

# Wraparound Fidelity: What does the national research tell us?



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<http://depts.washington.edu/wrapeval>

[www.rtc.pdx.edu/nwi](http://www.rtc.pdx.edu/nwi)



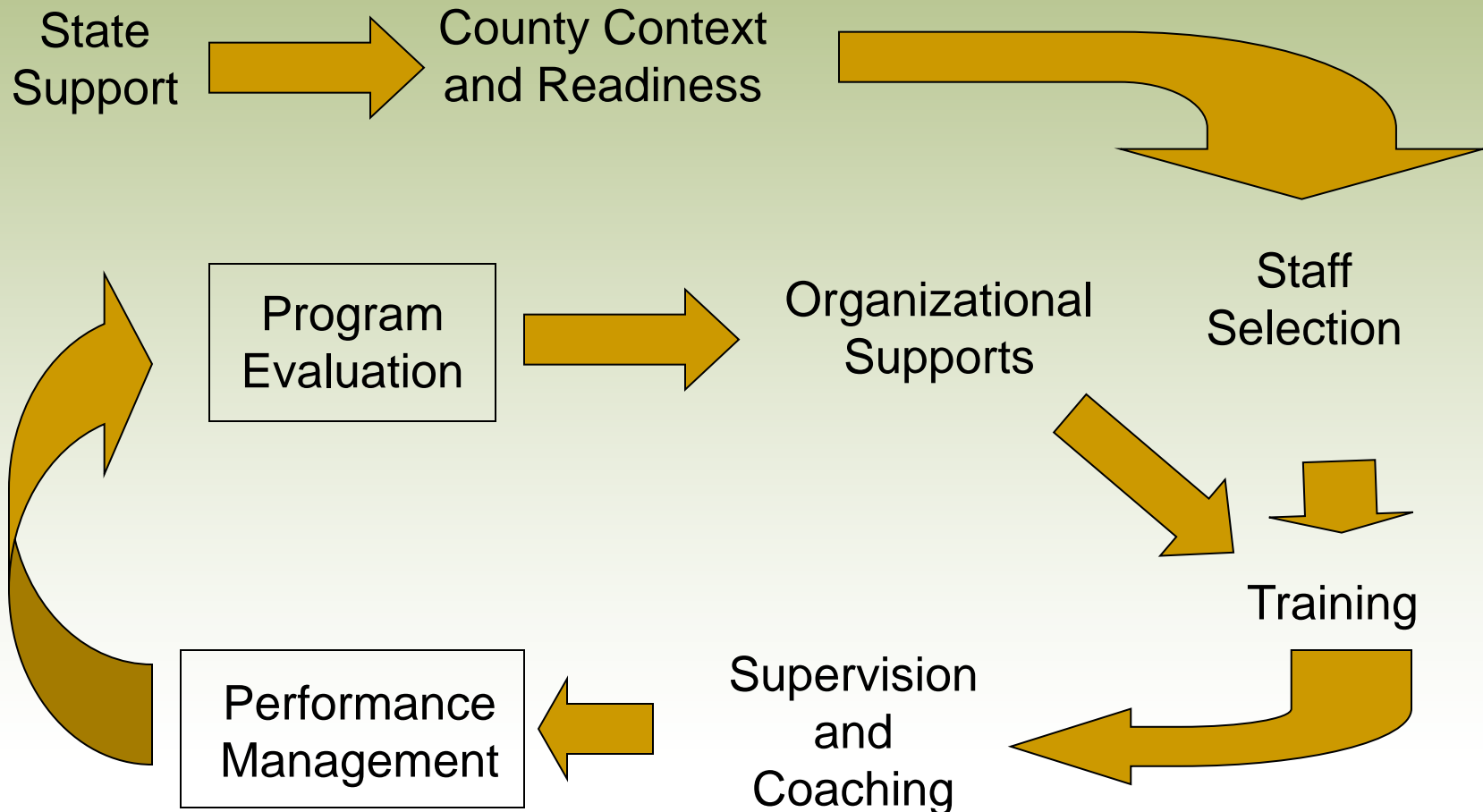
John D. Burchard, University of Vermont



# Overview of the session

- Background – the importance of fidelity in human services
- What is “fidelity” in wraparound implementation?
- How does one measure it?
- What is the evidence that our fidelity measures are reliable and valid?
- What do the data tell us about wraparound implementation nationally?
- What is the connection to youth and family outcomes?

# Implementation with High Fidelity Requires...



# Fidelity is critical to outcomes



- F Higher levels of fidelity to organizational level assessment for **ACT** was associated with greater reductions in days spent in psychiatric hospitals (McGrew, Bond, Dietzen & Salyers, 1994)
- F Improved youth delinquency outcomes for higher fidelity **Teaching Family** model (Kirigin et. al. 1982)
- F Improved youth delinquency outcomes for higher fidelity **MST** (Henggler, Melton, Browndino, Scherer & Hanley, 1997)
- F Better overall outcomes for youth receiving model adherent **FFT** (Alexander, Pugh, Parsons and Sexton, 2000)
- F Better outcomes for **school-wide behavioral management** when implemented with fidelity (Felner et. al. 2001)

# Monitoring quality of implementation of child and family teams



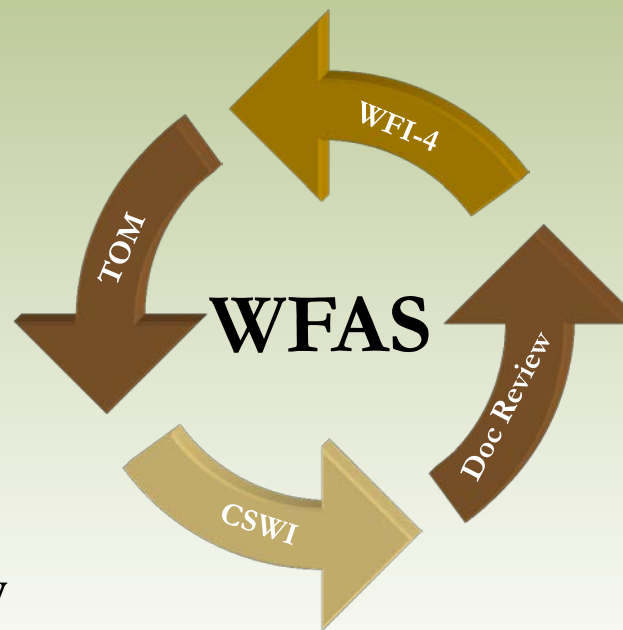
- Have facilitators and team members fill out activity checklists
- Look at plans of care and meeting notes
- Sit in on and observe team meetings
- Ask the people who know- parents, youth, facilitators, program heads

# Wraparound Fidelity Assessment System



**TOM** – Team  
Observation  
Measure

**WFI-4** –  
Wraparound  
Fidelity Index



**CSWI** – Community  
Supports for  
Wraparound Index

**DRM** - Document  
Review Measure

# How did we get to the WFI-4 and the WFAS?



- Wraparound circa 2003...
  - Wraparound is an appealing model that can be very difficult to carry out.
  - Some teams and programs were very successful; however....
  - There was no generally-accepted description of what teamwork should look like (or the roles and activities of key individuals, such as facilitators, parent partners, etc.)
  - Fidelity measures (e.g., WFI-3) based on principles, not a “Practice model”
  - Growing evidence that much “wraparound” was not living up to the vision expressed in the principles





# Formation of the NWI

The National Wraparound Initiative formed in 2003

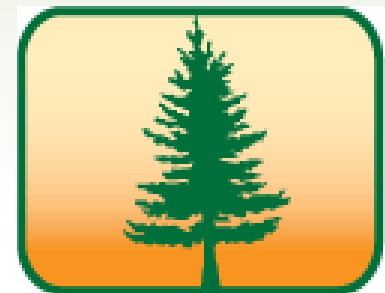
- Group of diverse stakeholders with high levels of experience with wraparound, including the most successful programs
- Open membership, using collaboration and consensus-building processes to:
  - Provide guidelines for wraparound practice
  - Describe necessary organizational and system supports
  - Provide an opportunity to share tools, resources, techniques, and other forms of support
  - **Develop fidelity measures**



# Resource Guide to Wraparound



- [www.wrapinfo.org](http://www.wrapinfo.org)
- ~ 50 chapters plus appendices
  - All existing NWI products plus further information about
    - Wraparound and its history and evolution
    - Putting principles into practice
    - Training, coaching, supervision
    - Specialized roles in wraparound implementation
    - Implementation assessment
    - Finance



Resource Guide  
To Wraparound

# The Wraparound Fidelity Index, version 4



- Assesses implementation of the wraparound process through brief interviews with multiple respondents
  - Caregivers
  - Youths
  - Wraparound Facilitators
  - Team Members
- Found to possess good psychometric characteristics
  - Test-retest reliability
  - Inter-rater agreement
  - Internal consistency
- Used in research on wraparound
- Even more widely as a quality assurance mechanism by wrap programs

# Wraparound Fidelity Index, v.4



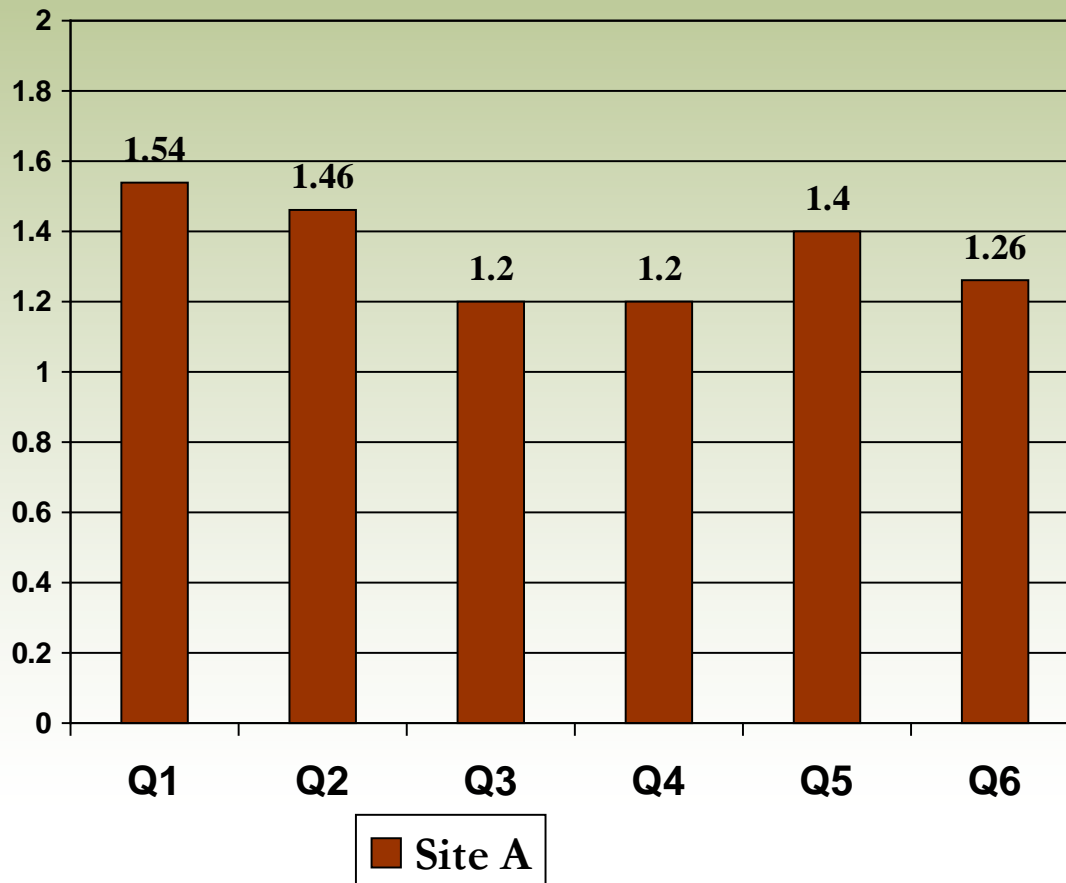
- Items on the principles and core activities, organized by the 4 phases of wraparound
  - **Engagement:** Did you select the people who would be on your youth and family team?
    - Principle = Team based
  - **Planning:** Does the plan include strategies for helping your child get involved with activities in the community?
    - Principle = Community based
  - **Implementation:** Does the team evaluate progress toward the goals of the plan at every team meeting?
    - Principle = Outcome based
  - **Transition:** Will some members of your team be there to support you when formal wraparound is complete?
    - Principle = Persistence

# WFI Items: Engagement and Team Preparation Phase



Phase 1: Engagement		Yes	Sometimes Somewhat	No
1. CC	When you first met your wraparound facilitator, were you given time to talk about your family's strengths, beliefs, and traditions? <i>Circle one: YES NO</i>	YES to both questions	YES to only the first question	NO to the first question
	Did this process help you appreciate what is special about your family? <i>Circle one: YES NO</i>	2	1	0
2. FVC	Before your first team meeting, did your wraparound facilitator fully explain the wraparound process and the choices you could make?	2	1	0
3. SB	At the beginning of the wraparound process, did you have a chance to tell your wraparound facilitator what things have worked in the past for your child and family?	2	1	0
4. TB	Did you select the people who would be on your wraparound team?	2	1	0
5. TB	Is it difficult to get agency representatives and other team members to attend team meetings when they are needed?	0	1	2
6. OB	Before your first wraparound team meeting, did you go through a process of identifying what leads to crises or dangerous situations for your child and your family?	2	1	0

# Reports from the WFI: Individual items (Engagement phase)



Q1. Were you given time to talk about your family's strengths, beliefs, and traditions?  
*True - 10 Partly True - 3 Not True - 2*

Q2. Did your facilitator fully explain wraparound & the choices you could make?  
*True - 9 Partly True - 4 Not True - 2*

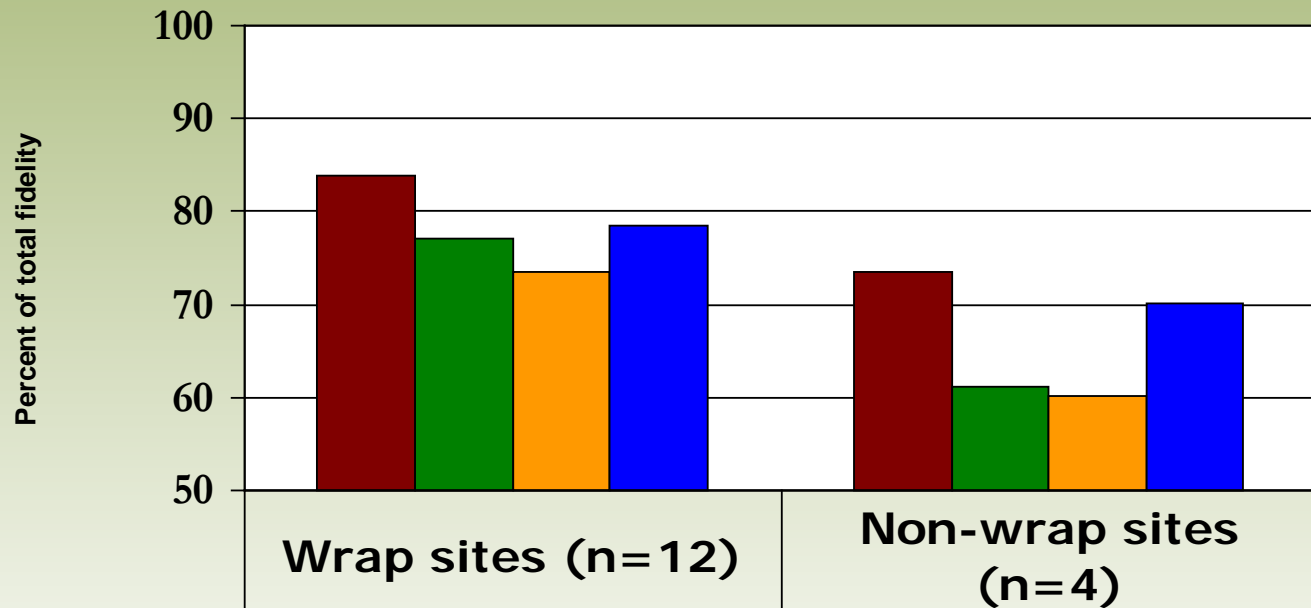
Q3. Did you have a chance to tell your wraparound facilitator what has worked in the past for your child and family?  
*True - 7 Partly True - 4 Not True - 4*

Q4. Did you select the people who would be on your wraparound team?  
*True - 7 Partly True - 4 Not True - 4*

Q5. Is it difficult to get team members to meetings when they are needed?  
*True - 9 Partly True - 3 Not True - 3*

Q6. Did you go through a process of identifying what leads to crises for yr family?  
*True - 8 Partly True - 3 Not True - 4*

# WFI-4: Discriminant Validity



<b>Facilitator</b>	<b>83.8</b>	<b>73.6</b>
<b>Caregiver</b>	<b>77.1</b>	<b>61.2</b>
<b>Youth</b>	<b>73.6</b>	<b>60.1</b>
<b>Team Member</b>	<b>78.4</b>	<b>70.1</b>

# What is the evidence on connections between fidelity and outcomes?



1. Do youth/families with higher WFI scores show more positive outcomes? (Inconsistent/weak evidence)
2. Do individual provider staff whose families experience better outcomes have higher WFI scores? (Stronger)
3. Do wraparound sites/initiatives with higher WFI scores achieve better outcomes? (Emerging)
4. Is training and coaching associated with gains in fidelity and higher fidelity? (Growing)
5. Do communities with better developed supports for wraparound show higher WFI scores (Strong)
6. Can we say what “high fidelity” wraparound is yet?



# Associations between fidelity and outcomes at the family level



1. Bruns, E.J., Suter, J.S., Force, M.D., & Burchard, J.D. (2005). Adherence to wraparound principles and association with outcomes. *Journal of Child and Family Studies, 14*, 521-534.
2. Walker, S.E.C., Bruns, E.J., & Sather, A. (in submission). Wraparound fidelity in systems of care and association with outcomes.
3. Cox, K., et al. (in press). Wraparound Retrospective: Factors predicting positive outcomes. *Journal of Emotional and Behavioral Disorders*

# Associations between fidelity and outcomes at the family level



- Study 1: Small N (N=34) in one site; associations found between WFI-2.1 scores and 6 months follow-up data on:
  - Residential restrictiveness
  - Satisfaction
  - Child behavior (only from facilitator report of WFI)
- Study 2: N=176, one provider organization
  - Outcomes included goal attainment, CAFAS, and residential restrictiveness
  - Results found positive but weak association between WFI total scores and outcomes
  - Association found between several WFI principles (Community based, strengths based) and outcomes
  - Presence of Natural supports on team predicted residential and goal attainment outcomes

# Associations between fidelity and outcomes at the family level



- Study 3
  - Three sites, N=121 (baseline), N=93 (6 months), N=53 (12 months)
  - Many outcomes assessed
  - Looked at outcomes differences by:
    - Comparing for high vs low fidelity sites
    - Regression of WFI scores on outcomes (controlling for baseline)
  - Attrition reduces ability to reach conclusions

# Study 3 Findings: Outcomes differences between sites with high vs low WFI scores



- Significant between-group differences found for:
  - Total services received
  - Caregiver satisfaction
  - Restrictiveness of living environment
  - Placement changes
  - Family functioning
    - All differences in hypothesized direction
- No differences found for:
  - Child functioning
  - Child behavior (CBCL or YSR)
  - Behavioral strengths
  - Caregiver strain
  - Family resources
  - Youth satisfaction

# Results: Association between CG-reported wraparound fidelity and 6-month outcomes



After controlling for baseline score

Outcome variable	B	SE	Beta	t	Sig.
Restrictiveness of Living	-.294	.177	-.196	-1.658*	0.10
Placement changes	-.005	.071	-.008	-.067	.947
CAFAS	-0.78	3.32	-0.02	-0.23	0.82
CBCL	-0.84	0.58	-0.12	-1.46	0.15
YSR	-1.00	1.12	-0.09	-0.89	0.38
BERS	1.32	1.05	0.15	1.26	0.21
Family Functioning	0.05	0.04	0.13	1.24	0.22
Caregiver Strain	-0.10	0.07	-0.14	-1.48	0.14
Family Resources	3.27	1.22	0.24	2.68**	0.01
Outcome variable				r	Sig.
MSSC Total				.08	
Caregiver Satisfaction				.56**	.000
Youth Satisfaction				.03	

\*\* $p < .01$  \* $p < .1$

# Study 3 Findings: Relationship between fidelity and outcomes



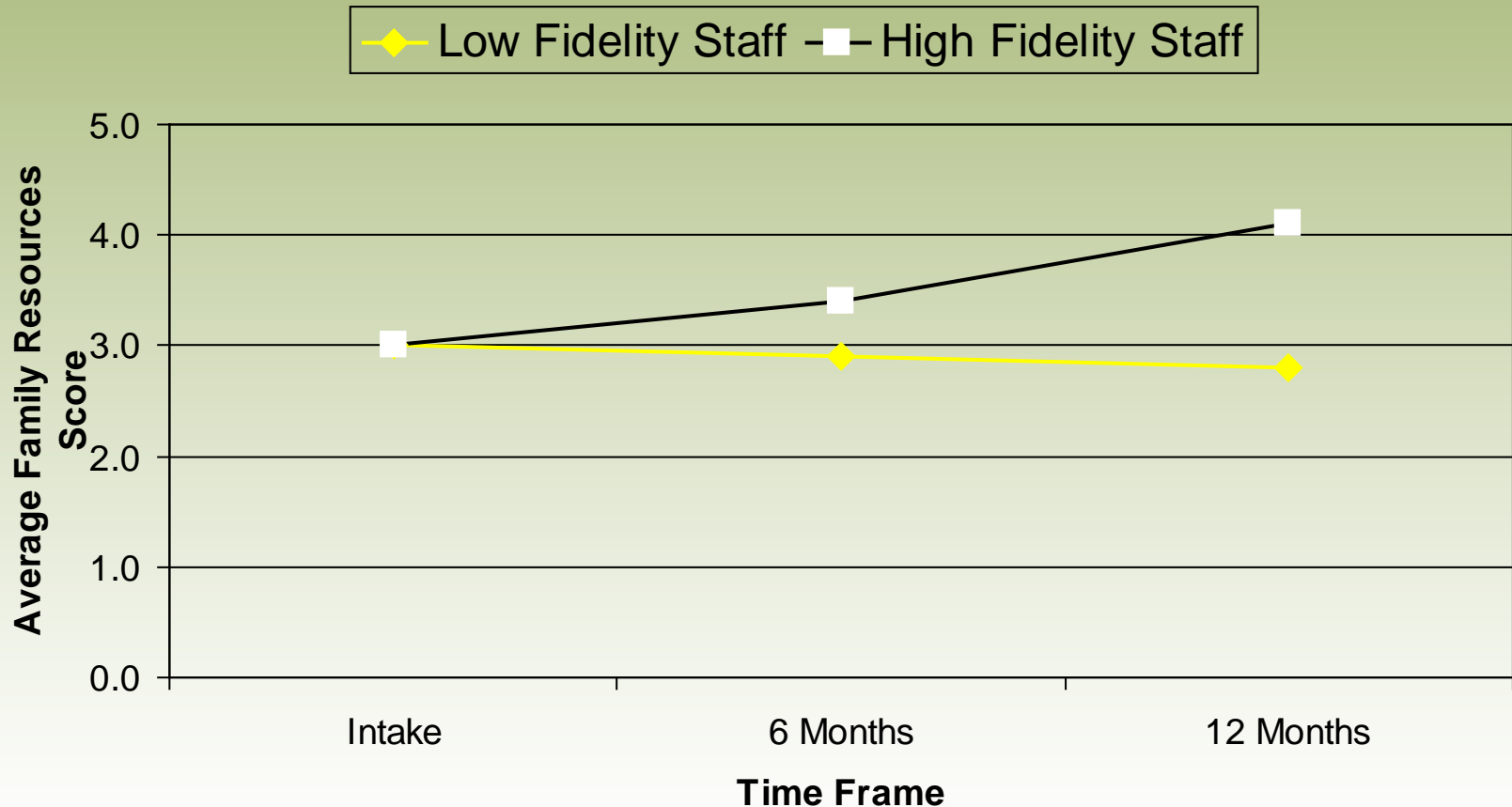
- Caregiver reported fidelity was found to be related to several 6-month outcomes:
  - Restrictiveness of living ( $p < .1$ )
  - Family resources
  - Caregiver satisfaction
- CG-reported fidelity was associated in the hypothesized direction with all 6-months outcomes
  - Overall, however, few significant relationships were found
- Stronger findings at the site level

# Fidelity and outcomes at the staff level



- Studies have been primarily restricted to program evaluations; however one published study:
  - Bruns, E.J., Rast, J., Walker, J.S., Peterson, C.R., & Bosworth, J. (2006). Spreadsheets, service providers, and the statehouse: Using data and the wraparound process to reform systems for children and families. *American Journal of Community Psychology*, 38, 201-212.
- Analyses have been completed in NV, AZ implementation efforts
- Currently possible in MD, CA, WA, NV

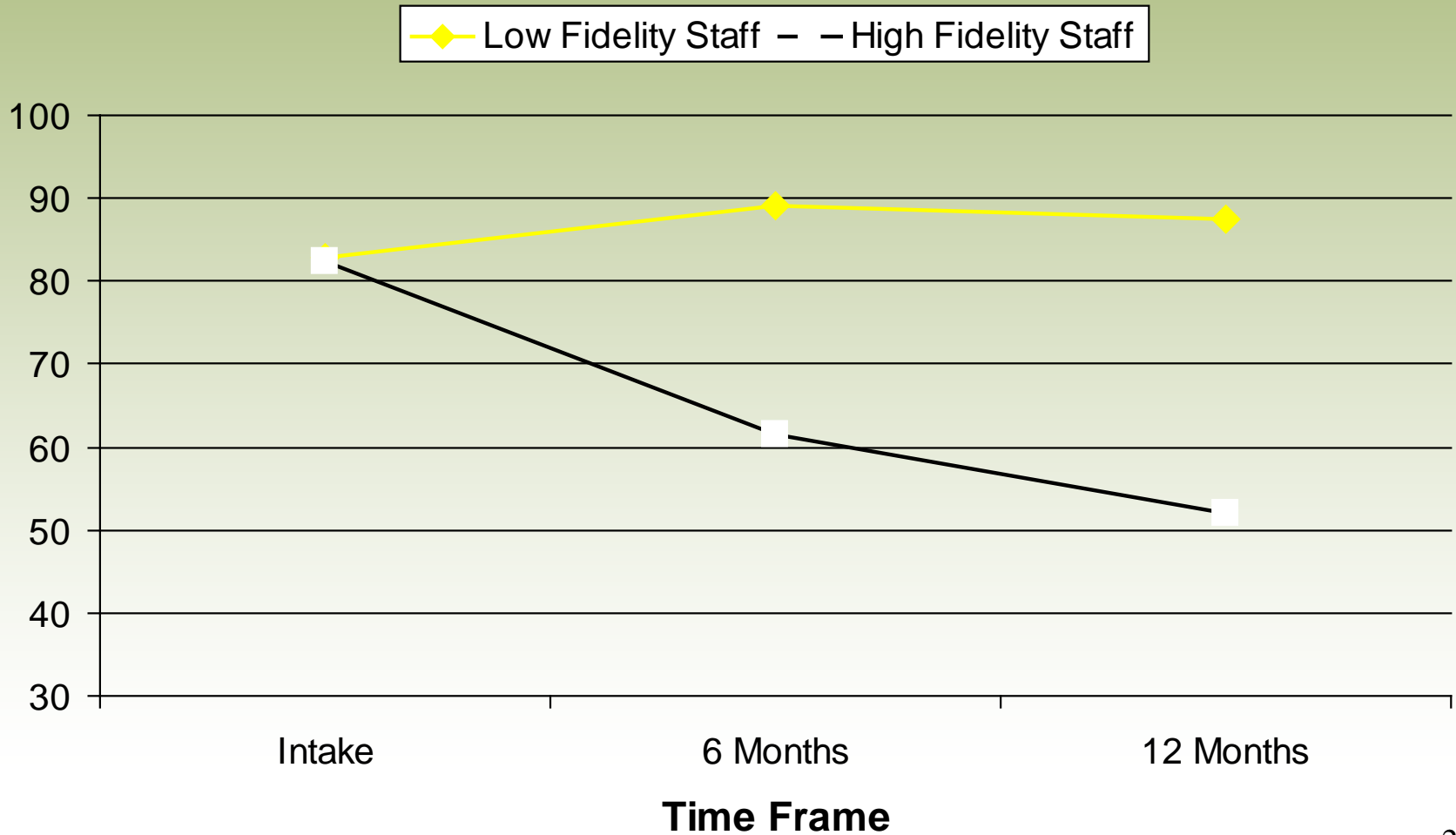
# Low- vs. high-fidelity wraparound in AZ: Family resources



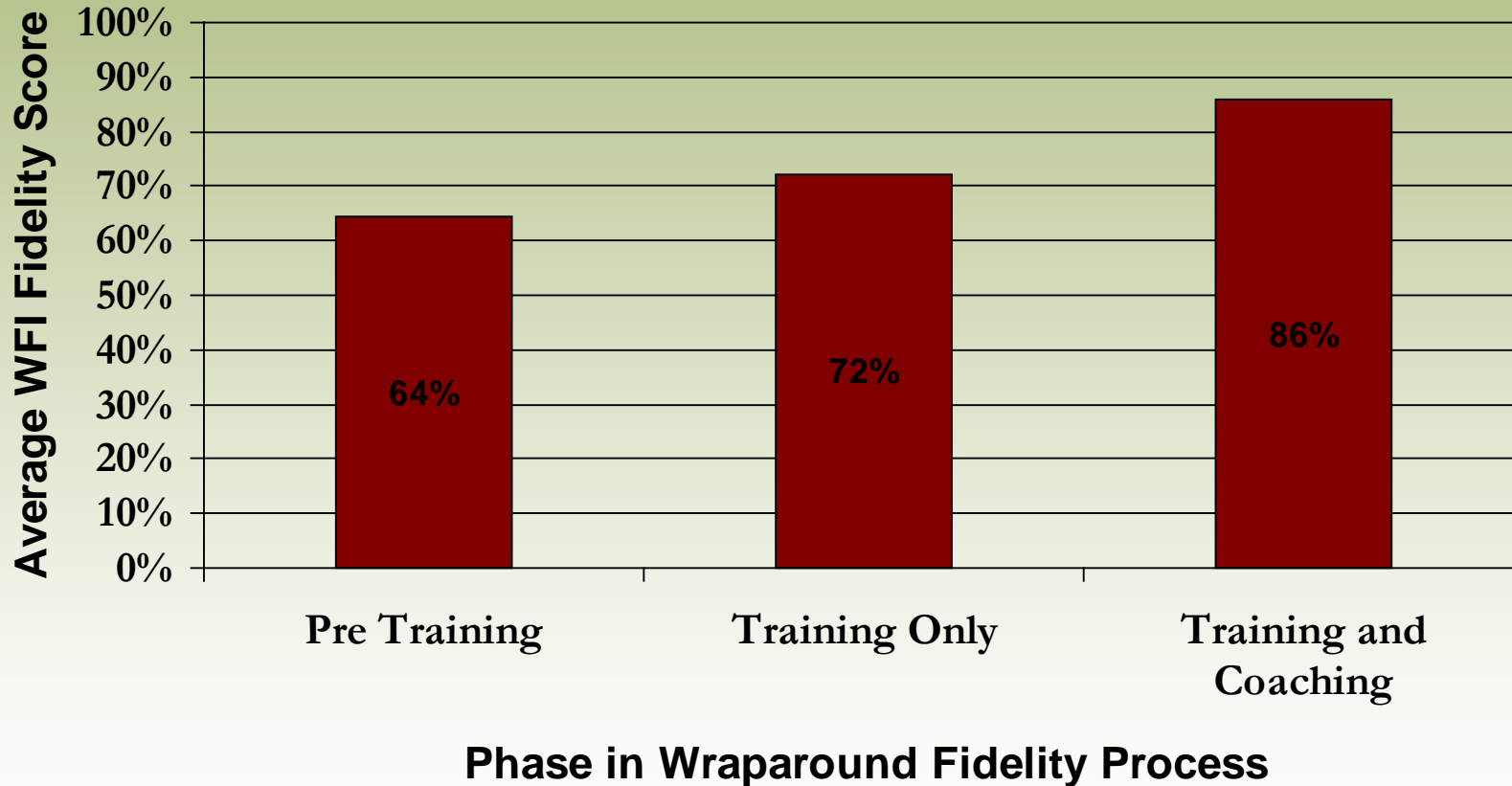
FRS measures a caregiver's report on the adequacy of a variety of resources (time, money, energy, etc.) needed to meet the needs of the family as a whole, as well as the needs of individual family members. Group average on the scale of 1 – 5 1 = Not at all adequate 5 = Almost always adequate



# *Low- vs. high-fidelity wraparound in AZ:* **Child Behavior**

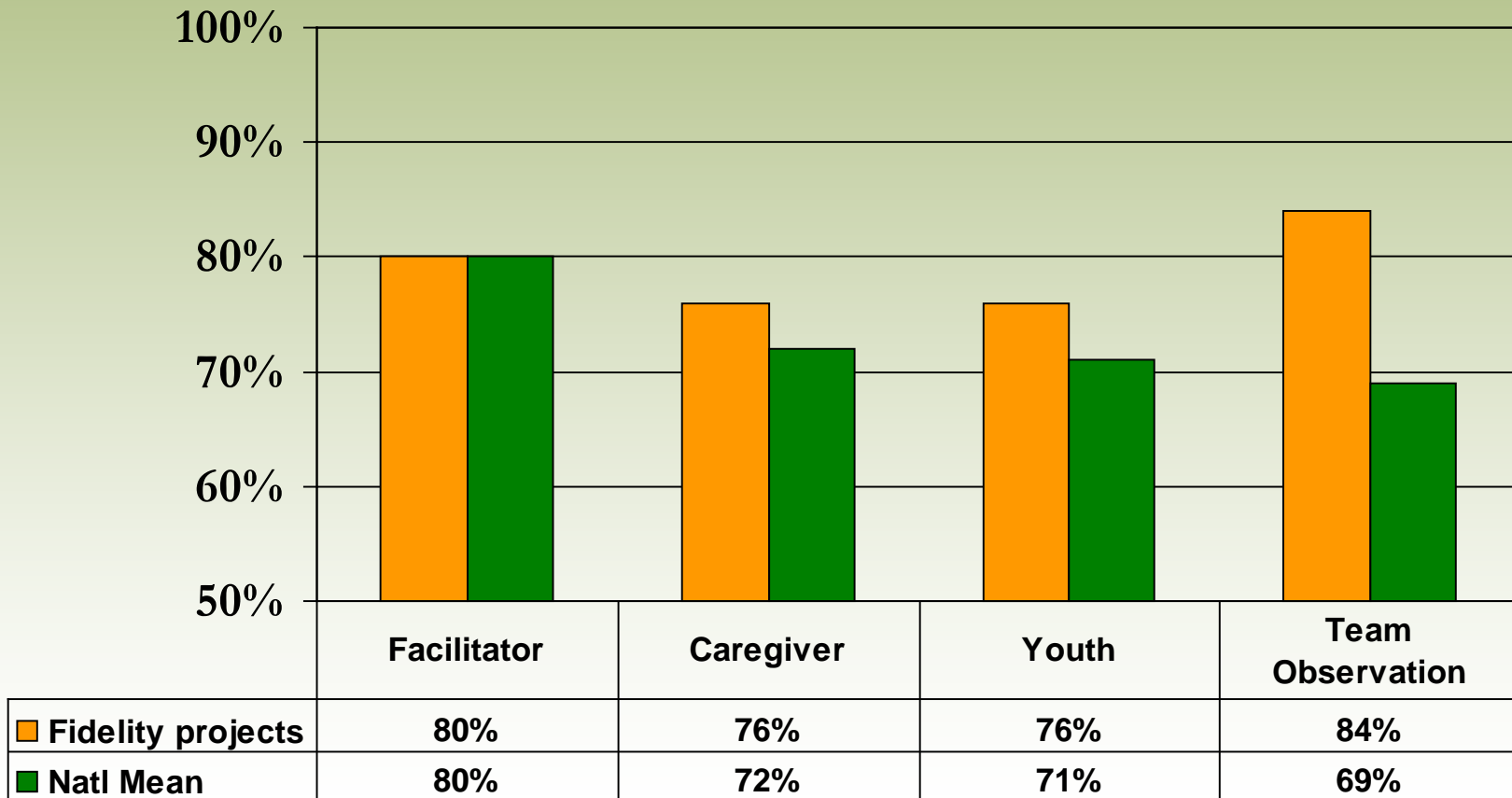


# Ongoing training and professional development support leads to higher fidelity

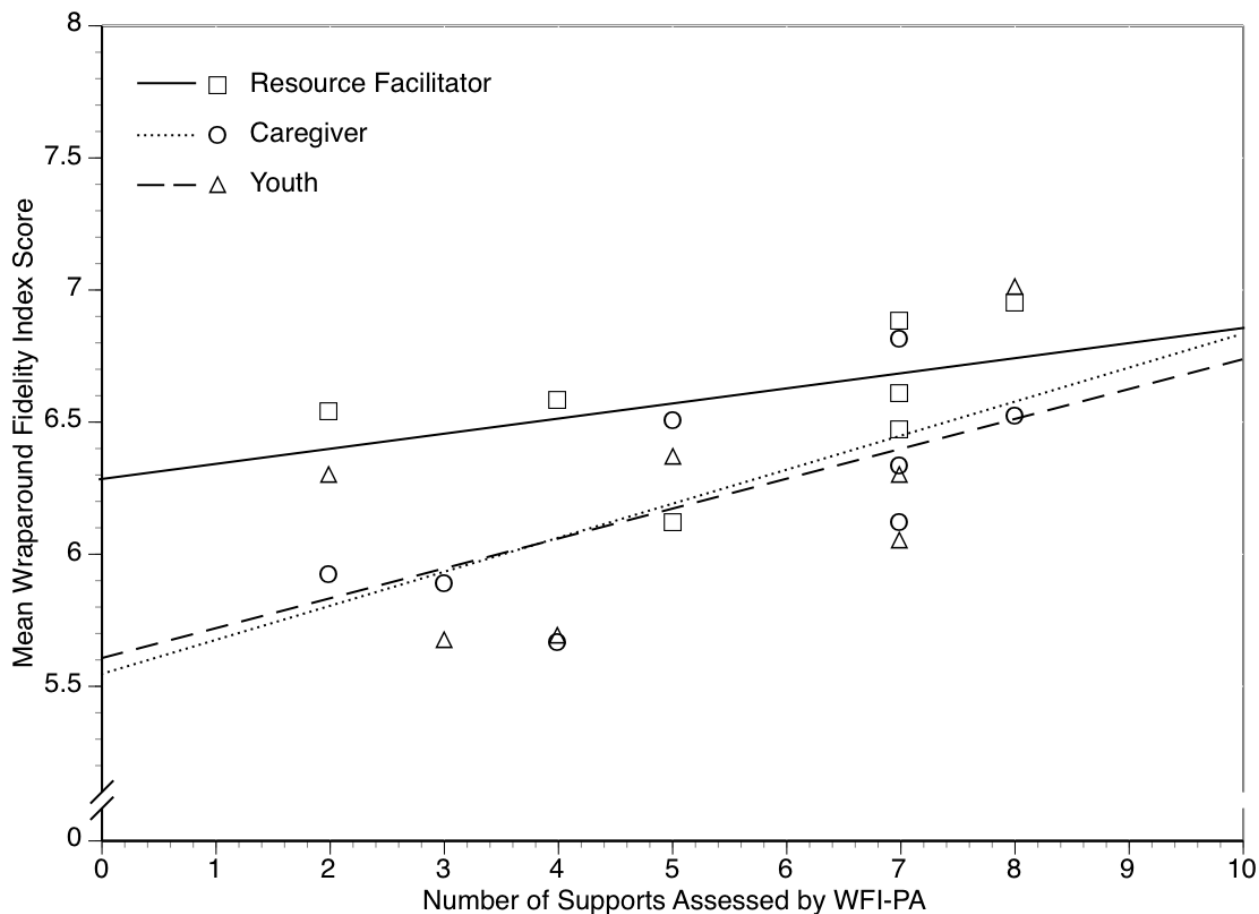


Bruns, Rast, Walker, Peterson, & Bosworth (2006).  
*American Journal of Community Psychology*.

# Wraparound Projects (N=6) with coaching to certification: Mean WFI scores

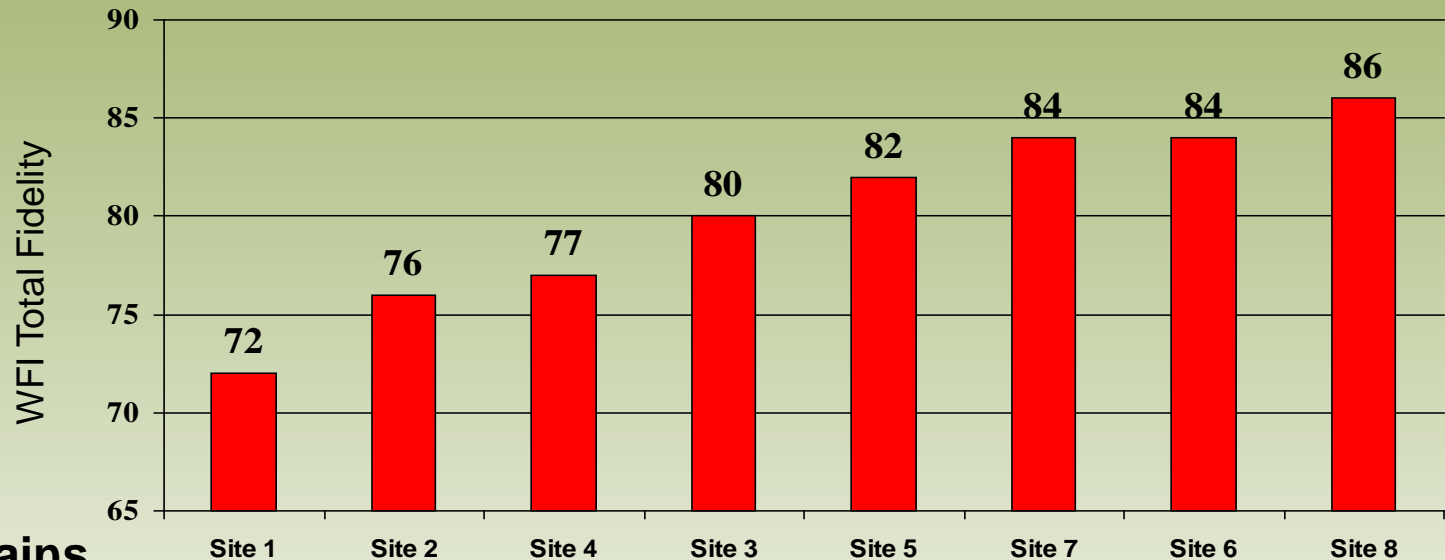


# Organizational and system-level supports predict fidelity



Bruns, Suter, & Leverentz-Brady (2006). Relationship between Program and System Variables and Fidelity to the Wraparound Process for Children and Families. *Psychiatric Services*.

# Number of system and program supports predicts wraparound fidelity (WFI-3)

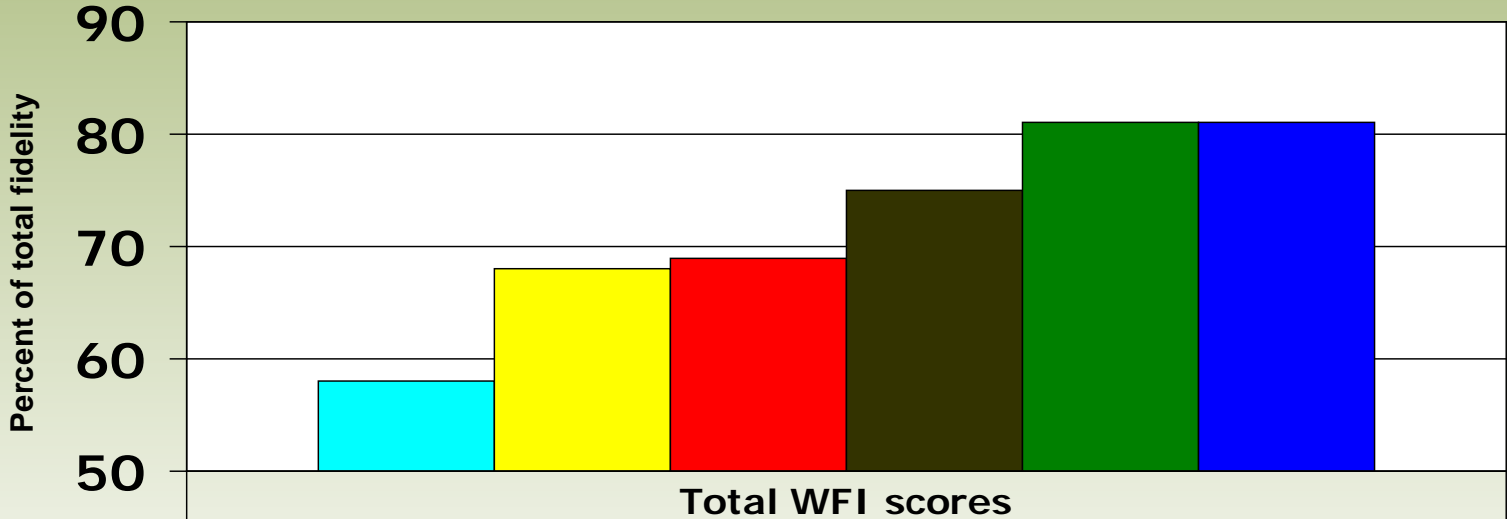


## WFI-PA domains

	Site 1	Site 2	Site 4	Site 3	Site 5	Site 7	Site 6	Site 8
Program Longevity	Y				Y	Y	Y	Y
Low Caseload Size		Y	Y	Y	Y			Y
Low Staff turnover			Y	Y		Y		
Interagency collab.	Y		Y	Y			Y	Y
Pooled funding					Y		Y	
Natural supports	Y			Y	Y	Y	Y	Y
Family centeredness		Y		Y		Y	Y	Y
Fund/Serv.Flexibility					Y	Y	Y	Y
Outcomes assessed					Y	Y	Y	Y
<b>TOTAL WFI-PA</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>7</b>	<b>7</b>

# WFI Scores at a State Level

Benchmarks and real-world reality



Non-wraparound comparisons	58
State No.1	68
State No.2	69
National Average	75
State No.3	81
State No.4	81

# Getting to “high fidelity”

## The story of “state number 3”

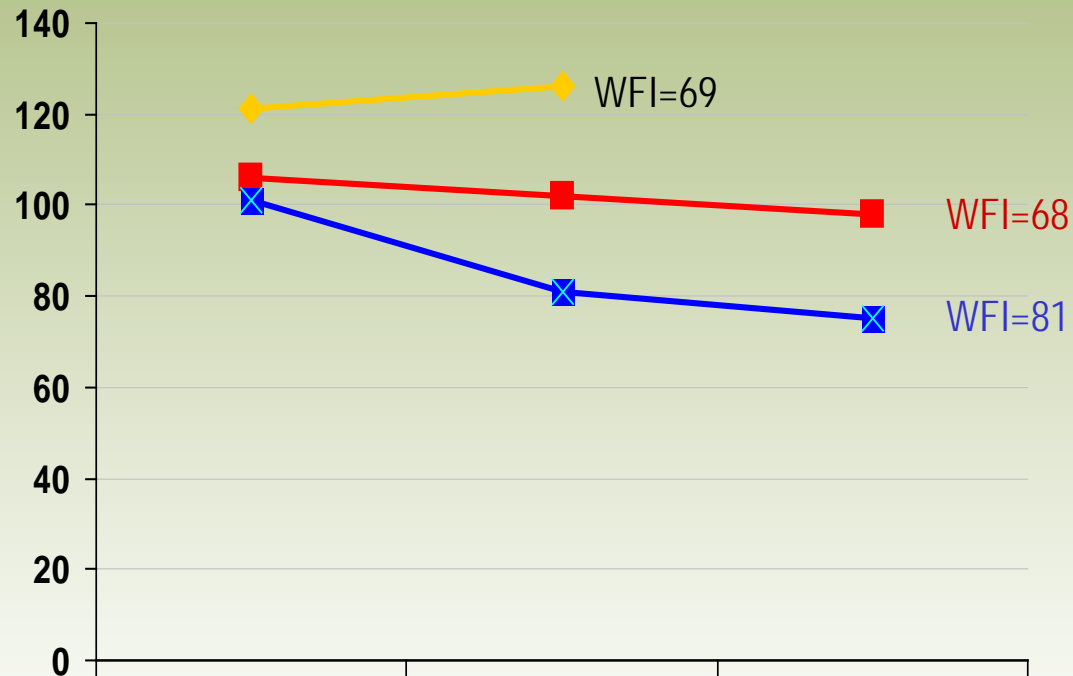


- Statewide training and TA center
- Consistent availability of family partners (+ youth advocates)
- Certification program for facilitators/FPs
- Referrals from and fiscal responsibility shared by multiple agencies
- Care management entity (CME) that maintains MIS, develops service array, holds some risk for overall costs
  - Allows for flexible funding of team strategies
- 1915c Waiver
- Professional development at SSW and in provider agencies

# Fidelity's Impact on Outcomes at a state level?



Average Functional Impairment on the CAFAS



	Intake	6 months	12 months
State 1 (WFI=68)	121	126	
State 2 (WFI=69)	106	102	98
State 4 (WFI=81)	101	81	75

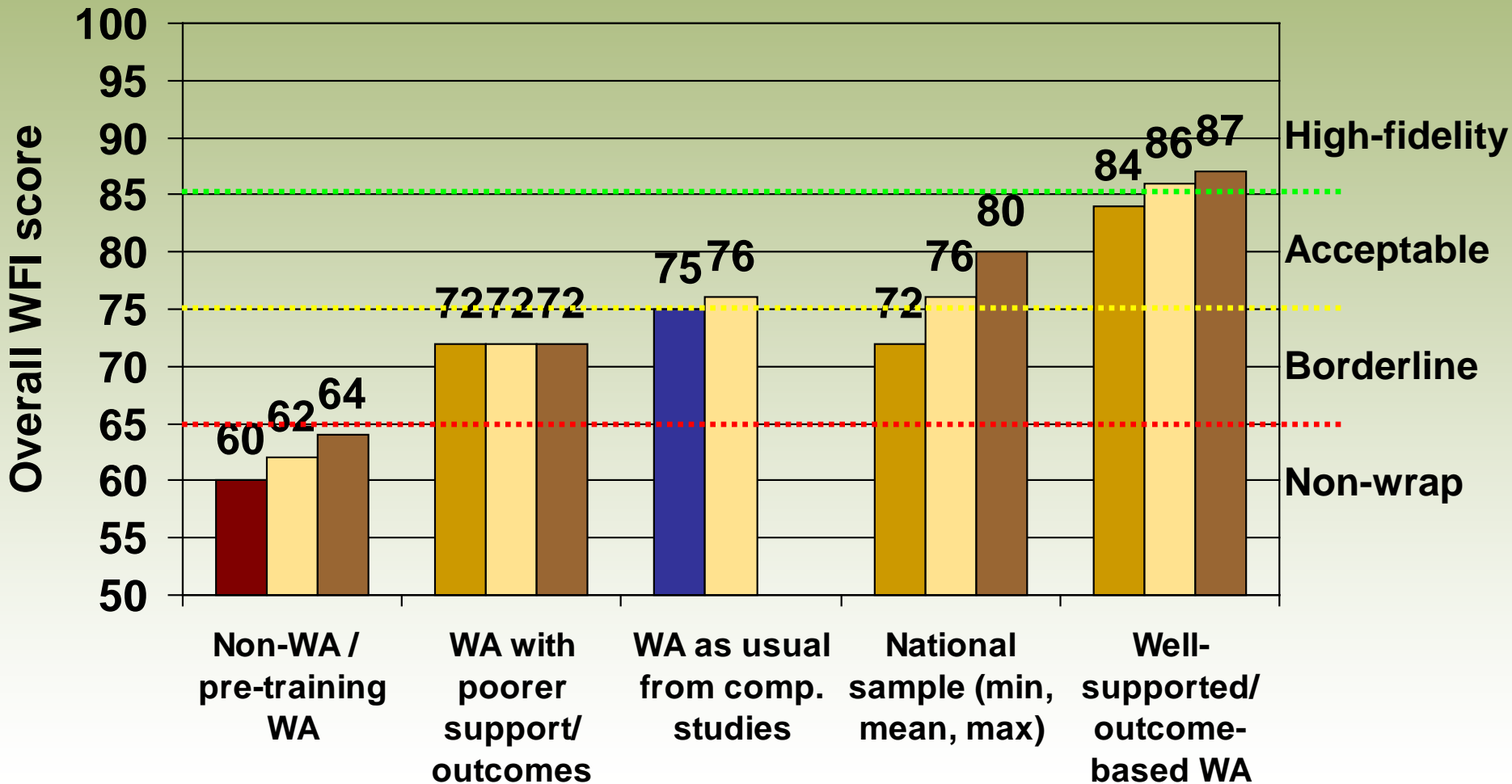


# What is the evidence on connections between fidelity and outcomes?



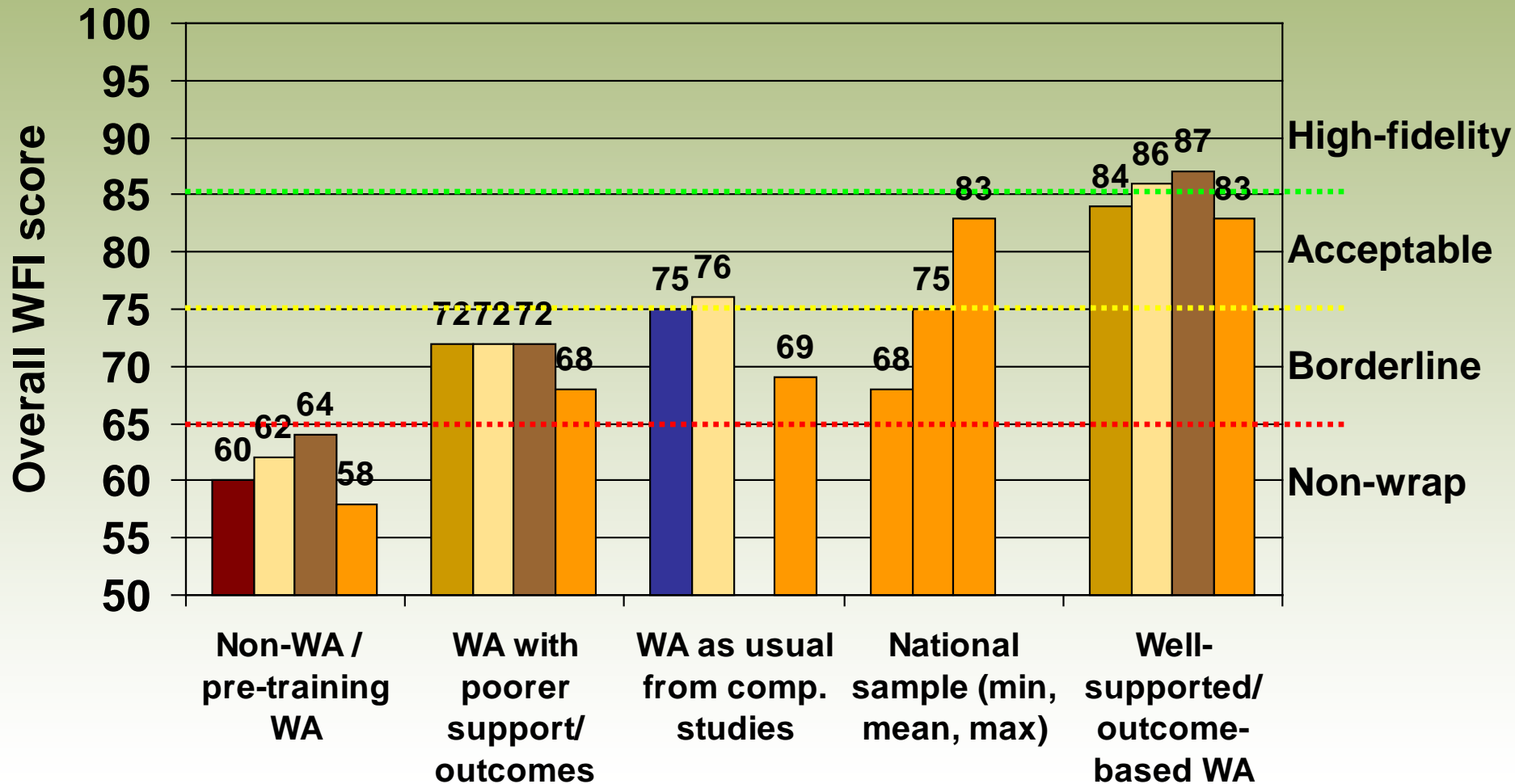
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# Bootstrapping fidelity standards using the WFI (version 3)

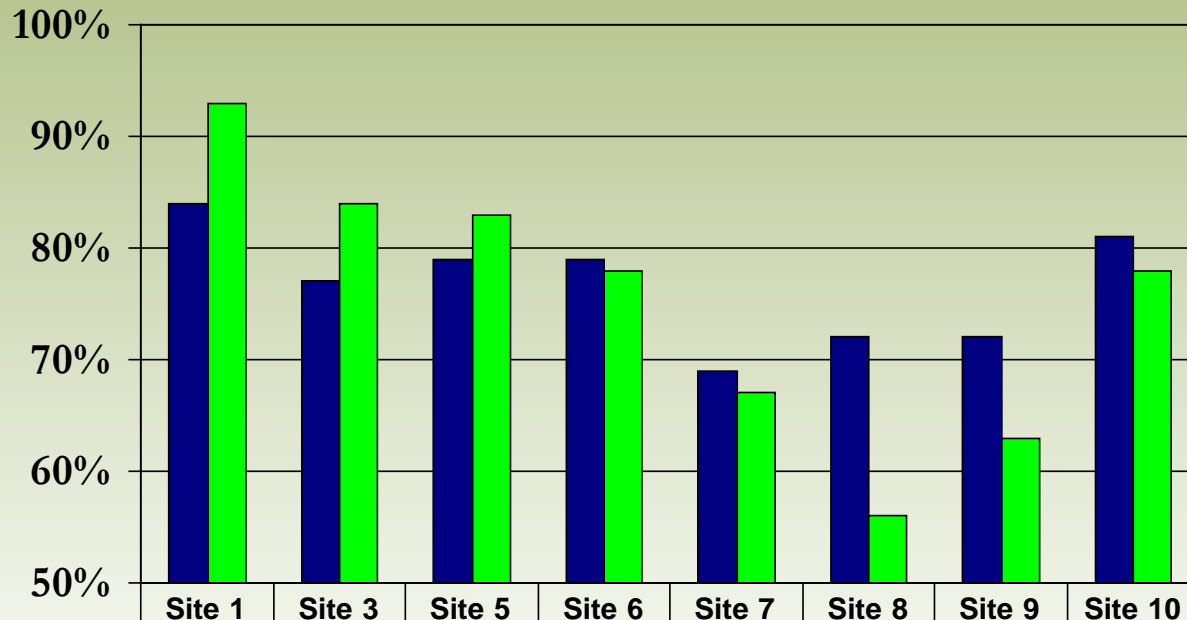


Bruns, E.J., Leverentz-Brady, K.M., & Suter, J.C. (2008). Is it wraparound yet? Setting fidelity standards for the wraparound process. *Journal of Behavioral Health Services and Research*, 35, 240-252.

# Bootstrapping fidelity standards using the WFI (adding recent results from WFI-4)



# Sites with both WFI-4 and Team Observation Measure (TOM) Scores



	Site 1	Site 3	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10
■ WFI Combined	84%	77%	79%	79%	69%	72%	72%	81%
■ Team Observation	93%	84%	83%	78%	67%	56%	63%	78%

Site 1 WFI n=19 / TOM n=4

Site 3 WFI n=19 / TOM n=14

Site 5 WFI n=17 / TOM n=10

Site 9 WFI n=110 / TOM n=39

Site 6 WFI n = 22 / TOM n=13

Site 7 WFI n = 3 / TOM n=3

Site 8 WFI n = 50 / TOM n=24

Site 10 WFI n = 207 / TOM n=16



# WFI-TOM correlation (N=8 sites)

## Descriptive Statistics

	Mean	Std. Deviation	N
WFI_COM	76.63	5.153	8
TOM	75.25	12.279	8

## Correlations

		WFI_COM	TOM
WFI_COM	Pearson Correlation	1	.857**
	Sig. (2-tailed)		.007
	N	8	8
TOM	Pearson Correlation	.857**	1
	Sig. (2-tailed)	.007	
	N	8	8

\*\* . Correlation is significant at the 0.01 level (2-tailed).

## Excluding 2 sites with small *ns*:

### Correlations

		WFI_COM	TOM
WFI_COM	Pearson Correlation	1	.849*
	Sig. (2-tailed)		.033
	N	6	6
TOM	Pearson Correlation	.849*	1
	Sig. (2-tailed)	.033	
	N	6	6

\*. Correlation is significant at the 0.05 level (2-tailed).



# Findings

- Fidelity-outcomes associations are tenuous and inconsistent at the family/youth level
- At the site/program level, there is a discernable pattern of WFI Fidelity scores across studies
  - Wraparound vs. non-wraparound programs
  - Wraparound programs with different levels of system support and that achieve different degrees of impact
  - Site-level scores from the national WFI dataset show significant variability, but fall logically within the pattern
- Beginning to be able to interpret the “level of fidelity” WFI scores
- Team Observations correlate with WFI scores and may be even more sensitive to quality



# Conclusions/Implications

- Factors at the youth/family level make WFI scores difficult to interpret reliably at that level
  - This is the nature of interviews
- WFI scores may be most reliable, valid, and useful at a staff and program level
- WFI scores should be helpful in interpreting research results
- The TOM is emerging as a reliable and valid instrument

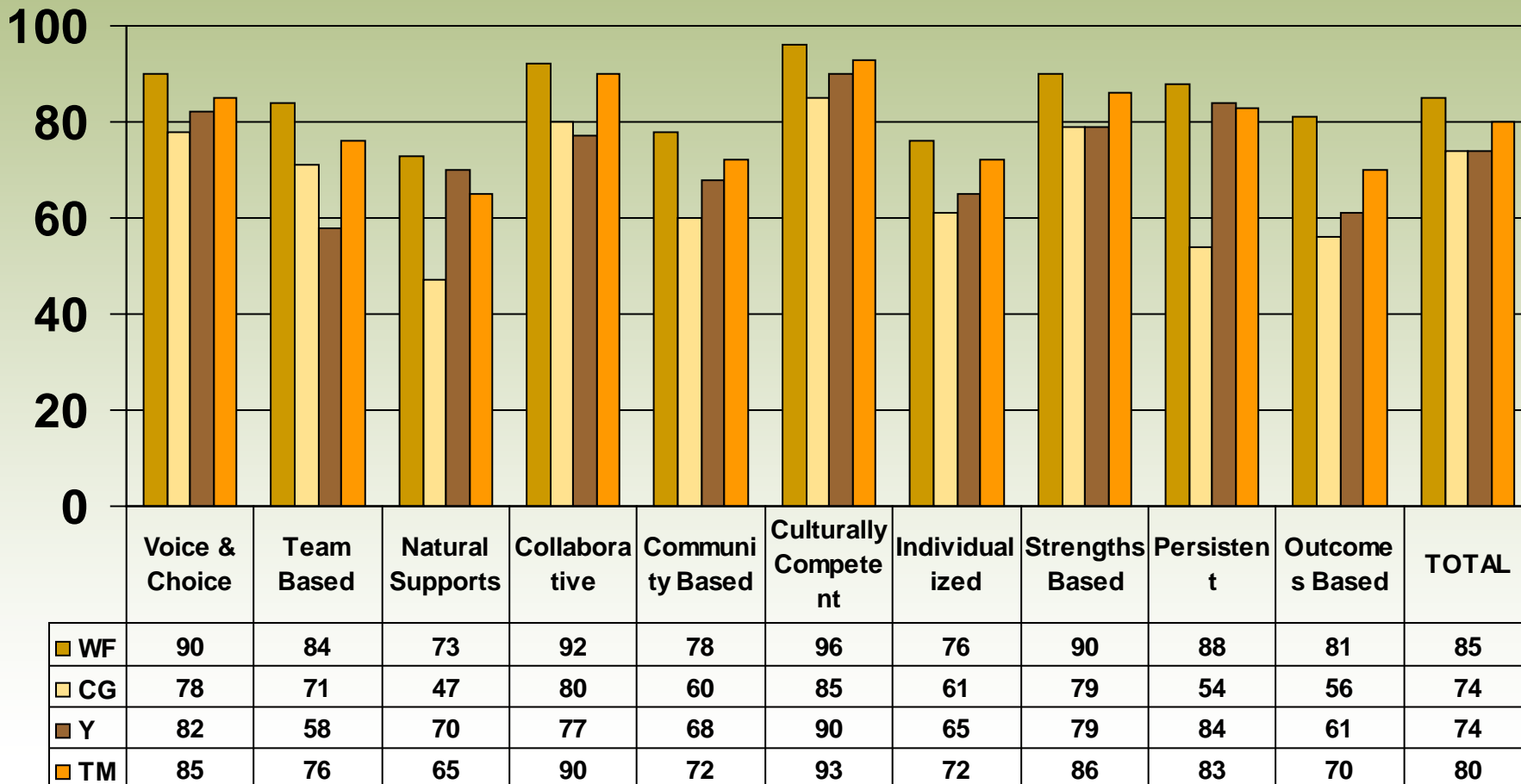
# Mean WFI scores by Principle and Respondent (N=2200)



Principle	WF	CG	Y	TM
1 Voice & Choice	90	78	82	85
2 Team Based	84	71	58	76
3 Natural Supports	73	47	70	65
4 Collaborative	92	80	77	90
5 Community Based	78	60	68	72
6 Culturally Competent	96	85	90	93
7 Individualized	76	61	65	72
8 Strengths Based	90	79	79	86
9 Persistent	88	54	84	83
10 Outcomes Based	81	56	61	70
TOTAL	85	74	74	80



# Mean WFI scores by Principle and Respondent (N=2200)



# WFI Items with 5 Highest Scores (From National WFI-4 dataset)



Item	Item means (CG form; range = 0-2)
3.11 Does your team create a positive atmosphere around successes and accomplishments at each team meeting?	1.79
2.4 Are there supports and services in your plan connected to the strengths and abilities of your child and family?	1.73
1.3 At the beginning of the wraparound process, did you have a chance to tell the WF what things have worked for you in the past?	1.68
3.15 Does your child have the opportunity to communicate their own ideas when it comes to decisions?	1.63
3.12 Does your team go out of its way to make sure all members present ideas and participate in decisions?	1.62
2.11 During the planning process, did the team make enough time to understand your values, and is the plan in tune with those values?	1.62

# WFI Items with Lowest Scores (From National WFI-4 dataset)



Item	Item means (CG form; range = 0-2)
2.3 Does your plan include mostly professional services?	.63
3.6 Is there a friend or advocate of your child or family who actively participates on the team?	.78
4.1 Has your team discussed a plan for how wraparound will end, and when?	.79
3.3 Does your team get your child involved with activities they like and do well?	.80
3.8 Are the services and supports in your plan difficult for you to access?	.82
3.9 Does the team assign specific tasks to all members at the end of the meeting, and does the team review follow-through at the next meeting?	.83
3.7 Does your team come up with new ideas when something isn't working?	.92
3.4 Does the team find ways to increase the support you get from friends & family?	.94