

Behavioral Health Outcome Management Tools across the Life Span

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Indiana Rural Health Association Conference 2012

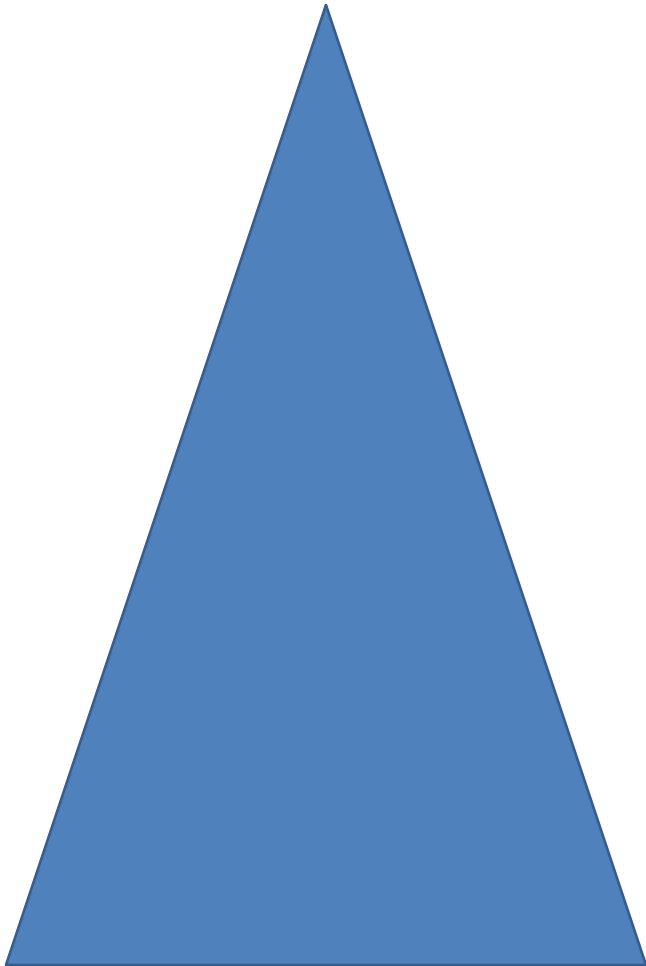
Indianapolis, Indiana

June 15, 2012

“Mental Health is part of overall health.”

(Surgeon General, HHS, 1999)

- “**Mental illness** refers collectively to all diagnosable mental disorders.”
- “**Mental Health** is a state of successful performance of mental function, resulting in productive activities, fulfilling relationships with other people, and the ability to adapt to change and to cope with adversity.”



Mental Illness can Impact Anyone

- **Nearly half of all Americans** have or will **experience a mental illness in their lifetime**
- **Mental Illness** on track to surpass all chronic disease as the **major cause of disability** worldwide in the next decade
- **Costly** (SAMSHA, 2012):
 - **Treatment** for MH & Substance use is approaching \$239 billion
 - **Economic cost of mental illness** in the US is substantial, ~\$300 billion in 2002

Across the Life Span in Indiana

Infants to
Older Adults



- **> 5%**, (260,783) **adults** mental health needs & functional impairments
- **20%** (321,000) **children** with mental health needs
- **9% to 13%** have **significant functional impairments**
- **5% to 9%** experience **severe functional impairments**
- In SFY 2010, **42,387 youth** (birth to 21) **received behavioral health services** through DMHA community mental health centers & addiction providers.

Treatment Works!

RECOVERY
Is
POSSIBLE!

- Early identification & effective intervention is essential.
- Otherwise, consequences led to functional impairments:
 - Developmental delays
 - Poor social functioning
 - Poor academic success
 - Behavioral disorders
 - Employment problems
 - Disability
 - Risk of criminal justice involvement
 - Poor physical health, shortened lifespan

Outcome Performance Measures

Monitor Progress

- Outcome Measures often **Process Measures**
 - How many people served?
 - % of completed reassessments?
 - % of individuals who are seen in OP setting within 7 days of discharge from an acute psychiatric inpatient setting
 - # of billable hours
 - Bed census
- Need to measure **recovery based outcomes** for **individuals** who receive services

Rural Communities

In 2000, 29.2% of Hoosiers lived in rural areas.

Rates of childhood mental health problems similar between rural & urban settings (Lambert, 2008; Howell, 2008)

Accessing needed services is more problematic in rural settings (Lenardson, 2010)

Nationally, in 2010, 19.3% of Americans lived in rural communities (US Census).

- **Children in rural areas are 20% less likely to have a mental health visit than urban children (Howell, 2008)**
- **Stigma toward use of mental health services many limit acceptance of treatment by rural parents (Star. 2002)**
- **Often less resources are available within rural communities (Weiner, 2011)**

Outcome Management Tools

Child & Adolescent Needs & Strength (CANS), Lyons, 2009)

- 2007 **Behavioral Health Providers** Statewide [Division of Mental Health & Addiction, (DMHA)]
- 2008 **Child Residential Providers** [Department of Child Services, (DCS)]
- 2008 Adult Needs & Strength Assessment (ANSA) (DMHA)
- 2008 Integrated into Medicaid Demo Grant (DMHA, OMPP)
- 2010 Linked to **Medicaid Rehabilitation Option** [Office of Medicaid Policy & Planning (OMPP)]
- 2010 **Child Welfare Family Case Managers (DCS)** use information **to refer** to MRO providers (CMHCs)
- 2012 Linked to **foster care rates (DCS)**

Opportunity

- 9 state 5-year Medicaid Grant for Youth with Behavioral Health Needs and Severe Functional Needs
- To demonstrate that Youth & their Families with complex needs could be effectively served through intensive community based treatment and support
- Information from multiple service systems available
- <http://www.in.gov/fssa/dmha/6643.htm>

Introduction

- Research highlights the disparities between access and quality of behavioral health services in urban as compared to rural areas.
 - (Human & Wasemen, 1991; Rost, Fortney, Fischer, & Smith, 2002; Smalley, Yancey, Warren, Naufel, Ryan, & Pugh, 2010)
- Research identifies social support structures, community-based services, and the need for more highly trained professionals as key components to bridging the gap with urbanized communities.
 - (Bauer, Batson, Hayden, & Wilburn, 2005; Kelleher; Taylor; & Rickert, 1992; Letvak, 2002; McCabe & Macnee, 2002)

Research Design

- This exploratory study evaluated Indiana's involvement with the Community Alternatives to Psychiatric Residential Treatment Facilities (CA-PRTF) Medicaid demonstration grant.
- Researchers assessed whether intensive community-based services are effective in improving child mental health functioning and other variables in both urban and rural areas.
- Specifically, researchers analyzed reliable change to baseline functioning, youth and family satisfaction scores, and the relationship between practice model fidelity.

Methodology

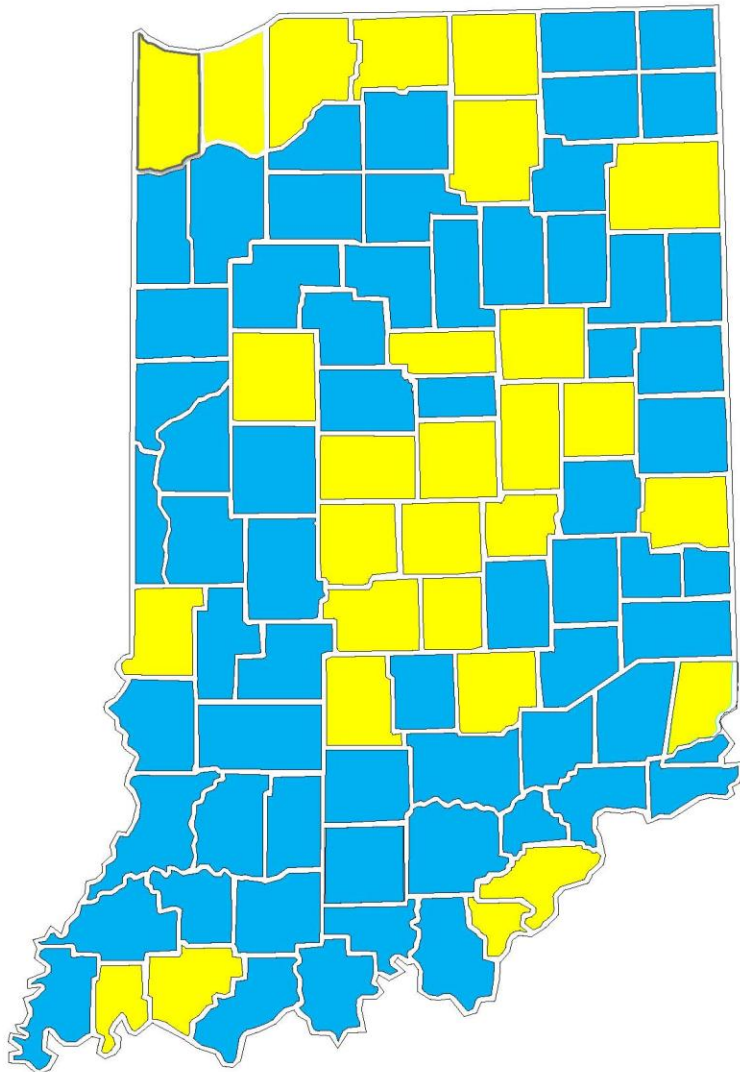
- Sample
 - $n = 1,061$ (71% Male, 71% White, 18% African American, 4% Multi-racial, 1% Native American, 1% Asian, 5% Other, and 4% Hispanic)
 - Mean age = 13.66
 - Split file into urban and rural categories*
 - Urban: $n = 826$
 - Rural: $n = 235$

* Researchers split the file using urban and rural definitions provided by the United States Census Bureau.

Methodology, continued

- Measurement Tools
 - Child and Adolescent Needs and Strengths Assessment (CANS, Lyons, 2009)
 - Youth Satisfaction Survey (Brunk & Innes, 2003)
 - Youth Satisfaction Survey – Families (Brunk & Innes, 2003)
 - Wraparound Fidelity Index 4.0 (Bruns, Suter, Morce, Sather, & Leverentz-Brady, 2007)

Indiana County Map



Rural

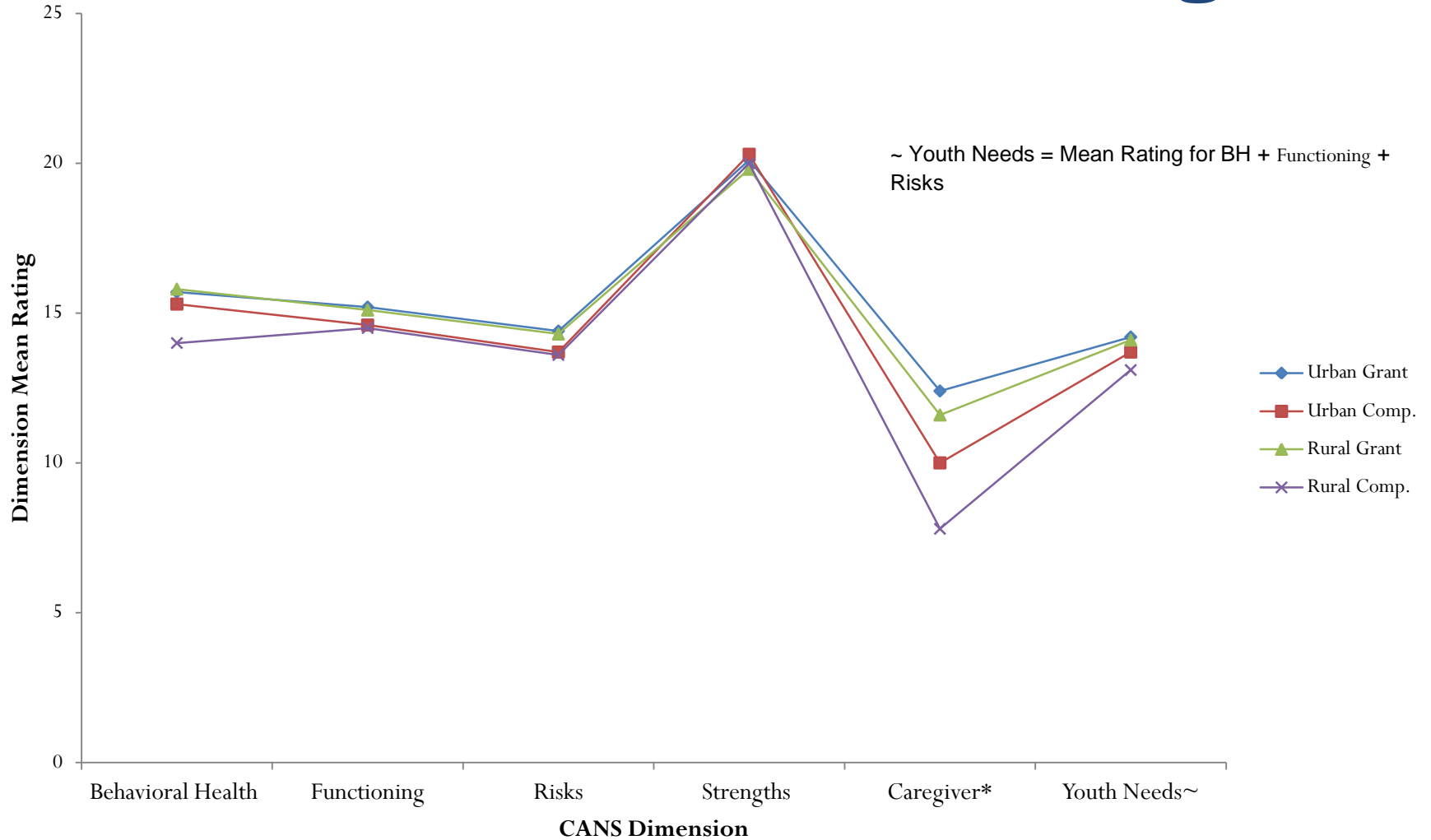
Urban

Urban counties: Allen, Bartholomew, Boone, Clark, Dearborn, Delaware, Elkhart, Floyd, Grant, Hamilton, Hancock, Hendricks, Howard, Johnson, Kosciusko, Lake, LaPorte, Madison, Marion, Monroe, Morgan, Porter, St. Joseph, Tippecanoe, Vanderburgh, Vigo, Warrick, and Wayne

Methodology, continued

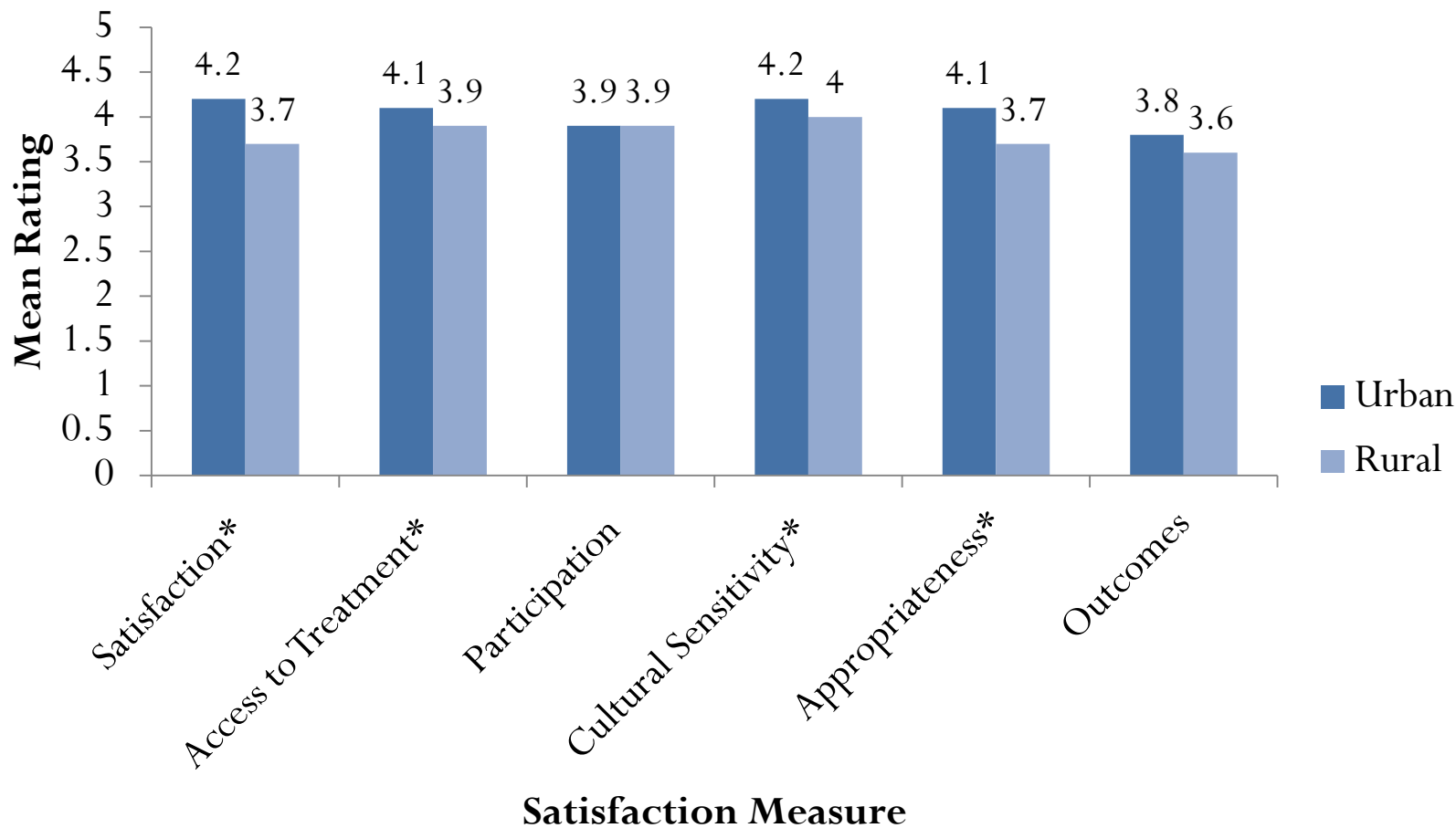
- Data Analysis
 - Descriptive statistics
 - Independent samples t -test
 - Hierarchical multiple regression (stepwise method)

CANS Baseline Needs and Strengths



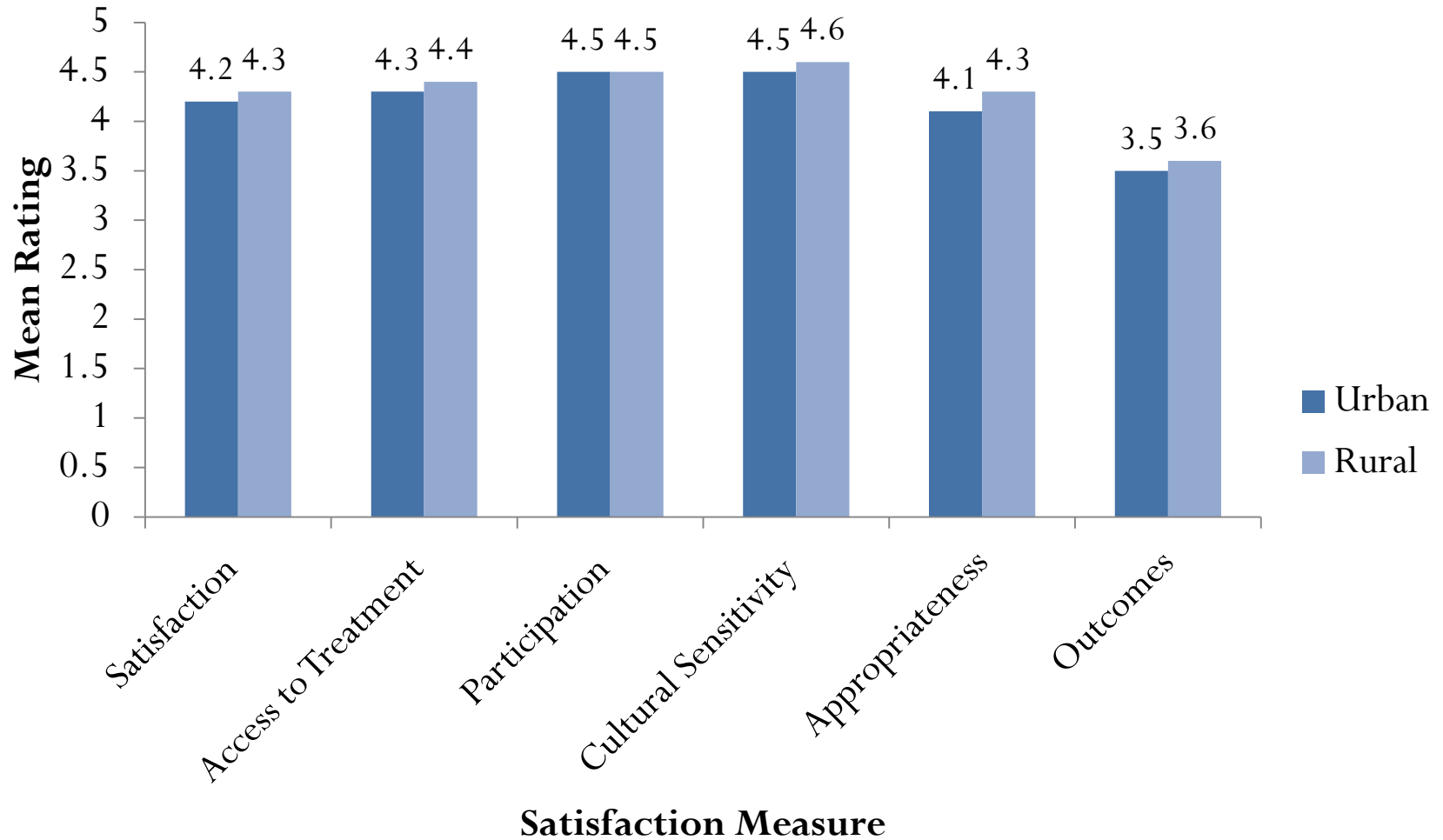
* $p < 0.05$

Youth Satisfaction Scores



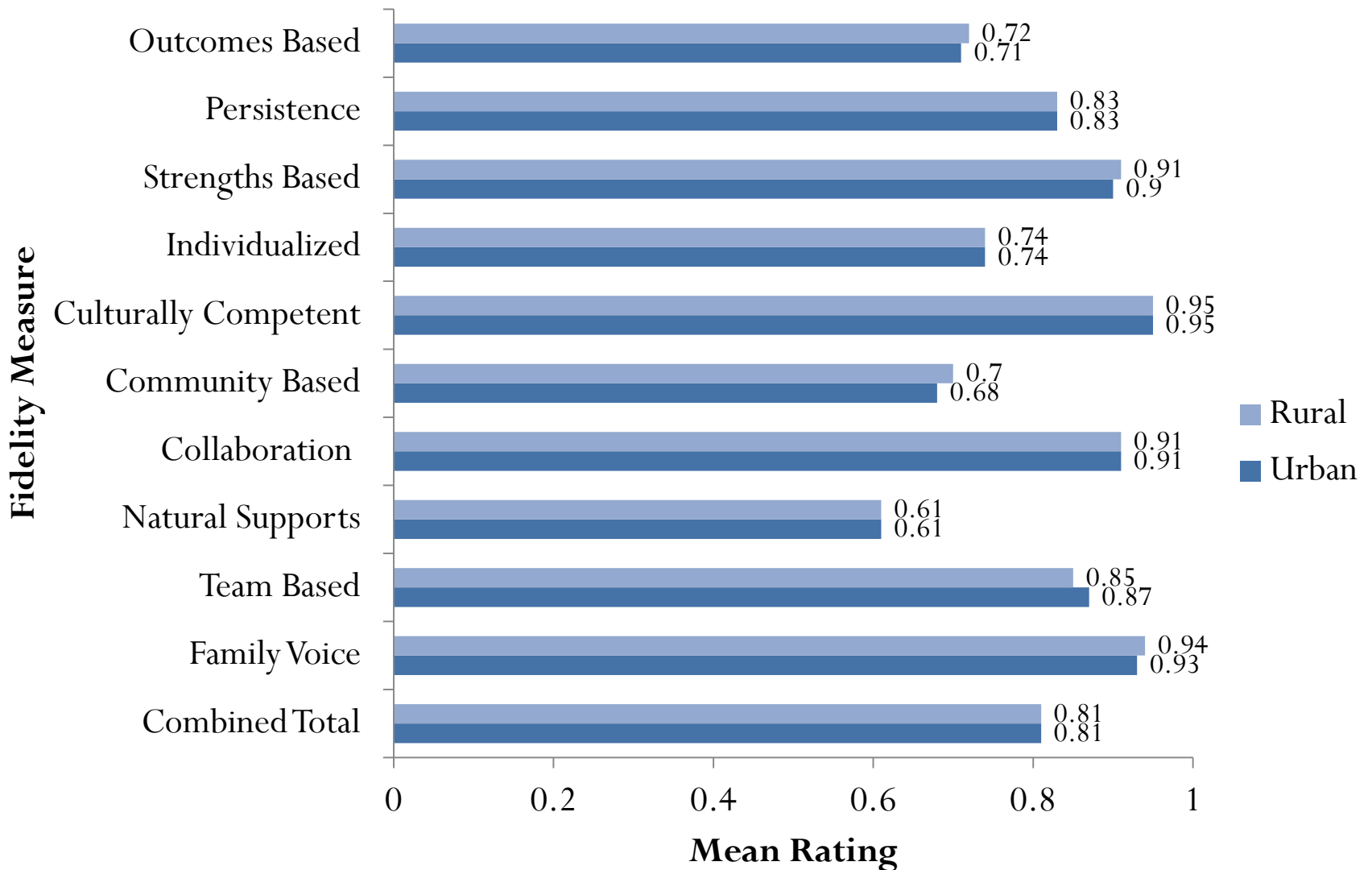
* $p < 0.05$

Family Satisfaction Scores



There were no significant differences between groups.

Fidelity – Combined WFI Scores



There were no significant differences between groups.

Amount Spent on Services

	Grant	PRTF	Medical	Behavioral Health	State Plan	Total
Urban	20,797	13,136	4,281	45,461	49,742	70,562
Rural	23,900	14,730	4,245	46,644	50,890	74,876
Difference	3,103	1,594	36	1,183	1,148	4,314

There were no significant differences between groups.

Predicting Reliable Change

- Hierarchical multiple regression
 - Dependent variable: Change in youth needs
 - Independent variables:
 - WFI items (10 items)
 - Baseline youth needs (37 items)
 - Baseline strengths (1 item)
 - Baseline caregiver (14 items)
 - Services received (6 items)
 - Demographics (7 items)

Final Regression Model

- Dependent variable: Change in youth needs
- Independent variables:
 - WFI items (total score)
 - Baseline youth needs (11 items)
 - Baseline caregiver (3 items)
 - Services received (6 items)
 - Demographics (7 items)

Results: Urban

- The multiple regression revealed the following independent variables (combined total WFI, conduct, depression, social functioning, substance abuse, legal, adjustment to trauma, oppositional, and school achievement) are significant predictors of change in youth needs ($F [df = 13, 539] = 17.678, p < 0.001$). Exactly 29.9% of the variance in change in youth needs is accounted for by these collective independent variables.

Results: Urban, continued

Predictor	Standardized β	t	p
Combined Total WFI	0.141	3.802	> 0.001
Conduct	0.177	4.182	> 0.001
Depression	0.092	2.261	0.024
Social Functioning	0.157	3.946	> 0.001
Substance Abuse	0.094	2.528	0.012
Legal	0.070	1.600	0.110
Adjustment to Trauma	0.088	2.312	0.021
Oppositional	0.140	3.362	0.001
School Achievement	0.088	2.333	0.020

Results: Rural

- The multiple regression revealed the following independent variables (combined total WFI, social functioning, anxiety, conduct, substance use, pharma_psych, and total grant) are significant predictors of change in youth needs ($F [df = 12, 177] = 12.187, p < 0.001$). Exactly 32.5% of the variance in change in youth needs is accounted for by these collective independent variables.

Results: Rural, continued

Predictor	Standardized β	<i>t</i>	<i>p</i>
Combined Total WFI	0.160	2.557	0.011
Social Functioning	0.200	2.860	0.005
Anxiety	0.390	5.670	> 0.001
Conduct	0.237	3.418	0.001
Substance Use	0.143	2.182	0.030
Pharma_psych	-0.196	-2.972	0.003
Total Grant	0.143	2.204	0.029

Discussion and Implications

- This research produced findings that illustrate how intensive community-based services help bridge the gap between mental health functioning of children living in both urban and rural areas.
- The lack of multiple significant findings illustrates that community-based services worked as effectively in urban as compared to rural areas of Indiana.

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