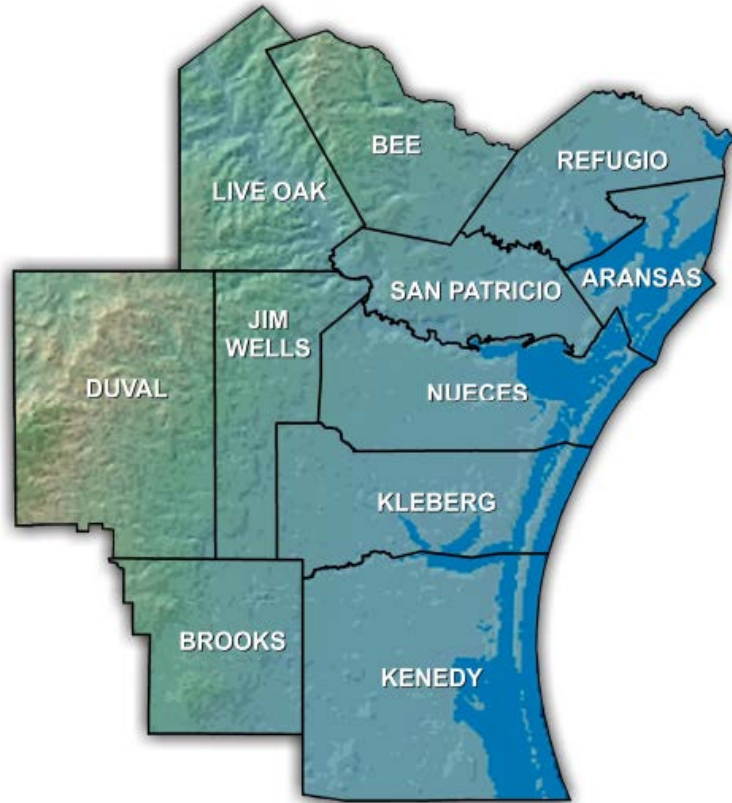# TRIP for Salud y Vida
Transportation for Rural Integrated health Partnership

Examining Health Literacy in a Population with Severe Mental Illness

R.E.A.L. Inc.
RURAL ECONOMIC ASSISTANCE LEAGUE

REAL, INC. SERVICE AREA

BEE
REFUGIO
LIVE OAK
SAN PATRICIO
ARANSAS
JIM WELLS
DUVAL
NUECES
KLEBERG
BROOKS
KENEDY

Connecting South Texas Communities and locations in between!

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.
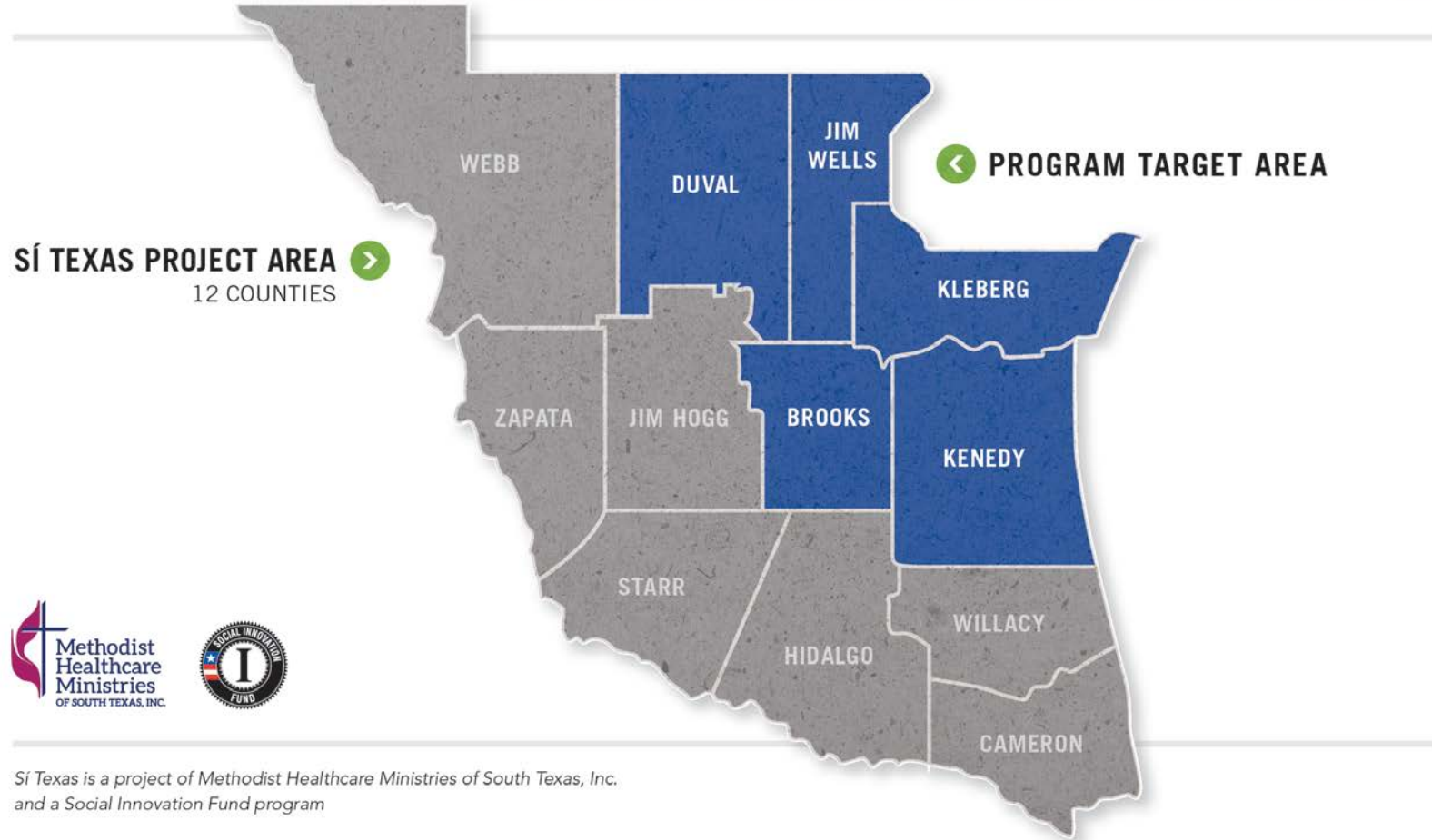
"Where helping people is our only goal!"

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
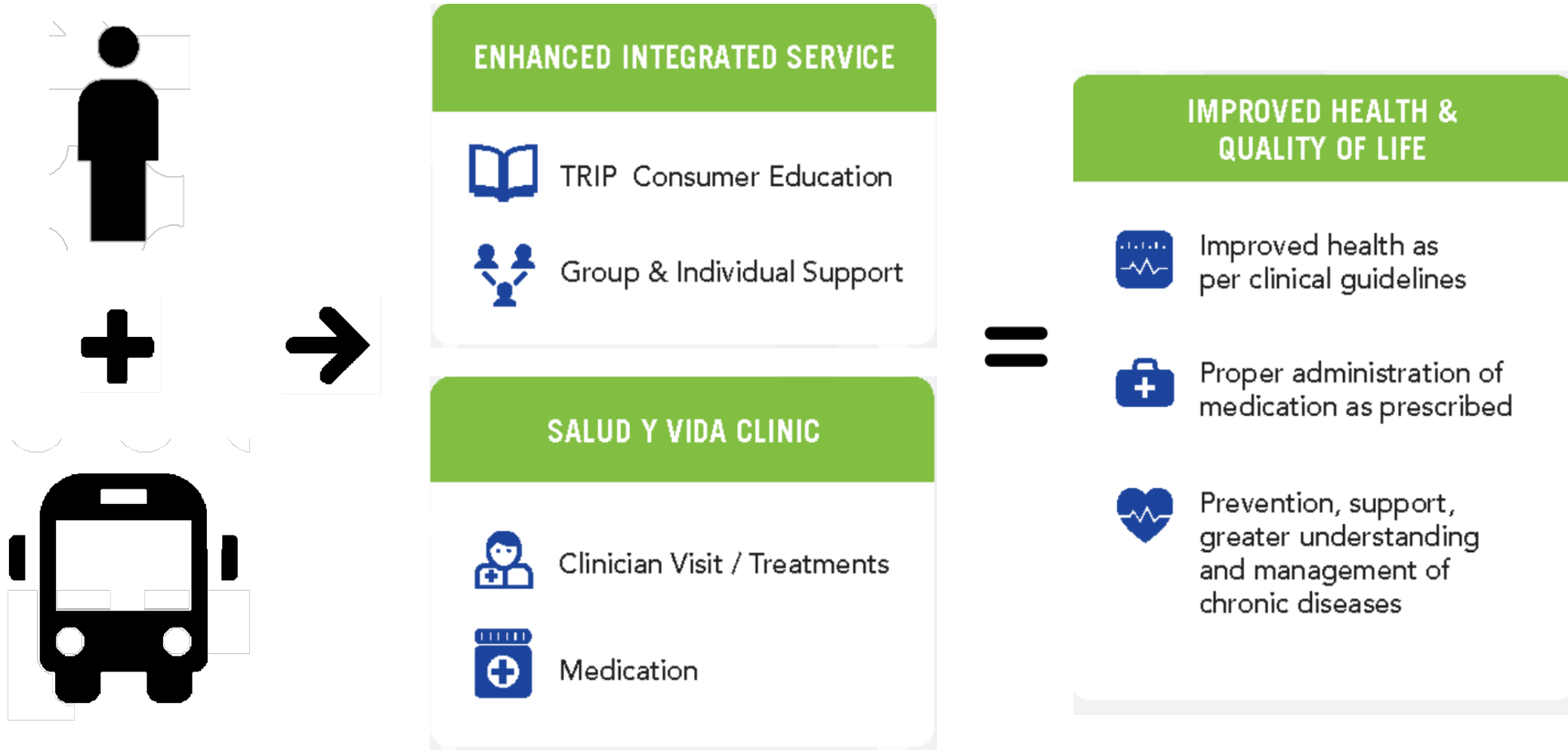
TRIP for Salud y Vida Model

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

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

INCARCERATION

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

POVERTY

HEALTHY FOOD

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

GRADUATION

ENVIRONMENT

HEALTH COVERAGE

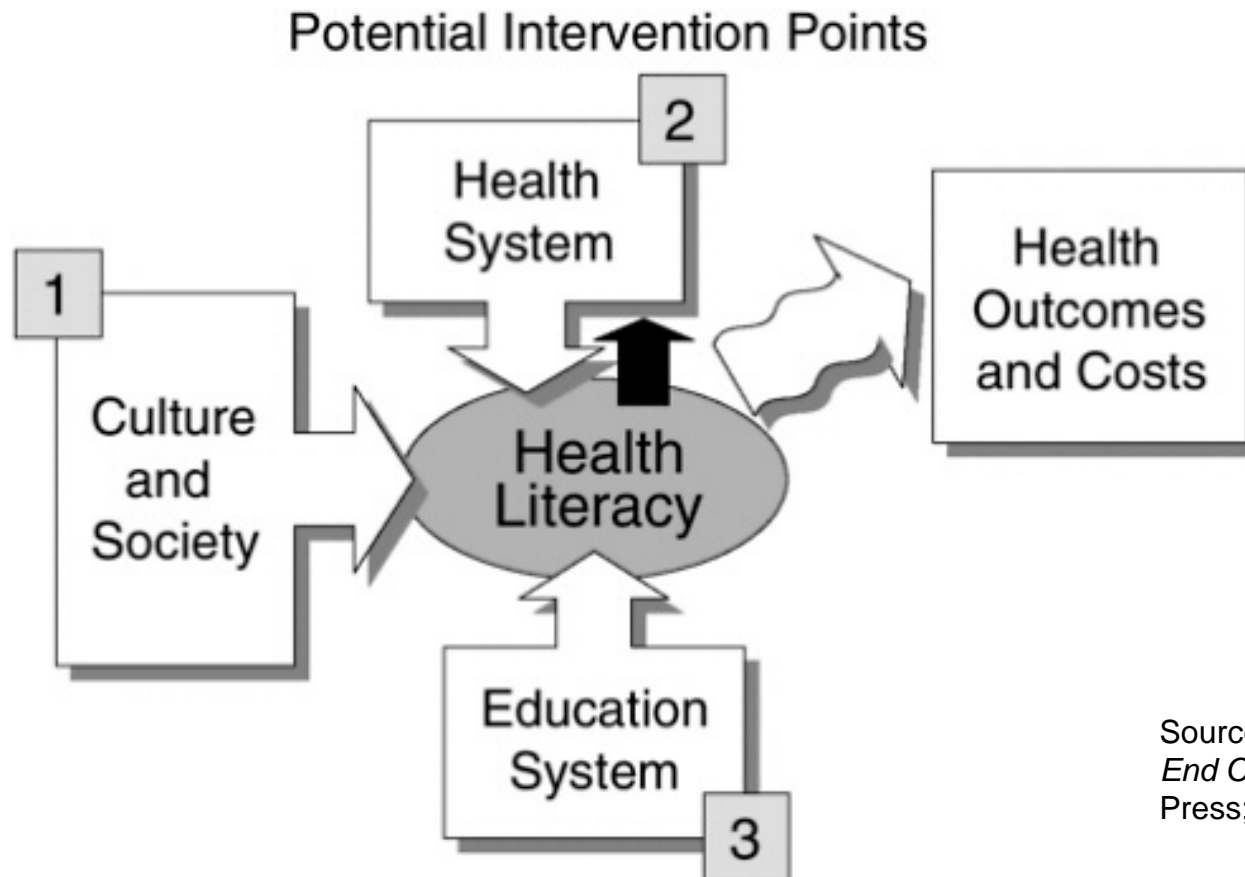**ACCESS TO CARE**

More than 89% of U.S. adults

Why TRIP?

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

How to Begin to Make Changes?

Source: Institute of Medicine. *Health Literacy: A Prescription to End Confusion.* Washington, DC: The National Academies Press; 2004.

Methods

Quasi Experimental Design
    3 intervention clinics
    2 comparison clinics
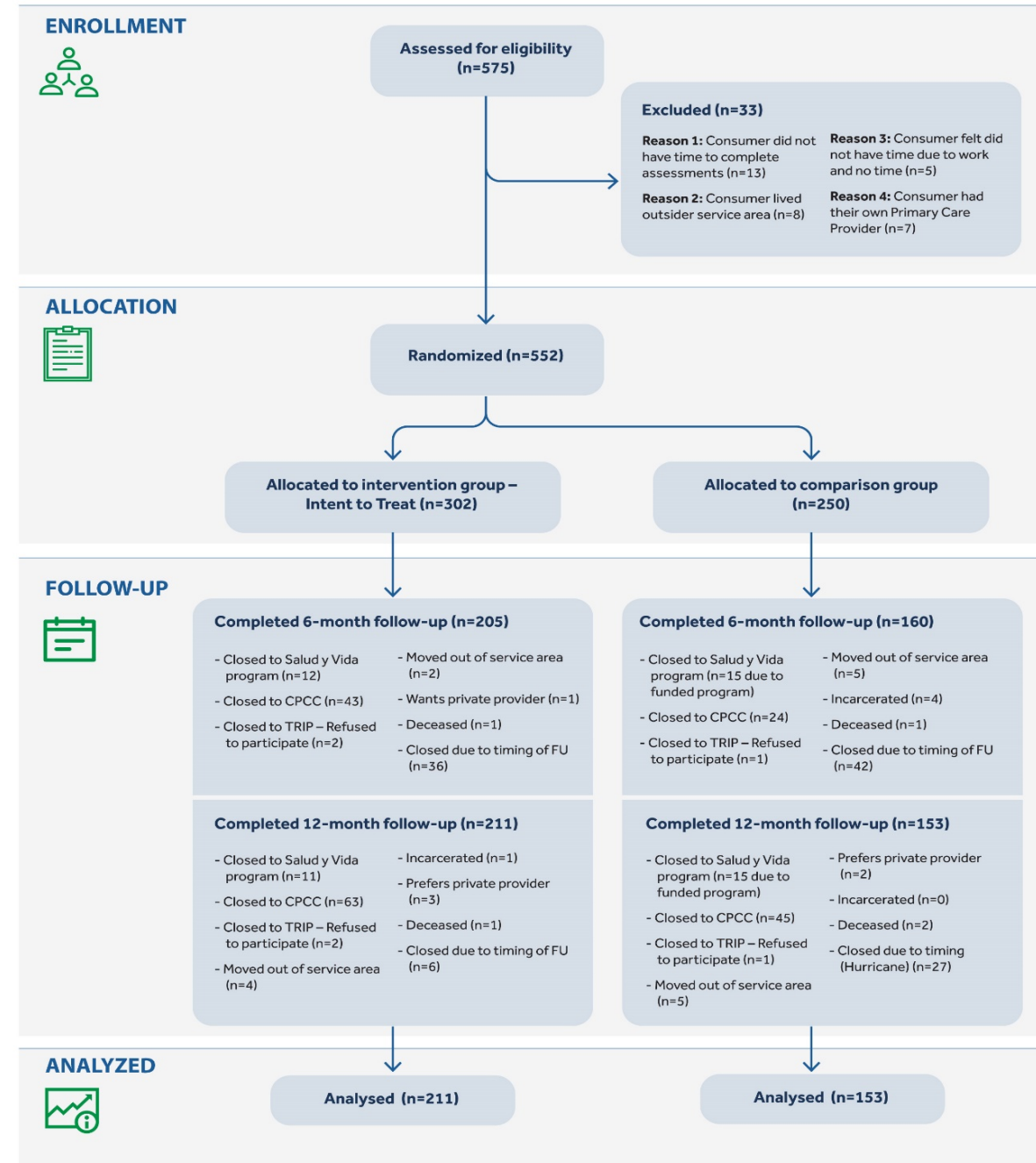
Voices Leadership Group

Health Literacy Measures
    eHEALS and BRIEF

Quality Improvement
    Partner Goals and Feedback Loops
    Consumer Feedback

Baseline Descriptives

Evaluation – Baseline: Demographics (n=500)

Male: 37%
Female: 63%:

Mean age: 46
Range: 20-72

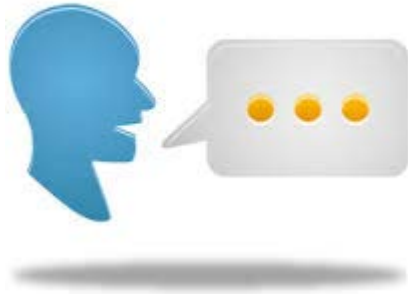Less than HS: 51%
HS/GED: 20%
Some College: 23.7%
BA/BS: 1.3%

Employed: 21%
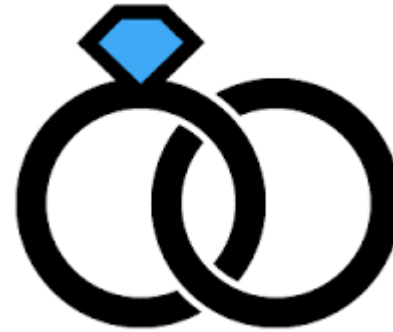Unemployed: 75%
Other: 4%

Evaluation – Baseline: Demographics (n=500)

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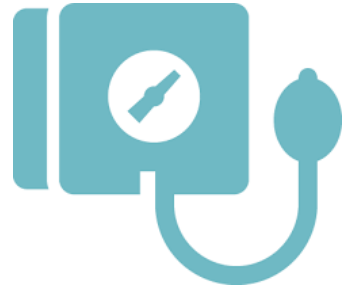Other: 0.7%

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

| Measure	Group	Assessment Interval								
		Baseline			6 Months			12 Months		
		N	Mean	SD	N	Mean	SD	N	Mean	SD
Brief Health Literacy	Program	269	13.0	4.7	184	12.8	4.8	206	12.7	4.9
	Control	244	12.6	4.8	155	13.1	5.2	163	13.2	5.1
	Total	513	12.8	4.7	339	12.9	5.0	369	12.9	5.0

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.

BRIEF 4-Item

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.

Time-course for Brief Health Literacy for intervention and control sites
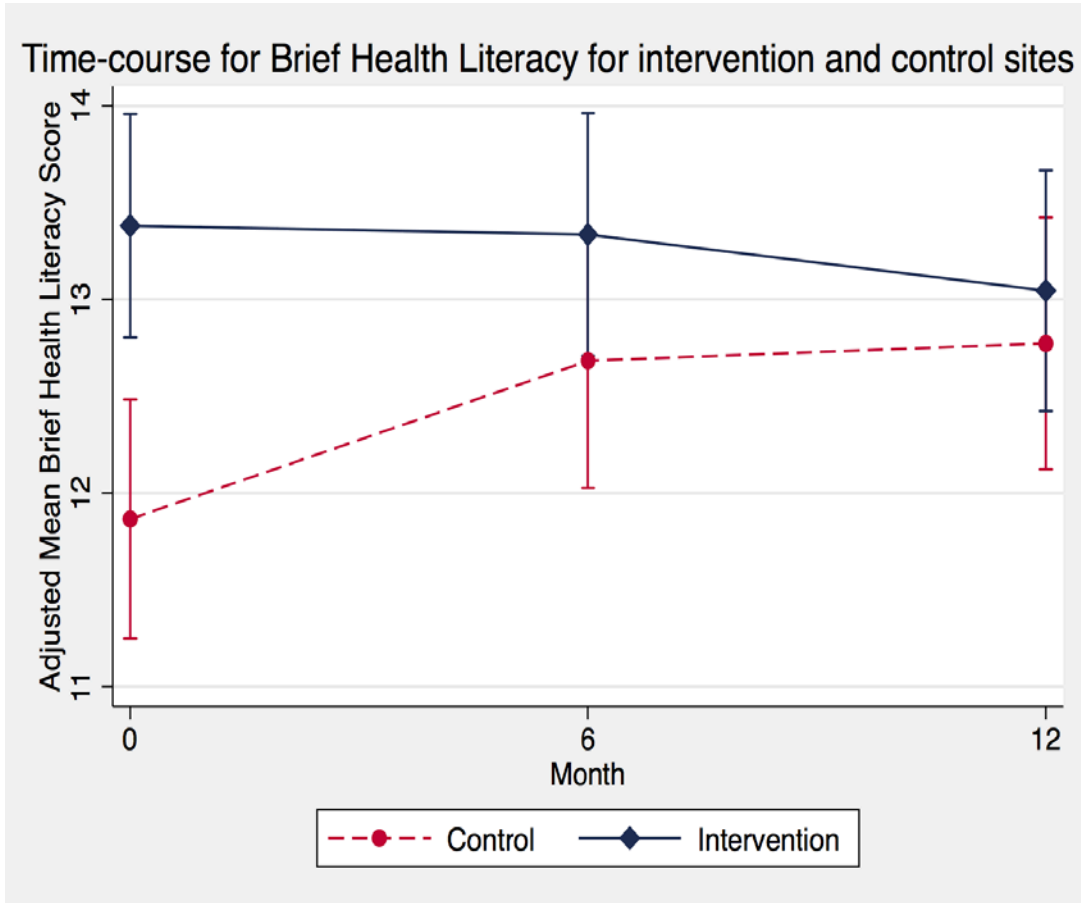
BRIEF 4-Item and Transportation Use

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

Level of Utilization	Coefficient	Standard Error	z	95% CI
Low	-0.23	0.67	-0.35	-1.54 to 1.08
Moderate	-0.66	0.71	-0.93	-2.04 to 0.73
High	-2.23	0.67	-3.31	-3.55 to -0.91
Very High	-2.18	0.69	-3.18	-3.52 to -0.83

Health Literacy – eHEALS Assessment

	Sum Score	Baseline		12 Months	
		n (561)	%	n (391)	%
eHEALS Assessment	8 – 9	169	30.3	175	44.6
	10 – 19	72	12.8	26	6.6
	20 – 29	168	29.8	75	19.2
	30 – 39	138	24.6	79	20.4
	40	14	2.5	36	9.2

Health Literacy – eHEALS Assessment

| Item	Baseline (*M*)	12-months (*M*)	Change
I know how to find helpful health resources on the Internet	2.88	2.62	-0.26
I know how to use the Internet to answer my health questions	2.90	2.61	-0.29
I know what health resources are available on the Internet	2.56	2.48	-0.08
I know how to use the health information I find on the Internet to help me	2.63	2.49	-0.14
I have the skills I need to evaluate the health resources I find on the Internet	2.62	2.49	-0.13
I can tell high quality from low quality health information on the Internet	2.47	2.41	-0.06
I feel confident in using information from the Internet to make health decisions	2.50	2.36	-0.14

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.

Time-course for PHQ-9 Depression scores for intervention and control sites
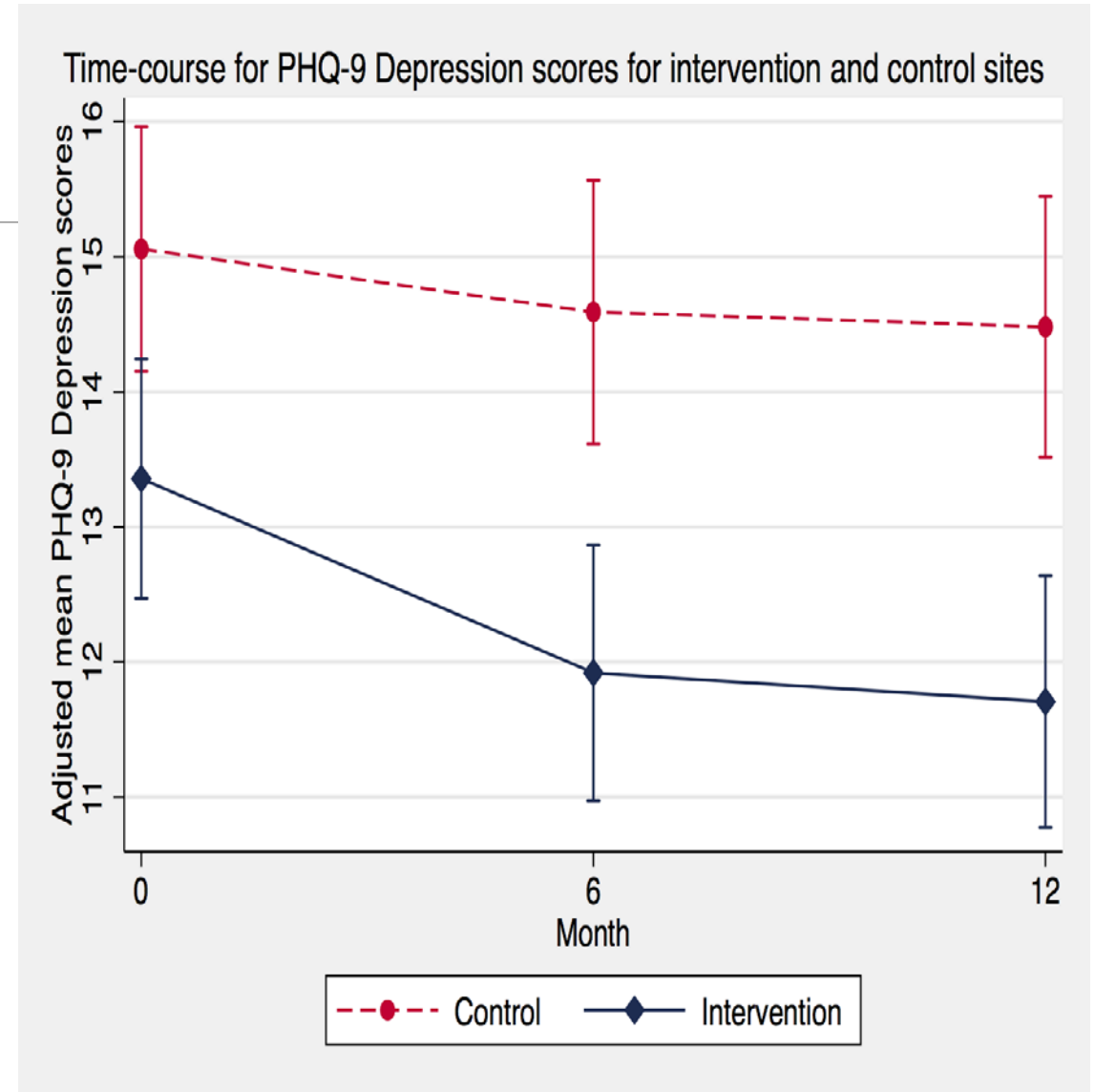
Blood Pressure

Body Mass Index (BMI)

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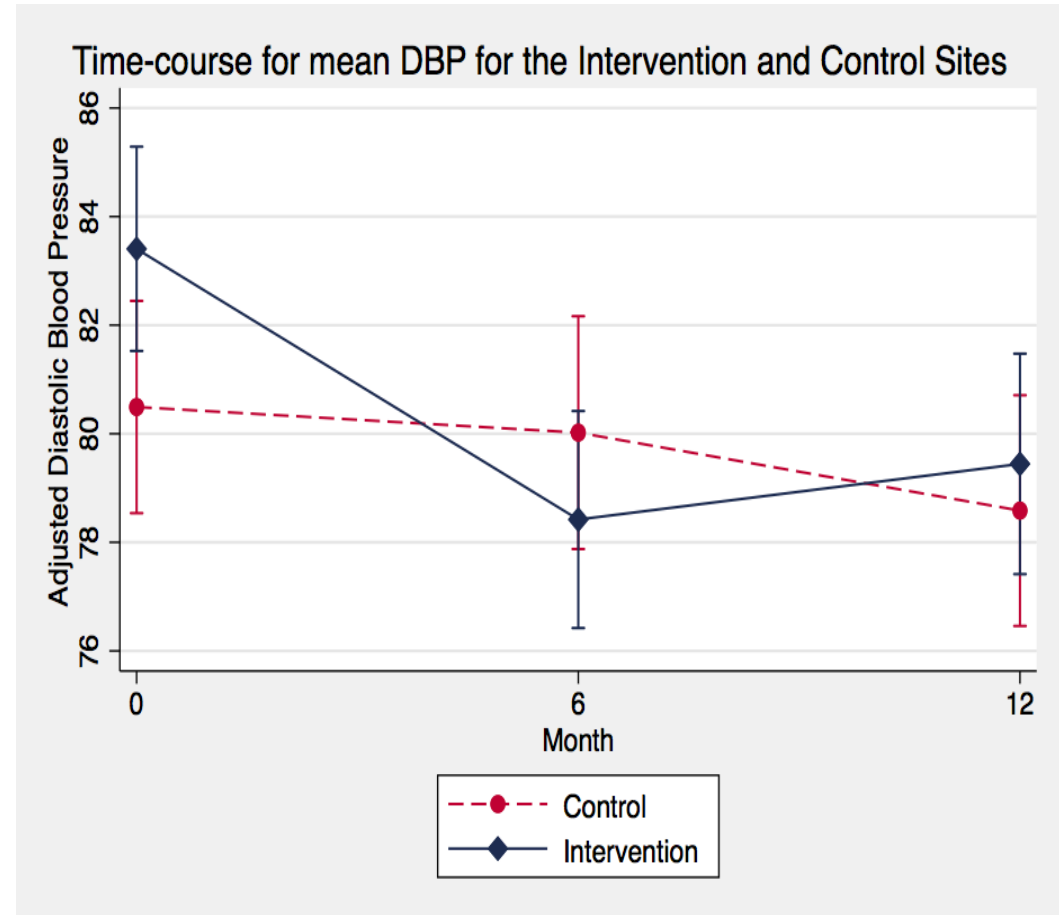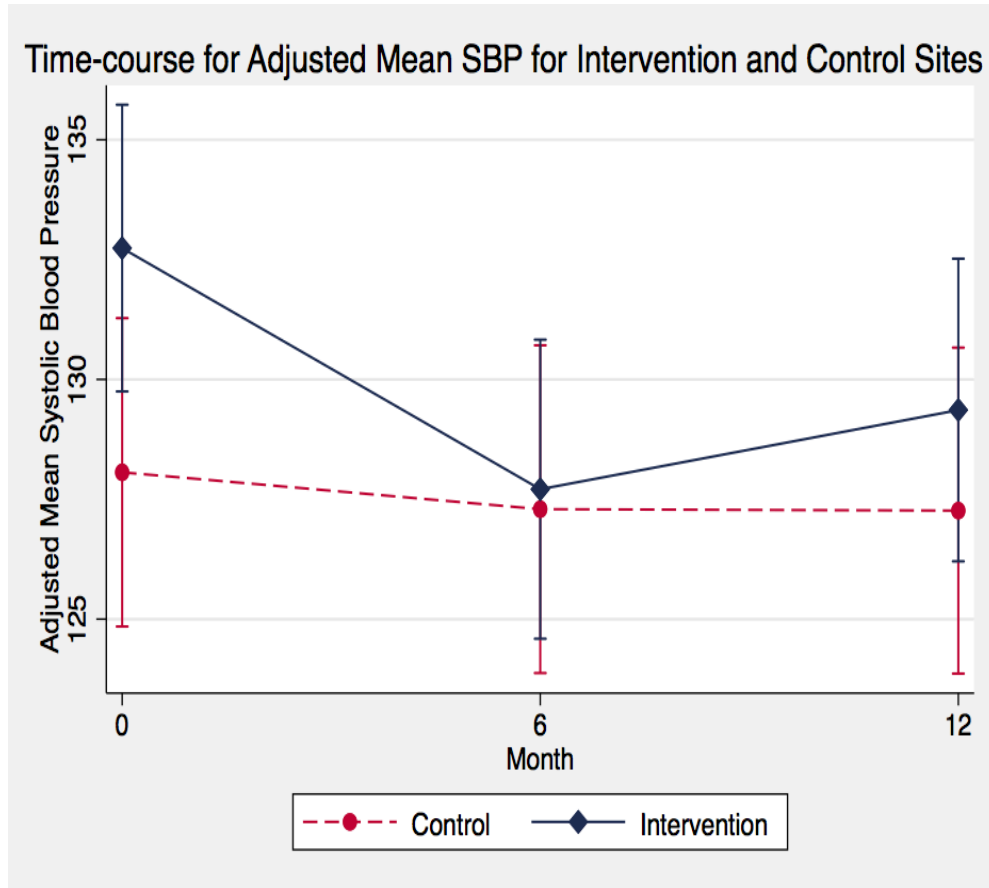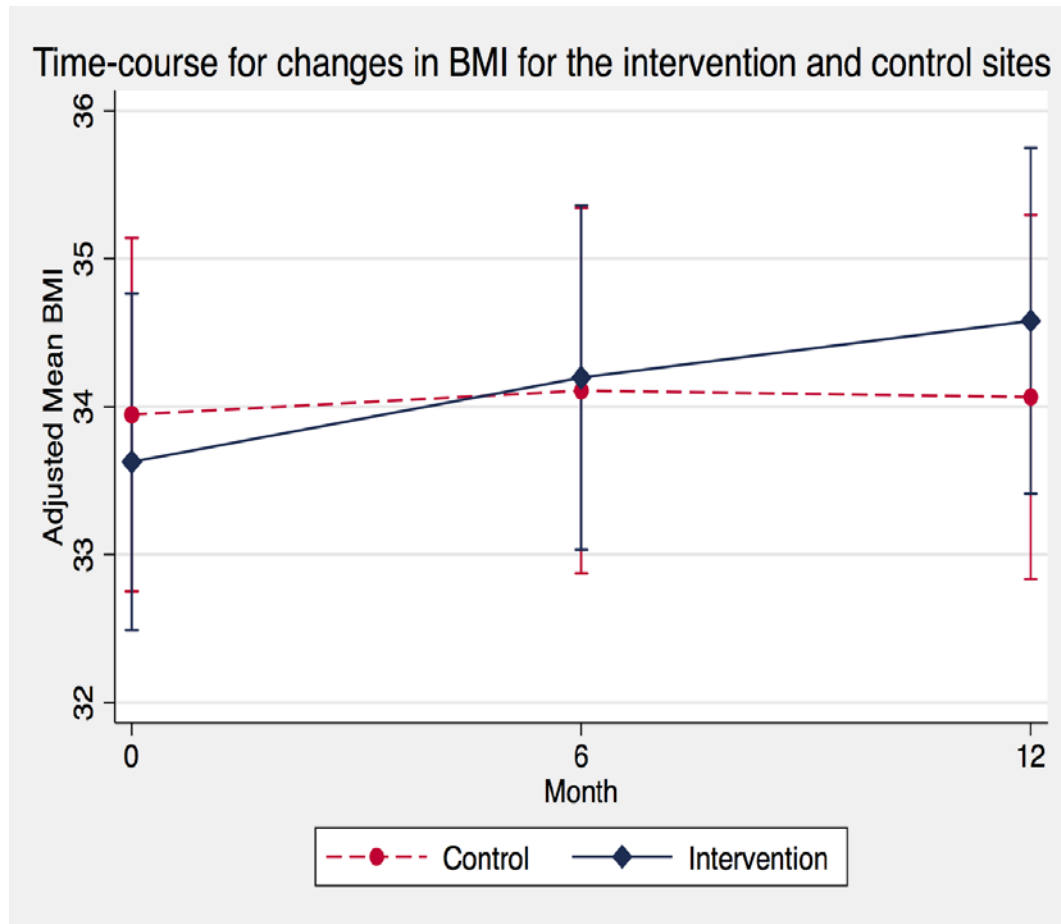
- Changes seen in individuals may have been maxed with the inclusion of all consumers.
- Given the higher BMI in the consumer population and the risk factor of overweight in the SMI population we will continue to examine changes in weight and BMI.
- The subgroup analysis is planned.

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

R.E.A.L. Inc.
RURAL ECONOMIC ASSISTANCE LEAGUE

South Coastal
AHEC

Coastal Plains
Community Center

**METHODIST
HEALTHCARE
MINISTRIES**
OF SOUTH TEXAS, INC.
"Serving Humanity to Honor God"

Corporation for
**NATIONAL &
COMMUNITY
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