Creating Cross-site CANS Benchmarks: Profiles of Baseline Needs and 6-month Change in a Large Multi-site Sample of Wraparound-Enrolled Youth

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Child, Adolescent, and Young Adult Behavioral Health
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Agenda

- CANS and Project Background

- Description of Included Sites

- Making a "core" CANS for cross-site analyses

- Typical needs and strengths of Wraparound youth at enrollment

- Typical change seen after 6 months

- Summary and Next steps

The CANS is a customizable tool built upon Communimetrics Theory

- The Child and Adolescent Needs and Strengths (CANS) was developed to assess the number and magnitude of needs and strengths in a particular youth, and to assign actionable steps to address needs

- Developed by Dr. John Lyons to address an issue in the literature that items on scales do not *appear* to measure the construct they are intended to measure

- The CANS focuses more on face validity and utility, rather than classic psychometric properties

- Allows for site-level customization of items and action statements to more directly address youth needs

Each CANS item is scored on a 0-3 scale, corresponding to need for action

Level of action corresponding to Rating

No Evidence ⟶

Watchful waiting/prevention ⟶
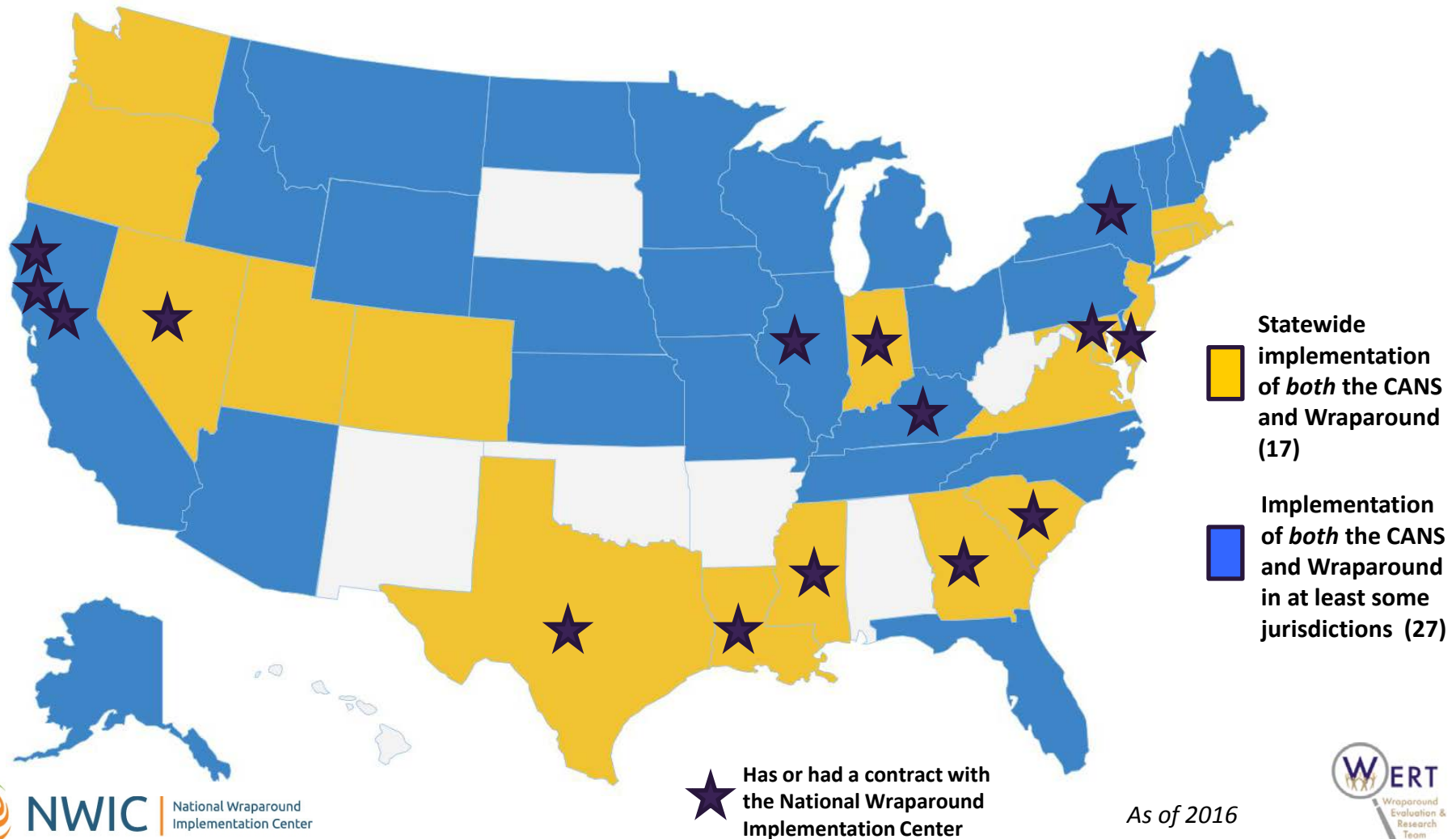
Indicates item is an "Actionable Need"

Action ⟶

Immediate/Intensive Action ⟶

Check	FAMILY Functioning *Please rate the highest level form the past 30 days*
0	Child is doing well in relationships with family members.
1	Child is doing adequately in relationships with family members although some problems may exist. For example, some family members may have some problems in their relationships with child.
2	Child is having moderate problems with parents, siblings and/or other family members. Frequent arguing, difficulties in maintaining any positive relationship may be observed.
3	Child is having severe problems with parents, siblings, and/or other family members. This would include problems of domestic violence, constant arguing, etc.

- Strengths are scored based on their usefulness for planning from 0, "Centerpiece Strength" to 3, "No Strength Identified"

- Scored by a professional administers based on their knowledge of the youth and family, typically every 3-6 months

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CANS and Wraparound are being implemented in nearly every state

Statewide implementation of *both* the CANS and Wraparound (17)

Implementation of *both* the CANS and Wraparound in at least some jurisdictions (27)

Has or had a contract with the National Wraparound Implementation Center

As of 2016

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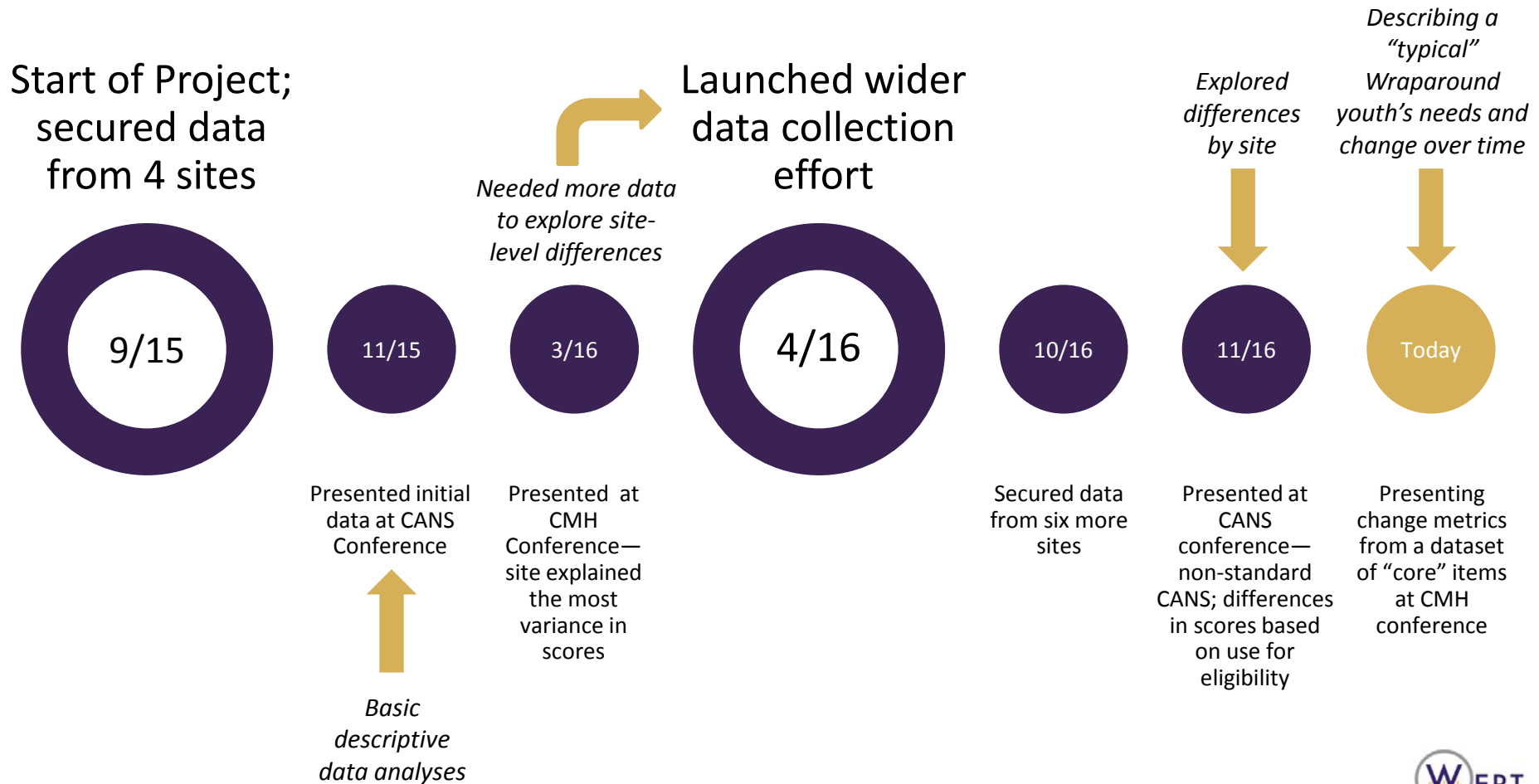WERT | Wraparound Evaluation & Research Team

National CANS and Wrap data project:
provide guidance for program and system-level CANS usage

- What are the typical strengths and needs of Wraparound-enrolled youth and families?
  - What services and supports are needed in the service systems serving these youth?
- How much change can programs and systems can expect to see in CANS scores over time?
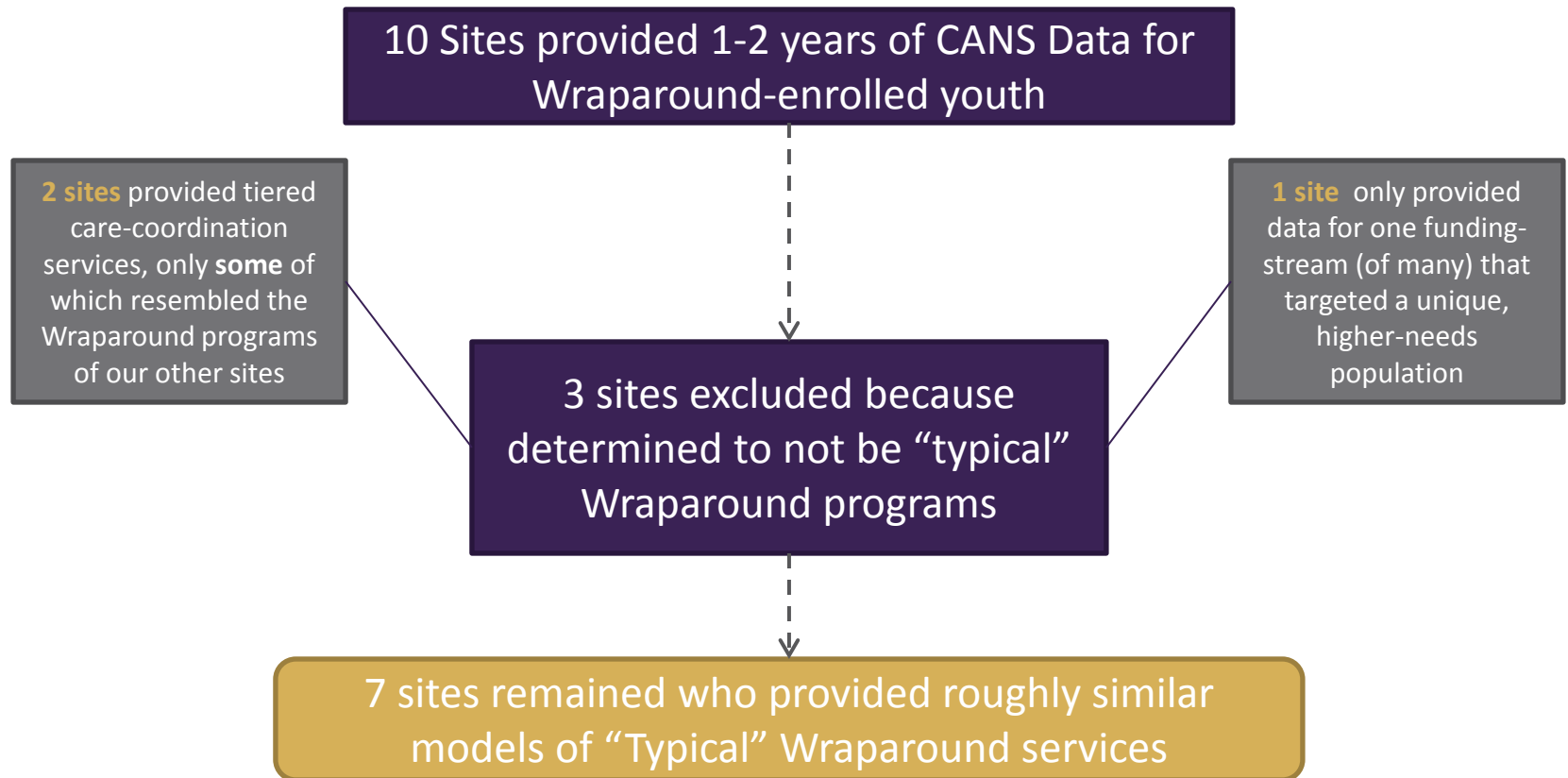- How do CANS scores vary across states and sites?

Project has evolved over time, with each step of the analysis

Start of Project; secured data from 4 sites

9/15

11/15

Needed more data to explore site-level differences

3/16

Launched wider data collection effort

4/16

10/16

Explored differences by site

11/16

Describing a "typical" Wraparound youth's needs and change over time

Today

Presented initial data at CANS Conference

Presented at CMH Conference—site explained the most variance in scores

Secured data from six more sites

Presented at CANS conference—non-standard CANS; differences in scores based on use for eligibility

Presenting change metrics from a dataset of "core" items at CMH conference

Basic descriptive data analyses

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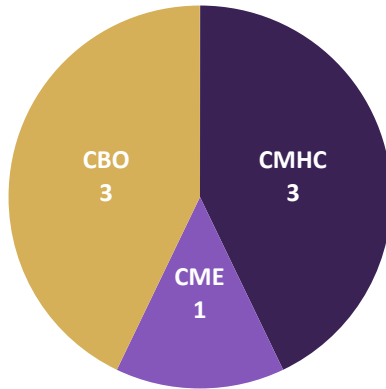WERT Wraparound Evaluation & Research Team

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Collected data from 10 sites; excluded three outliers from current analyses
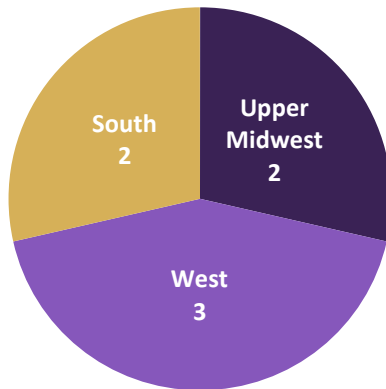
10 Sites provided 1-2 years of CANS Data for Wraparound-enrolled youth

2 sites provided tiered care-coordination services, only **some** of which resembled the Wraparound programs of our other sites

1 site only provided data for one funding-stream (of many) that targeted a unique, higher-needs population

3 sites excluded because determined to not be "typical" Wraparound programs

7 sites remained who provided roughly similar models of "Typical" Wraparound services

Current analyses based on seven Wraparound initiatives

Provider Type

CBO 3 / CMHC 3 / CME 1

Site Region

South 2 / Upper Midwest 2 / West 3

System-Level CANS Usage

Used for Eligibility Determination 3 / Not for Eligibility 4

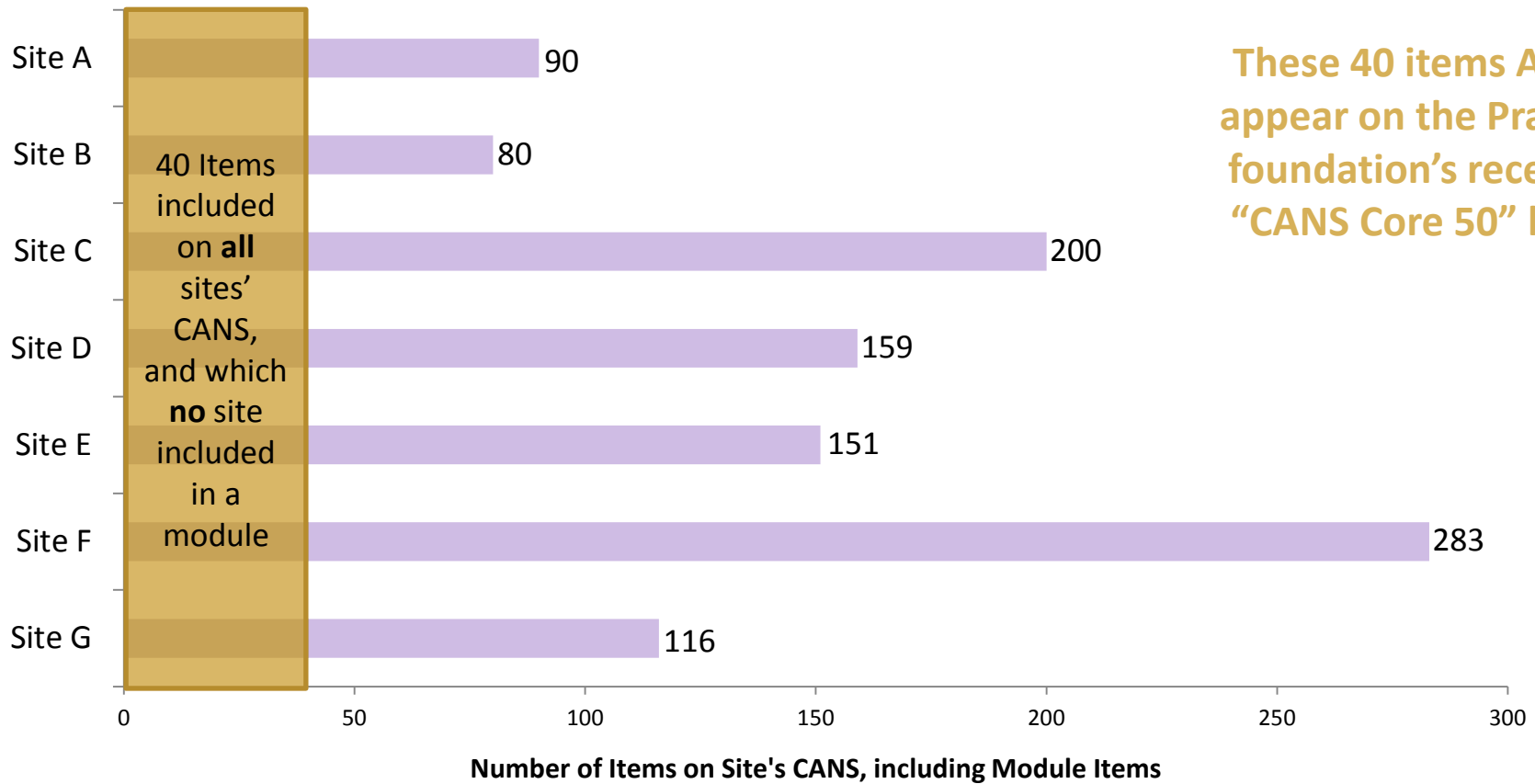Not used for Outcomes 3 / Used for Outcomes Monitoring 4
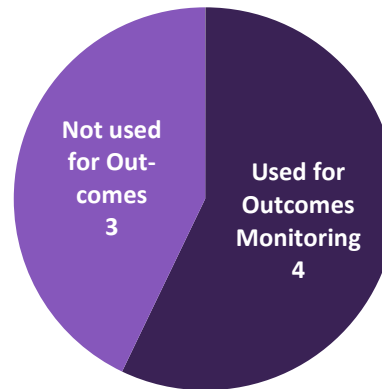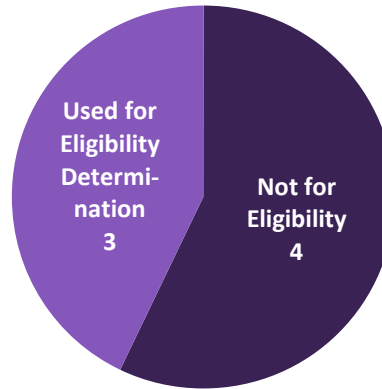
- Care Coordinators typically completed the CANS; external assessors were used in one site

- Sites represent three state-wide initiatives, two county-wide initiatives, and two multi-site Wraparound providers agencies

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Several hundred unique CANS items were identified across the seven sites

Site A — 90

Site B — 80 | 40 Items included on **all** sites' CANS, and which **no** site included in a module

Site C — 200

Site D — 159

Site E — 151

Site F — 283

Site G — 116

These 40 items ALL appear on the Praed foundation's recent "CANS Core 50" list

Number of Items on Site's CANS, including Module Items

0   50   100   150   200   250   300

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Final list of items contains 32 needs and 8 child strengths across 6 domains

Behavioral/Emotional
- ☐ Adjustment to Trauma
- ☐ Anger Control
- ☐ Anxiety
- ☐ Conduct
- ☐ Depression
- ☐ Impulsivity
- ☐ Oppositional
- ☐ Psychosis
- ☐ Substance Use

Life Functioning
- ☐ Developmental
- ☐ Family Functioning
- ☐ Judgment
- ☐ Legal
- ☐ Living Situation
- ☐ Recreation
- ☐ Sexual Development
- ☐ Sleep

CG Strengths/Needs
- ☐ Developmental
- ☐ Involvement with Care
- ☐ Knowledge
- ☐ Organization
- ☐ Physical
- ☐ Residential Stability
- ☐ Social Resources
- ☐ Supervision

Child Strengths
- ☐ Community Life
- ☐ Educational
- ☐ Family Strengths
- ☐ Interpersonal
- ☐ Optimism
- ☐ Relationship Permanence
- ☐ Spiritual/Religious
- ☐ Talents & Interests

Risk Behaviors
- ☐ Fire Setting
- ☐ Runaway
- ☐ Other Self Harm
- ☐ Sexual Aggression
- ☐ Suicide Risk
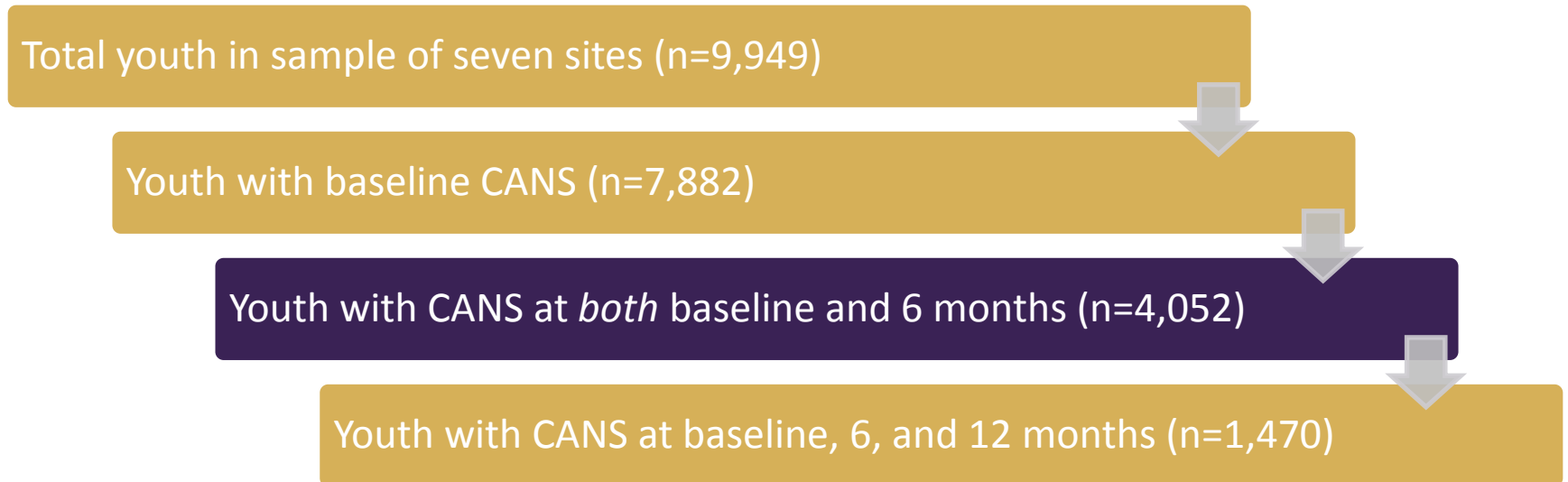
Acculturation
- ☐ Identity
- ☐ Ritual

School-related items noticeably absent due to sometimes being in a module or combined—may revisit

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Not all items fell under the same domains on all forms; domains listed here are the most common

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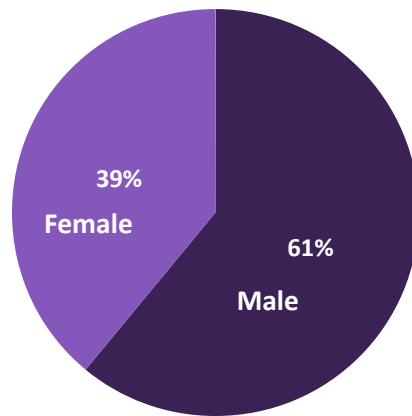
- Summary and Next steps

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We focused on data from n=4,052 youth with matched Baseline/6 Month assessments

Total youth in sample of seven sites (n=9,949)

Youth with baseline CANS (n=7,882)

Youth with CANS at *both* baseline and 6 months (n=4,052)

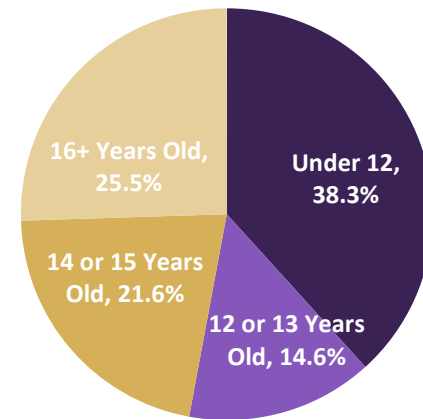Youth with CANS at baseline, 6, and 12 months (n=1,470)

- Used date of Wraparound enrollment and date of assessment to determine which assessments were baseline and 6 months
  - Assessments done within 45 days, on either side, of the reference date

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4,052 Wraparound youth from 7 sites with Baseline and 6 Month CANS

Gender

39% Female

61% Male

Age at Baseline

Mean age = 12.24

16+ Years Old, 25.5%

Under 12, 38.3%

14 or 15 Years Old, 21.6%

12 or 13 Years Old, 14.6%

Race/Ethnicity

Multiracial or Other, 4%

Uknown, 1%

White (Non-Hisp), 33%

Hispanic/Latino, 36%

Black (Non-Hisp), 27%

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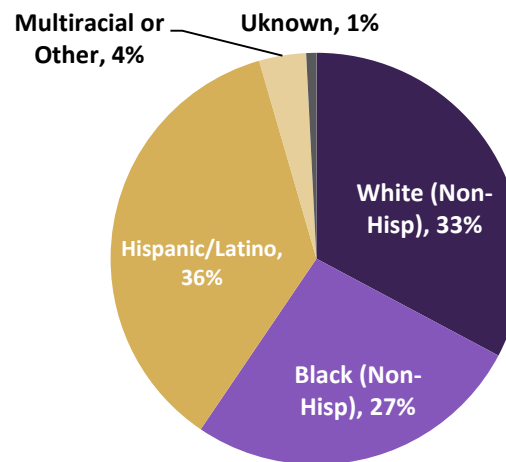
Wide variability in number of actionable needs at enrollment in Wraparound

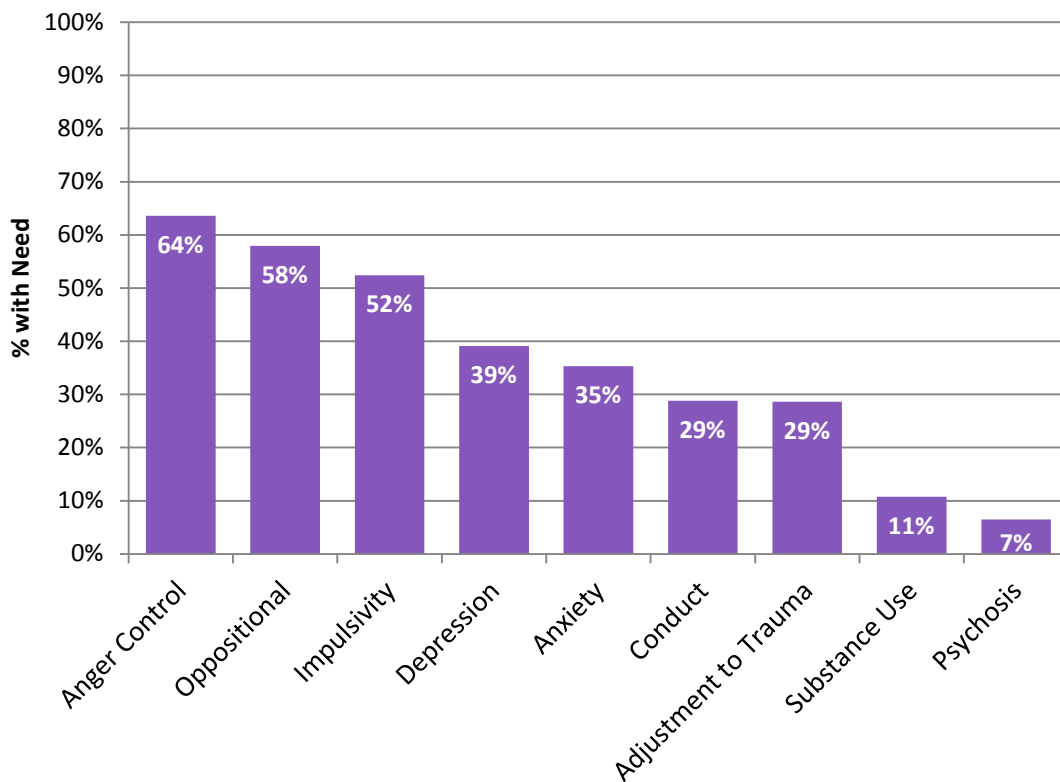**Distribution of youth by Need Complexity (# of actionable needs) at Enrollment**

Median Number of Needs: 7
(out of 32 "core" need items)

Sites that use the CANS for eligibility determination have slightly higher median needs at baseline, but still a lot of variability

Percent of Youth

Number of Needs at Baseline
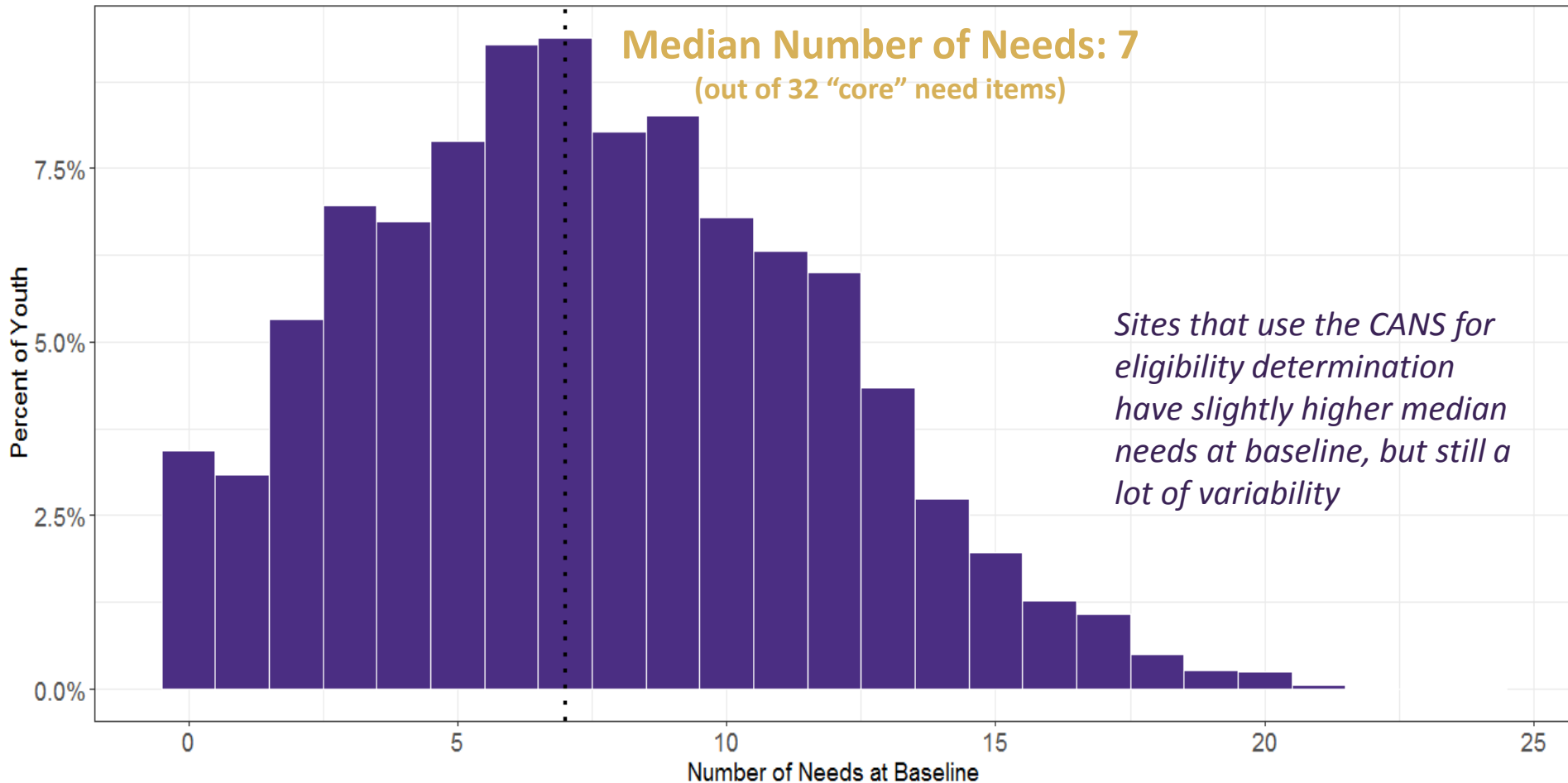
Most common needs include family functioning and externalizing behaviors
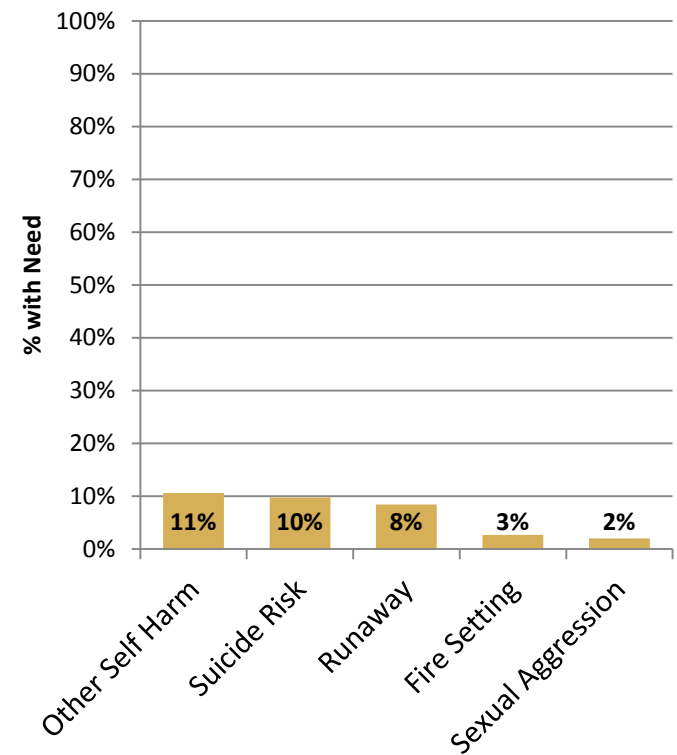

Most Prevalent Actionable Needs at Enrollment
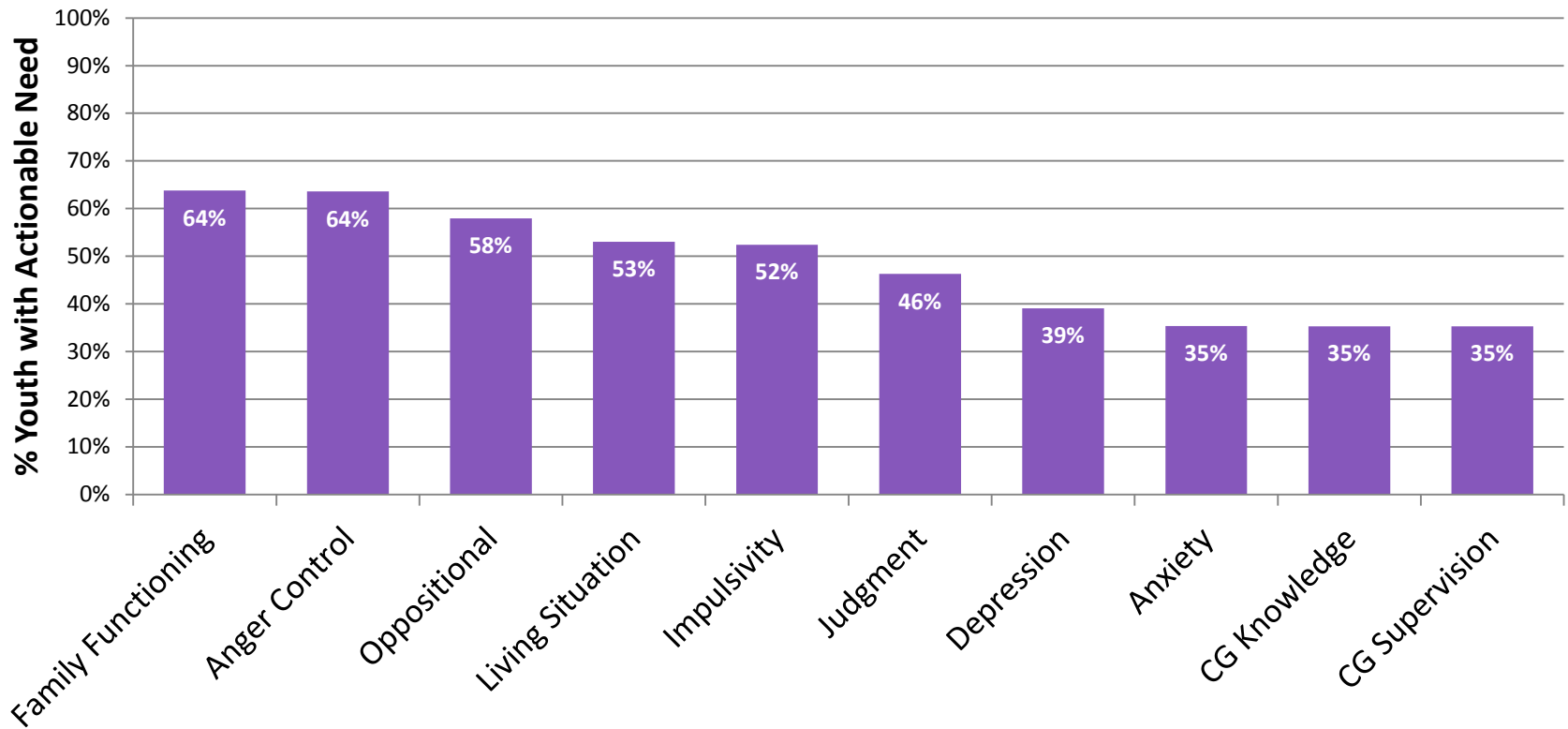
Actionable clinical needs are more common than child risk behaviors

Prevalence of Actionable Child Emotional/Behavioral Needs at Enrollment

% with Need

- Anger Control: 64%
- Oppositional: 58%
- Impulsivity: 52%
- Depression: 39%
- Anxiety: 35%
- Conduct: 29%
- Adjustment to Trauma: 29%
- Substance Use: 11%
- Psychosis: 7%

Prevalence of Actionable Child Risk Items at Enrollment

% with Need

- Other Self Harm: 11%
- Suicide Risk: 10%
- Runaway: 8%
- Fire Setting: 3%
- Sexual Aggression: 2%

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We assessed change in three ways; each have pros and cons

1. Change in total number of actionable needs between enrollment and 6 months

2. Number of baseline actionable needs met/resolved within 6 months

3. Number of needs items showing "clinical improvement" within 6 months

- Remember, total number of possible needs in the data is 32 (40 items – 8 strengths)

Assessing global improvement?

CHANGE IN TOTAL NUMBER OF ACTIONABLE NEEDS

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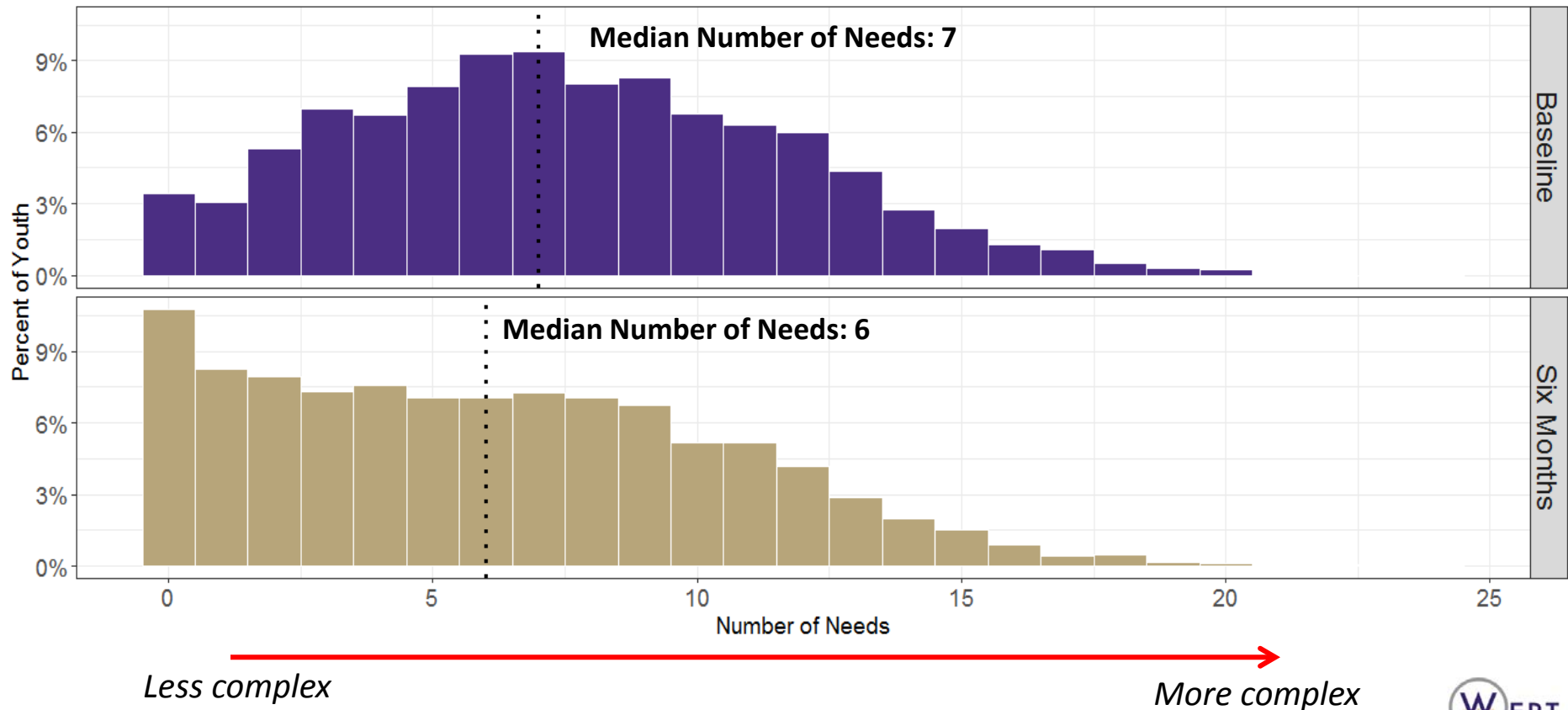the national technical assistance network for children's behavioral health

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2815 Eastlake Avenue East Suite 200 · Seattle, WA 98102
P: (206) 685-2085 · F: (206) 685-3430
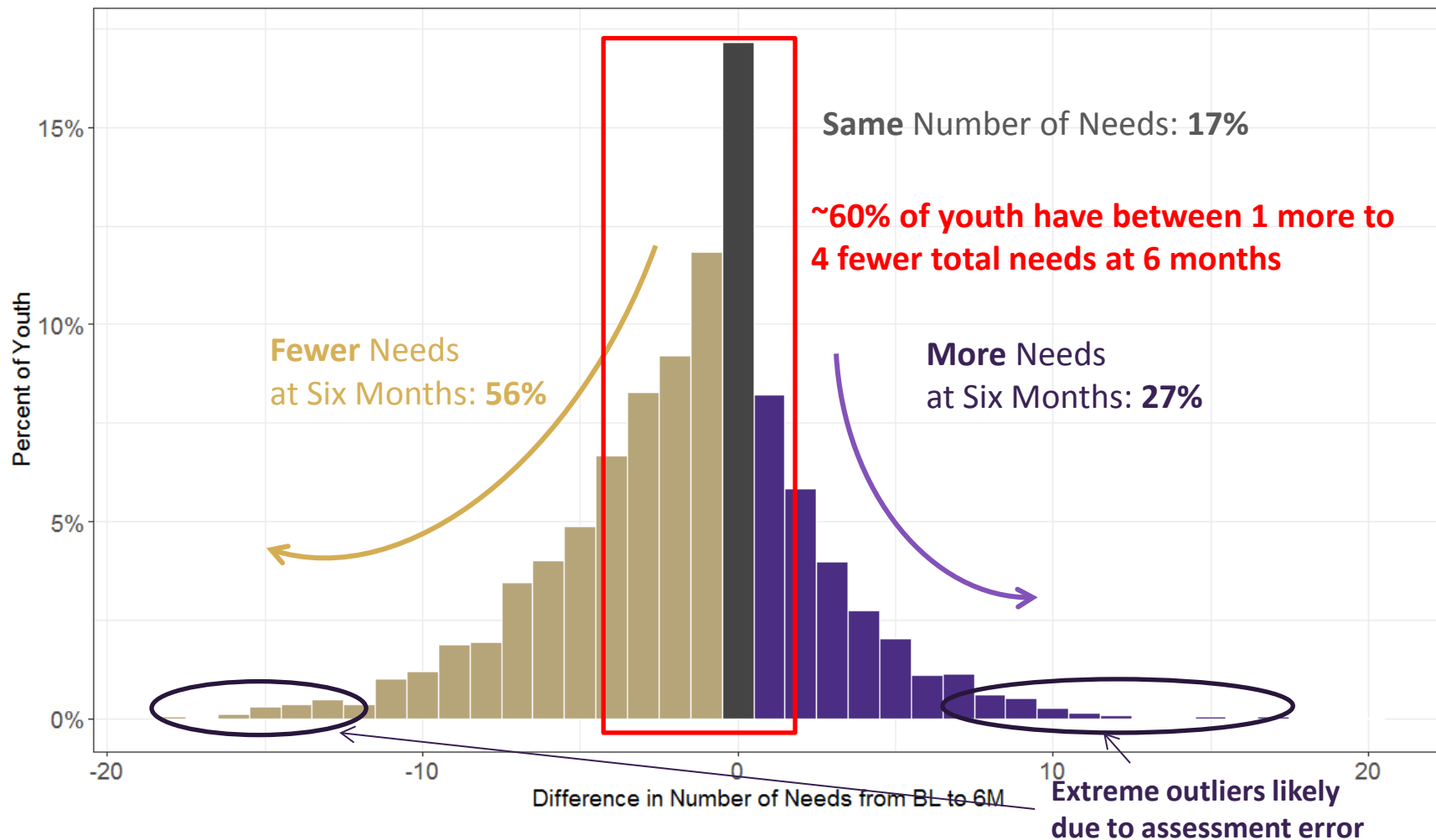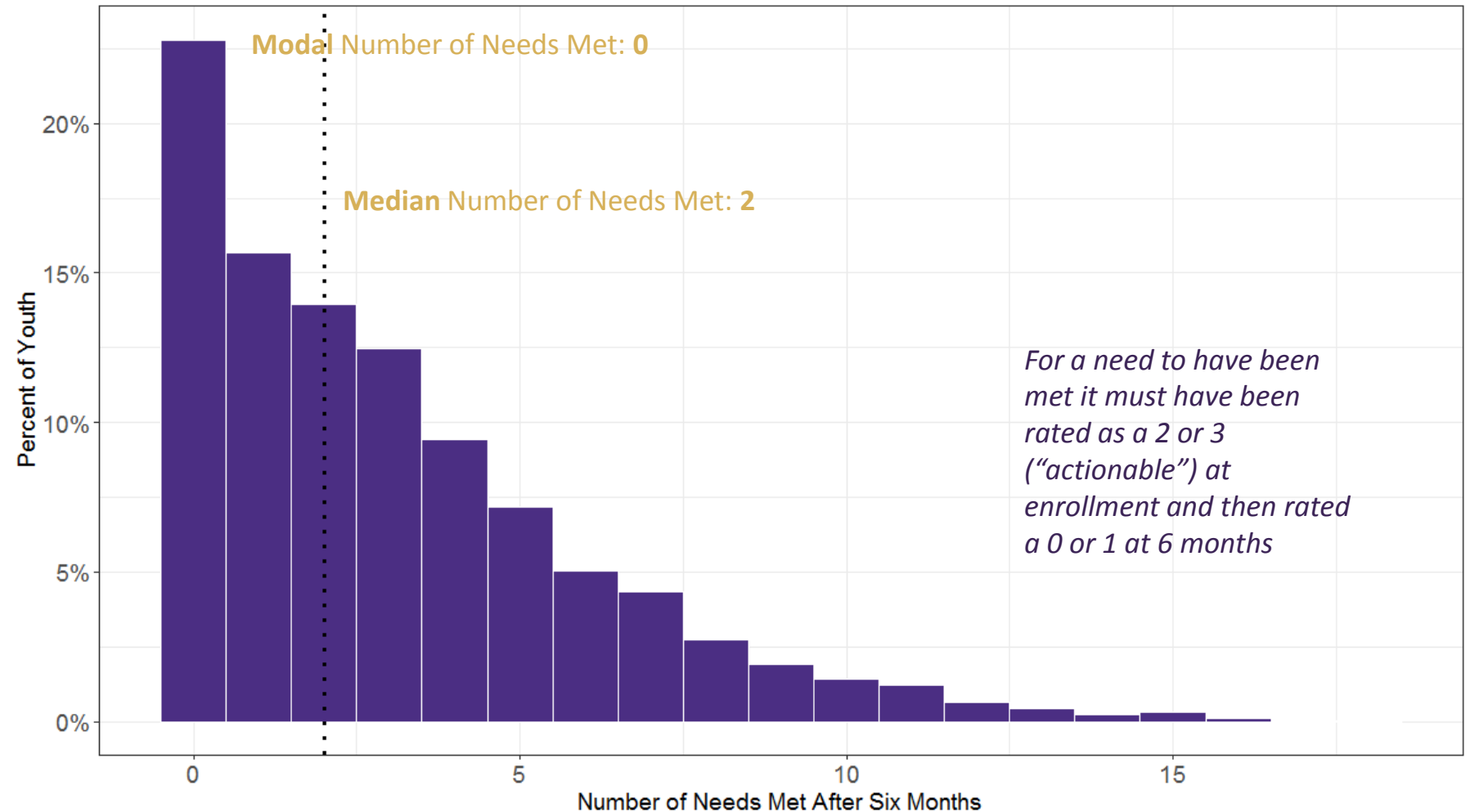www.depts.washington.edu/wrapeval

Moderate change in the total number of actionable needs after 6 months

Distribution of youth by Need Complexity (# of actionable needs)

Median Number of Needs: 7

Median Number of Needs: 6

Less complex

More complex

Majority of youth had fewer needs at 6 months; 43% had the same or more

Distribution of youth by Difference in # of Needs at Enrollment vs. 6 Months

Same Number of Needs: **17%**

~60% of youth have between 1 more to 4 fewer total needs at 6 months

Fewer Needs
at Six Months: **56%**

More Needs
at Six Months: **27%**

Percent of Youth

Difference in Number of Needs from BL to 6M

**Extreme outliers likely
due to assessment error**

Improvement in areas targeted for planning

NUMBER OF ACTIONABLE NEEDS MET AT 6 MONTHS

Proud co-partners of:

The median number of needs **met** after 6 months is 2; mode is 0

Distribution of youth by # of Actionable Needs Met by 6 Months

Modal Number of Needs Met: **0**

Median Number of Needs Met: **2**

For a need to have been met it must have been rated as a 2 or 3 ("actionable") at enrollment and then rated a 0 or 1 at 6 months
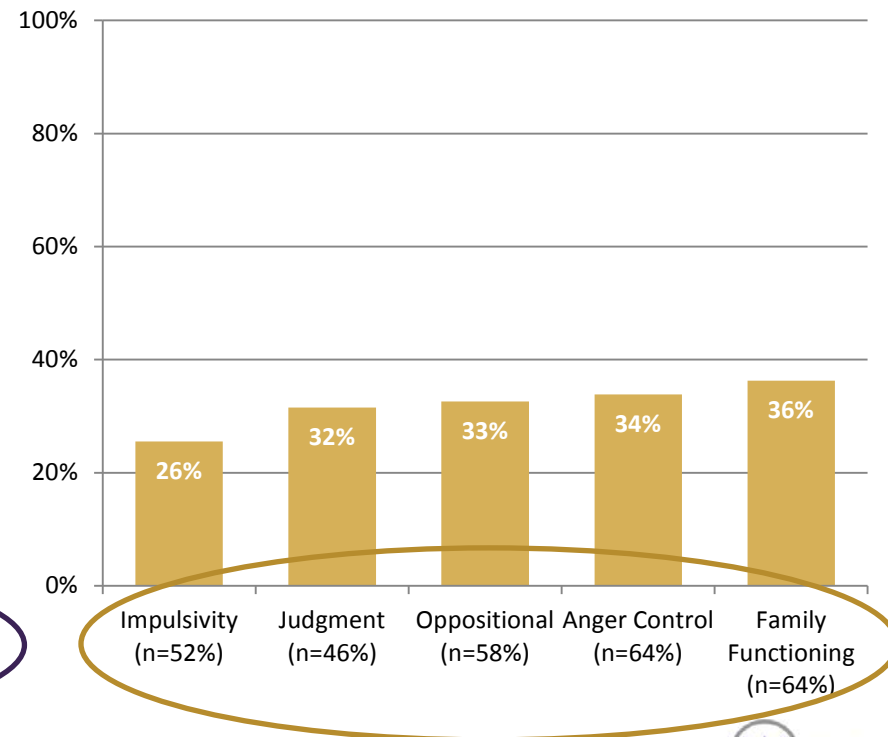
Percent of Youth

Number of Needs Met After Six Months

Needs most commonly met by 6 months are high-risk, rare behaviors

Needs MOST Commonly Met by 6 months
(% of youth with need at enrollment)

Needs LEAST Commonly Met by 6 months
(% of youth with need at enrollment)
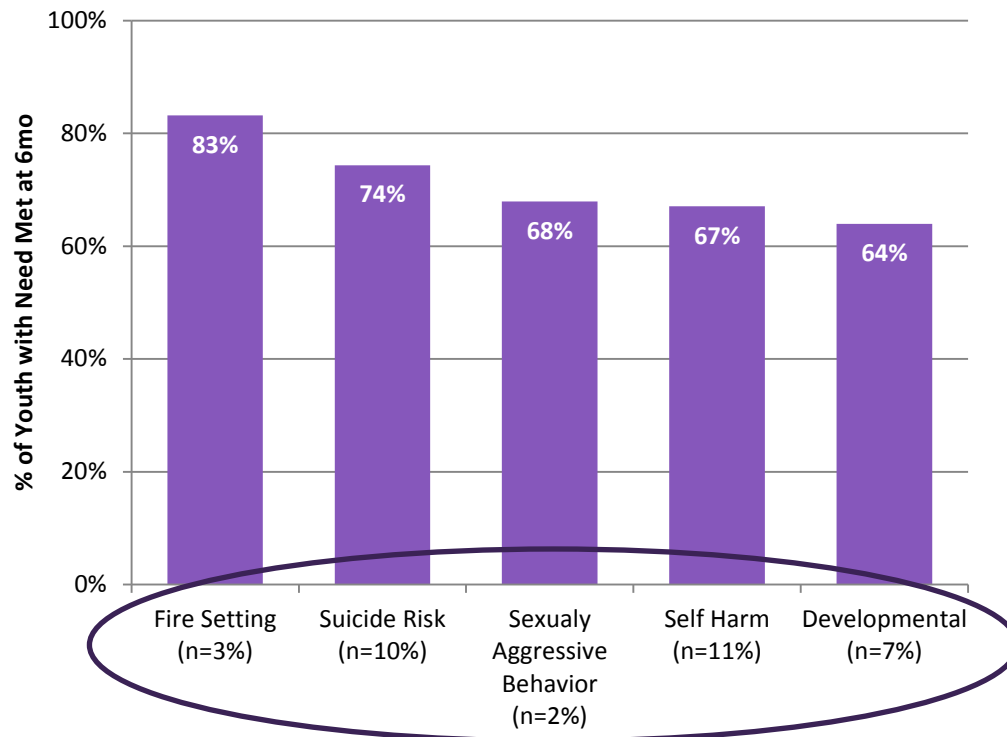
Low prevalence of actionable need at enrollment

Five of the top-ten most prevalent actionable needs at enrollment

A more sensitive test of change?
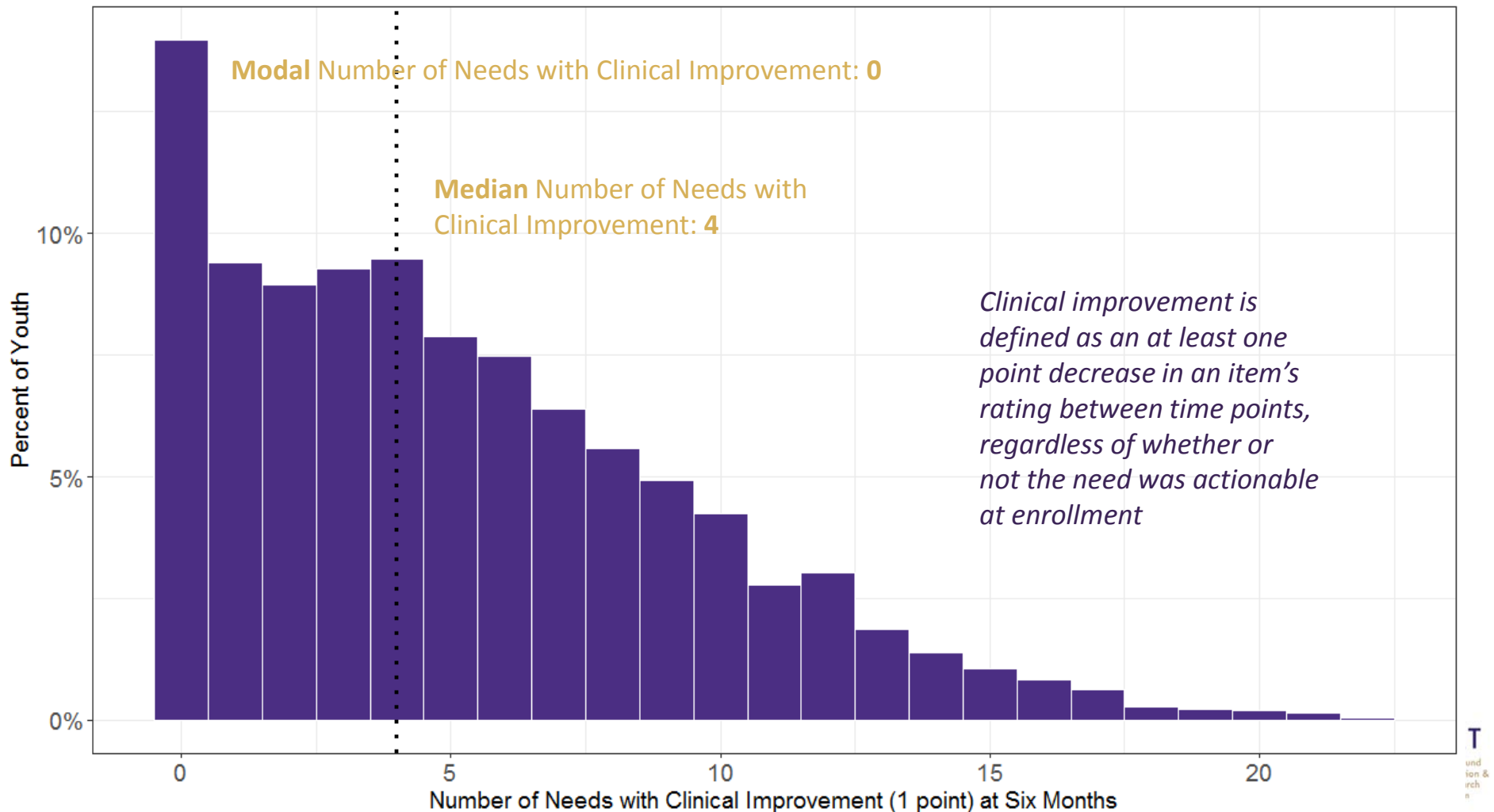
NUMBER OF NEEDS SHOWING "CLINICAL IMPROVEMENT"

Proud co-partners of:

Youth demonstrate "clinical improvement" on a greater number of needs; mode still 0

Modal Number of Needs with Clinical Improvement: **0**

Median Number of Needs with Clinical Improvement: **4**

Clinical improvement is defined as an at least one point decrease in an item's rating between time points, regardless of whether or not the need was actionable at enrollment

Percent of Youth

Number of Needs with Clinical Improvement (1 point) at Six Months

In 6 months, Clinical progress is seen in the most common and persistent needs

Needs Most Likely to Show Clinical Progress at 6 months
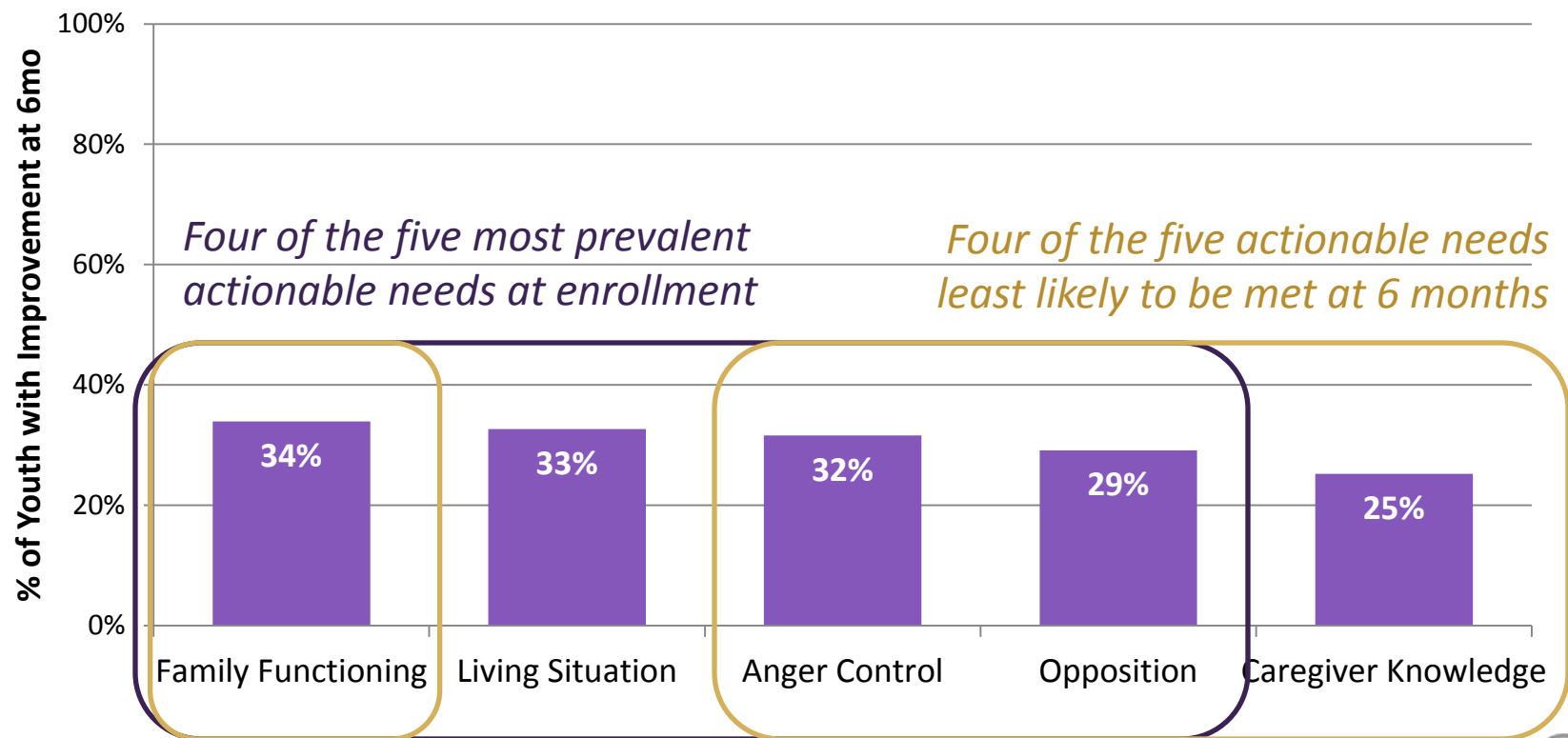
Four of the five most prevalent actionable needs at enrollment

Four of the five actionable needs least likely to be met at 6 months

% of Youth with Improvement at 6mo

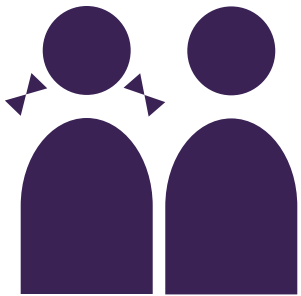| Family Functioning	Living Situation	Anger Control	Opposition	Caregiver Knowledge
34%	33%	32%	29%	25%

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What does this data tell us about the "typical" needs of Wrap-enrolled youth?

- At enrollment, most have needs around family functioning, externalizing behaviors, and common mental health concerns

- The typical youth will have a complex and likely interconnected set of needs

- A smaller subset will have very high-risk behaviors that need immediate action

Does the local service array contain EBPs and other supports for these concerns?

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On the 32 needs included in our core dataset, the "typical*" youth will...

There will be a lot of variation—these numbers should not be a target for a single youth or care coordinator.

Use change metrics at program- or system-level.

- Enter Wraparound with around **7 actionable needs**
  - ~50% will have between 4 and 10

- Have around **1 fewer actionable need** at 6 months
  - Many will have the same
  - ~60% will have between -4 and +1 total needs

- Have met **2 actionable needs** in 6 months
  - ~25% will have none met
  - ~50% will have met between 1 and 5 needs

- Have **4 needs demonstrate "clinical progress"** (at least a 1-point improvement) at 6 months
  - ~50% will make progress on between 2 and 8 needs

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* Typical of the youth from included sites who completed both a baseline and 6 month CANS, and using only the 32 needs items from our dataset.

What *type* of change is "typical"?

- Extreme, high-risk behavioral needs often met for the small segment of youth presenting with them
  - Impact of engagement and crisis/safety planning?
  - Regression to the mean?
- Clinically significant improvement in very prevalent and stubborn clinical concerns
  - Maybe service arrays are appropriately built out?
  - Maybe Wraparound is effectively encouraging participation?

Measurement issues limit the generalizability of our findings

- Difficult to summarize and compare across sites due to lack of standardization
  - *Need a consistent set of standardize "core" items organized in consistent domains*

- Different change metrics highlight different conclusions

- System-level factors may impact rating trends

This CANS dataset provides many additional analytical opportunities

- Explore relationship between youth-level baseline and demographic characteristics and change over time

- Continue to unpack how site-level CANS and Wraparound implementation differences impact scores

- Continue to assess impact of CANS customization on ability to use tool for performance monitoring, and program and system-level decision-making

Questions? Comments?