TRIP for Salud y Vida
*Transportation for Rural Integrated health Partnership*

Examining Health Literacy in a Population with Severe Mental Illness
The Rural Economic Assistance League, Inc. (REAL) is a non-profit organization established in 1972 with the mission to provide safe, caring and quality community centered services for the elderly, persons with disabilities and the general public by assisting them and their families in maintaining an independent and fulfilling life.

**MISSION & VISION STATEMENT**

The Rural Economic Assistance League, Inc. (REAL) and Board of Directors desire to be “The Provider of Choice” to the constituents that reside within our service area. We assure these communities quality care, prompt response, and cost efficiency in our delivery of services. We do not commit fraud, abuse, neglect, or waste. Furthermore, we will not tolerate anyone who does. We believe in honesty, due diligence in provision of services, avoidance of waste and the necessity of listening to our patients/clients and staff regarding any concerns that they may have. REAL, Inc. is an Equal Opportunity Employer and Equal Opportunity Housing Provider.

“Where helping people is our only goal!”
Overview

1. Rural setting and reach
2. Voices Leadership Group – Participatory approach to development
3. TRIP for Salud y Vida Program Model
4. Social Determinants of Health for populations with Severe Mental Illness (SMI)
5. Methods and Preliminary Findings – eHEALS, 4-item BRIEF
6. Strategies to engage, recruit and serve participants with inadequate health literacy
TRIP for Salud y Vida
A SÍ TEXAS: SOCIAL INNOVATION FOR A HEALTHY SOUTH TEXAS PROGRAM

SÍ TEXAS PROJECT AREA
12 COUNTIES

PROGRAM TARGET AREA

Sí Texas is a project of Methodist Healthcare Ministries of South Texas, Inc. and a Social Innovation Fund program.
TRIP for Salud y Vida Model

ENHANCED INTEGRATED SERVICE
- TRIP Consumer Education
- Group & Individual Support

SALUD Y VIDA CLINIC
- Clinician Visit / Treatments
- Medication

IMPROVED HEALTH & QUALITY OF LIFE
- Improved health as per clinical guidelines
- Proper administration of medication as prescribed
- Prevention, support, greater understanding and management of chronic diseases
Addressing Health Outcomes

Focus on more than the individual
- Place effects – rural area
- Transportation – public transit
- Access to quality health care services
- Health Literacy
- Culture and language

Why TRIP?

The conditions in which you live, learn, work and age affect your health. Social determinants such as these can influence your lifelong health and well-being.

Housing
- 6.5 million children live in low-income neighborhoods that are more than a mile from a supermarket.

Poverty
- Incarceration: The incarceration rate in the U.S. grew by more than 220% between 1980 and 2014, though crime rates have fallen.

Incarceration

Healthy Food

Graduation

Environment

Health Coverage

Access to Care

More than 89% of U.S. adults
How to Begin to Make Changes?

Methods

Quasi Experimental Design
3 intervention clinics
2 comparison clinics

Voices Leadership Group

Health Literacy Measures
eHEALS and BRIEF

Quality Improvement
Partner Goals and Feedback Loops
Consumer Feedback
Baseline Descriptive
Evaluation – Baseline: Demographics (n=500)

Male: 37%
Female: 63%
Mean age: 46
Range: 20-72
Less than HS: 51%
HS/GED: 20%
Some College: 23.7%
BA/BS: 1.3%
Employed: 21%
Unemployed: 75%
Other: 4%
Evaluation – Baseline: Demographics (n=500)

Hispanic: 71%
White: 95.5%
Black: 3.8%
Other: 0.7%

English: 98%

Language preference

Married: 21%

Uninsured: 73%
Medicare/Caid: 23%
Private: 4%
Evaluation – Baseline: Clinical Variables (n=453)

Non-hypertensive: 25%
Pre-hypertensive: 47%
Hypertension Stages 1-2: 28%

type 2 diabetes DX: 28%

Average BMI: 33.5
Obese: 64%
Overweight: 21%
Normal: 14%
Underweight: 1%

Duke Average: 27
Analysis by profile

Average: 25.2
Evaluation – Baseline: Exploratory (n=500)

- Adequate: 25%
- Marginal: 29%
- Inadequate: 46%

- Missed Appointment in last 6 mos.: 32%

- Difficulty asking for transportation (family/friends):
  - Very Difficult: 28%
  - Difficult: 25%
  - Not Difficult: 45%
Enhanced Integrated Services

Moving beyond Integrated Care to focus on health within the community setting to promote inclusion

Health and Wellness Classes – Diabetes Self-Management
Navigating community and clinical needs – Health Literacy
Physical Activity – Walk in the Park, Water Aerobics, Yoga, Tai Chi
Cooking Classes – Cocina, shopping trips
Consumer driven topics – Wills, funerals and financial literacy
Art and wellness – Painting and design, crochet
Understanding data and research
Preliminary Results
# Health Literacy – BRIEF Assessment

<table>
<thead>
<tr>
<th>Measure</th>
<th>Group</th>
<th>Assessment Interval</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Baseline</td>
<td>6 Months</td>
<td>12 Months</td>
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</tr>
<tr>
<td>Brief Health Literacy</td>
<td>Program</td>
<td>269</td>
<td>13.0</td>
<td>4.7</td>
<td>184</td>
<td>12.8</td>
<td>4.8</td>
<td>206</td>
<td>12.7</td>
<td>4.9</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Control</td>
<td>244</td>
<td>12.6</td>
<td>4.8</td>
<td>155</td>
<td>13.1</td>
<td>5.2</td>
<td>163</td>
<td>13.2</td>
<td>5.1</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Total</td>
<td>513</td>
<td>12.8</td>
<td>4.7</td>
<td>339</td>
<td>12.9</td>
<td>5.0</td>
<td>369</td>
<td>12.9</td>
<td>5.0</td>
<td></td>
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At baseline the mean BRIEF score was 13.0 (SD=21.8) the program group had slightly better health literacy with a mean score of 14.0 (marginal) while the comparison group had a mean score of 12.0 (inadequate).

The difference was not statistically significant at baseline.
Participants at the intervention sites had a 1.52 (95% CI: 0.65 to 2.38) points higher adjusted mean health literacy scores at time 0 than participants at the intervention sites, but the difference was not significant.

Over time the intervention sites had “lower” health literacy per the BRIEF, we posit that the EIS may have impacted assessments.
BRIEF 4-Item and Transportation Use

Adjusted mean differences between levels of utilization among those who used the transportation service and those who did not use the service

<table>
<thead>
<tr>
<th>Level of Utilization</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>z</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>-0.23</td>
<td>0.67</td>
<td>-0.35</td>
<td>-1.54 to 1.08</td>
</tr>
<tr>
<td>Moderate</td>
<td>-0.66</td>
<td>0.71</td>
<td>-0.93</td>
<td>-2.04 to 0.73</td>
</tr>
<tr>
<td>High</td>
<td>-2.23</td>
<td>0.67</td>
<td>-3.31</td>
<td>-3.55 to -0.91</td>
</tr>
<tr>
<td>Very High</td>
<td>-2.18</td>
<td>0.69</td>
<td>-3.18</td>
<td>-3.52 to -0.83</td>
</tr>
</tbody>
</table>
## Health Literacy – eHEALS Assessment

<table>
<thead>
<tr>
<th>Sum Score</th>
<th>Baseline</th>
<th>12 Months</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n (561)</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>n (391)</td>
<td>%</td>
</tr>
<tr>
<td>eHEALS Assessment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 – 9</td>
<td>169</td>
<td>30.3</td>
</tr>
<tr>
<td></td>
<td>175</td>
<td>44.6</td>
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<tr>
<td>10 – 19</td>
<td>72</td>
<td>12.8</td>
</tr>
<tr>
<td></td>
<td>26</td>
<td>6.6</td>
</tr>
<tr>
<td>20 – 29</td>
<td>168</td>
<td>29.8</td>
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<tr>
<td></td>
<td>75</td>
<td>19.2</td>
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<tr>
<td>30 – 39</td>
<td>138</td>
<td>24.6</td>
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<tr>
<td></td>
<td>79</td>
<td>20.4</td>
</tr>
<tr>
<td>40</td>
<td>14</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>36</td>
<td>9.2</td>
</tr>
<tr>
<td>Item</td>
<td>Baseline ((M))</td>
<td>12-months ((M))</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>I know how to find helpful health resources on the Internet</td>
<td>2.88</td>
<td>2.62</td>
</tr>
<tr>
<td>I know how to use the Internet to answer my health questions</td>
<td>2.90</td>
<td>2.61</td>
</tr>
<tr>
<td>I know what health resources are available on the Internet</td>
<td>2.56</td>
<td>2.48</td>
</tr>
<tr>
<td>I know how to use the health information I find on the Internet to help me</td>
<td>2.63</td>
<td>2.49</td>
</tr>
<tr>
<td>I have the skills I need to evaluate the health resources I find on the Internet</td>
<td>2.62</td>
<td>2.49</td>
</tr>
<tr>
<td>I can tell high quality from low quality health information on the Internet</td>
<td>2.47</td>
<td>2.41</td>
</tr>
<tr>
<td>I feel confident in using information from the Internet to make health decisions</td>
<td>2.50</td>
<td>2.36</td>
</tr>
</tbody>
</table>
PHQ-9 Depression

- Bonferroni adjusted pairwise contrasts showed no statistically significant difference in depression at baseline between the intervention and control sites (p = 0.156).
- Consumers at the intervention sites also had significantly lower depression scores than participants at the control sites at 6 and 12 months. The difference at 6 months was -2.67 (-4.75 to -0.59) points, and the difference at 12 months was -2.77 (95% CI: -4.83 to -0.72) points.
Blood Pressure
Body Mass Index (BMI)

- Changes seen in individuals may have been maxed with the inclusion of all consumers.
- Given the higher BMI in the consumer population and the risk factor of overweight in the SMI population we will continue to examine changes in weight and BMI.
- The subgroup analysis is planned.
Strategies for Engagement
Strategies for Engagement

**Individual level** – trust building, voice and respect. Community Health Workers were key to ongoing engagement and reach of consumers.

Voices Leadership Group – advocates and champions of the program within the community. Engagement throughout and pointed to needs and changes in program delivery.

**Community level** – working with new partners and engaging them in serving a population with SMI.

**Clinic level** – integration of clinic staff in trainings, focused on changes to programs as needed. Quality checks and goal setting.

**Organizational level** – transportation delivery, coordination of EIS and hiring.
Summary

1. A systematic intervention in rural and clinical settings designed to improve health outcomes in high risk populations.

2. The SMI population is often times isolated within both urban and rural settings; a behavioral health approach that improves access through set transportation services appears to improve health and outcomes over time.

3. Individuals with SMI can benefit from targeted EIS that focus on building health literacy related skills and addressing navigation of community, environmental and health resources.

4. Improvement in health outcomes – preliminary analyses.
Collaborating Partners
Coastal Plains Community Center
Community Action Corporation of South Texas
Kleberg County Human Services – Paisano Transit
Rural Economic Assistance League, Inc.
South Coastal Area Health Education Center

For more information please contact REAL, Inc. / 301 Lucero St., Alice, TX / (361) 668-3158