probable hospital admission
Challenges of Embedding Technology in Services Delivery for “Older” Individuals with SMI

• Individuals Must Be Able and Willing to Engage
  (40-50% are willing; Adherence has been good)
• Learning Curve for Staff
• Individuals Require Ongoing Training and Support
• Delivery Mode Options – Home Based, Mobile Device And Web Based System

Technology Implementation with This SMI Population Requires Initial Intense Support by Outreach Staff.
Provisional CMMI Outcomes to Date:

- Inpatient Admissions are down 18.8%
- ER visits are down 36.5%
- Potential savings from these reductions in utilization are $1,742 PPPY
- Estimated savings to date $1.2 Million

Just started an R01 with Steve Bartels to tease out contributing effects of Health Buddy, IIMR and Nursing Staff
Second Project: Vinfen - Wellframe App for Young Adults

Three Main Elements:

1. a **personalized daily schedule** that includes medication reminders, questions on emotional and mental status, an exercise log, clinical tools and health-related videos and articles;

2. a **personalized ‘tool box’** that contains the young adults' goals, their strengths and their most effective coping strategies and problem solving techniques; and

3. a **content library** that provides articles, video and audio links to a variety of key topics such as nutrition, safe sex, and personal safety.
Wellframe Content Library – Examples: (Total = 50+ to Date)

**Coping Strategies**
- List of Coping Skills
- Deep Breathing Techniques
- 5 Senses Meditation
- Grounding
- Mindful Positive Affirmations
- Breaking Behavior Chains

**Health Practices**
- Getting a Good Night’s Sleep
- Nutrition
- Safe Sex and Decision Making
  - Contraception
  - Facts about STIs
- Facts about Drugs and Alcohol
- Taking Medications Effectively

**Solving Problems**
- SODAS
- Keeping Safe
  - Getting There
  - Hanging out with your friends
  - Getting Home
- Violence in Relationships
  - How to know when you’re in a violent relationship
  - How to leave a violent relationship

**Where To Go Next**
- Obtaining Benefits
- Pharmacies
- Treatment Offices
- ERs
- Public Transportation

**Personal Expressions**
- Success Stories
Data tracking for App users:

**Use of the App**
- Adherence
- Patterns and frequency of use
- Content Library access
- Communications with staff through the App
- Alerts triggered
- Responses to emotional and mental health status

**Outcomes**
- Changes in health outcomes such as acute service utilization currently tracked by Vinfen
- Comparisons to non-users
- Encounters
- Changes in user satisfaction (SF-12)
Chloe explains belly breathing (video)
### Vinfen Report - 2/5/2015

<table>
<thead>
<tr>
<th>Young Adult</th>
<th>Reward Period</th>
<th>Days in Period</th>
<th>Time Spent on Content</th>
<th>Days Active</th>
<th>Tasks Completed</th>
<th>Current Engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td>vinfen002</td>
<td>1 - in progress</td>
<td>13/15</td>
<td>23 min</td>
<td>85%</td>
<td>62%</td>
<td>✗</td>
</tr>
<tr>
<td>vinfen003</td>
<td>1 - in progress</td>
<td>13/15</td>
<td>1 min</td>
<td>38%</td>
<td>27%</td>
<td>✗</td>
</tr>
<tr>
<td>vinfen004</td>
<td>1 - in progress</td>
<td>9/15</td>
<td>43 min</td>
<td>100%</td>
<td>100%</td>
<td>✓</td>
</tr>
<tr>
<td>vinfen005</td>
<td>1 - in progress</td>
<td>9/15</td>
<td>0 min</td>
<td>88%</td>
<td>72%</td>
<td>✗</td>
</tr>
<tr>
<td>vinfen006</td>
<td>1 - in progress</td>
<td>9/15</td>
<td>1 min</td>
<td>63%</td>
<td>42%</td>
<td>✗</td>
</tr>
<tr>
<td>vinfen007</td>
<td>1 - in progress</td>
<td>9/15</td>
<td>2 min</td>
<td>75%</td>
<td>68%</td>
<td>✗</td>
</tr>
<tr>
<td>vinfen008</td>
<td>1 - in progress</td>
<td>6/15</td>
<td>7 min</td>
<td>100%</td>
<td>74%</td>
<td>✓</td>
</tr>
<tr>
<td>vinfen009</td>
<td>1 - in progress</td>
<td>1/15</td>
<td>5 min</td>
<td>100%</td>
<td>100%</td>
<td>✓</td>
</tr>
<tr>
<td>vinfen010</td>
<td>1 - in progress</td>
<td>1/15</td>
<td>0 min</td>
<td>100%</td>
<td>100%</td>
<td>✓</td>
</tr>
</tbody>
</table>

**Rewards Criteria**

≥ 70% Engagement

---

**Dashboard Reports and Incentives for Engagement**

- **Welcome to your Wellframe profile page**
- You are a Wellframe superstar! You are doing great with your care program.
- Today 100%
- Tasks completed
- Last week 100%
- INSTRUCTIONS
- MEDICATIONS
Wellframe Experience to Date:

Participants and Staff:
- Accelerated Learning Curve (Adolescents and Young Adults Already Competent Users)
- Good Adherence to Date
- We (with Users) Will Continue to Shape Content
IIMR Manual
225 Pages
10 (20) Modules
Staff Guidelines and User Aids
Elizabeth discussed health choices at McDonalds.

Jairo shares exercise tips.

Videos include staff and young adults in the program.

Elizabeth discussed health choices at McDonalds.

How Fast and How Far will Technology Changes Move Clinical and Recovery Content?

Questions: How To Adapt/Adopt and Package Interventions:
A la carte Order vs Stepwise Toolkit?
Relative Contributions of “Elements” in the Packaged Program?
Explanations for Users – How Much?
Functional Life Management Tools (Schedules, Med Reminders)?
Best Designs for Protocols for Practicing Clinical/ Recovery Skills
   (ie Breathing for Stress: Simple Scripts? Videos?)?
Connections to Support Staff?
Data Available for Feedback to Shape User and Support Staff Decisions?
Established in 1977, Vinfen is a private, nonprofit human services organization and the leading mental health provider in Massachusetts. Vinfen provides a comprehensive array of services to youths and adults with psychiatric, developmental and behavioral disabilities. Vinfen's 2,300 dedicated employees are experienced, highly trained professionals who provide a full range of educational, rehabilitative and clinical services in more than 200 programs throughout eastern Massachusetts and northern Connecticut. For more information, visit www.vinfen.org.