

Center for Evidence-based Partnerships  
Virginia MST Fidelity and Outcome Report  
Coverage Period: April-June 2023

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## Statement of Purpose

Multisystemic Therapy (MST) is an evidence-based program (EBP) for youth ages 12-17 and their families aimed at reducing substance use, law involvement, and out-of-home placements. The current report is prepared by the Center for Evidence-based Partnerships in Virginia (CEP-Va) and presents relevant fidelity and outcome data in the state of Virginia per the Family First Prevention Services Act (FFPSA) from April 1, 2023 through June 30, 2023. Subsequent reports will be issued quarterly.

## The CEP-Va Fidelity Model for MST

CEP-Va has developed fidelity and outcome models for fidelity reporting for all EBPs in the Family First Prevention Plan developed by Virginia’s Department of Social Services (VDSS) and approved by the Children’s Bureau. For each model, we used the empirical literature and recommendations from the treatment developer. Pragmatic issues were also considered when developing the models, including data availability and burden on provider companies, practitioners, and/or families. All final models were approved by the EBP developer or the EBP training company selected by VDSS as well as by VDSS.

The MST fidelity model is depicted in Table 1; variables included in the current report are listed in **bold type**. Not all variables included in the model were available for the current report.

**Table 1.** CEP-Va’s Variable-level Fidelity Model for MST

Fidelity or outcome	Domain	Variable
<b>Fidelity</b>	<b>Adherence</b>	<b>Average TAM-R score by team</b>
Fidelity	Adherence	Percentage of teams with TAM-R above threshold
<b>Fidelity</b>	<b>Team health</b>	<b>Active full-time employees</b>
<b>Fidelity</b>	<b>Team health</b>	<b>Avg cases/therapist</b>
<b>Fidelity</b>	<b>Other</b>	<b>Percentage of youth completing treatment</b>
<b>Fidelity</b>	<b>Other</b>	<b>Percentage of youth discharged due to lack of engagement</b>
Outcome	Permanence	Percentage of cases without an out of home placement within 12 months from start of MST
Outcome	Permanence	Percentage of cases without an out of home placement within 12 months from end of MST
Outcome	Safety	Percentage of children with abuse/ neglect reports within 6 and 12 months from start of MST
Outcome	Safety	Percentage of children with abuse/ neglect reports within 6 and 12 months from end of MST
<b>Outcome</b>	<b>Wellbeing-Youth</b>	<b>Percentage of Youth living at home</b>

<b>Outcome</b>	<b>Wellbeing-Youth</b>	<b>Percentage of youth in school/working</b>
<b>Outcome</b>	<b>Wellbeing-Youth</b>	<b>Percentage of youth with no arrests</b>
Outcome	Wellbeing-Youth	CANS Scores (Life Domain Functioning, Child Strengths, Child Behavioral/Emotional Needs, and Child Risk Behaviors)
Outcome	Wellbeing-Caregivers	CANS scores (Caregiver Strengths/ Needs, CW Module Caregiver Strengths)

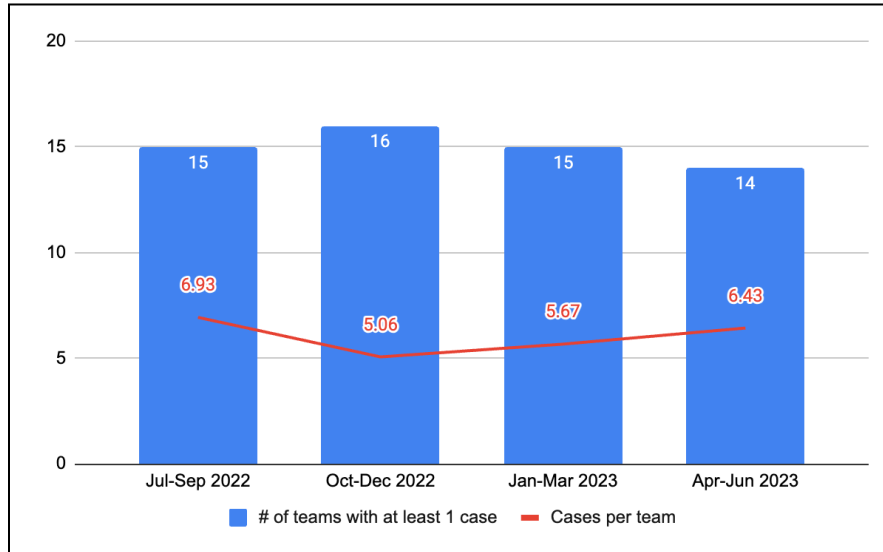
Fidelity and outcome data presented in the current report are aggregated at the team level and frequently averaged across the state.



## Current and Historical Status of Virginia MST Team Workforce and Caseloads

### Team and Case Data

**Figure 1.** Active Teams with Average Caseload Across Virginia



From April to June 2023, 14 teams were operating across the state and had at least one active MST case. Figure 1 shows this and data for the previous three quarters, with the total number of teams reducing to 14 from the late 2022 high of 16. The number of cases per team varies from five to seven.

A more detailed breakdown of team statuses captures more variability across quarters, as seen in Table 2.

Fluctuations are attributed to a mix of old teams closing, closed teams reopening, and new teams forming.

**Table 2.** Team Status Detail

Quarter	Total open teams	New Teams	Closed Teams	Reopened Teams	Teams w/ ≥1 case in treatment	Teams w/ ≥1 case completing treatment	Open team with 0 cases in treatment
Jul-Sep 2021	15	-	0	-	14	14	1
Oct-Dec 2021	15	0	0	0	14	13	1
Jan-Mar 2022	15	2	2	0	13	13	2
Apr-Jun 2022	15	0	1	1	13	13	2
Jul-Sep 2022	16	0	0	1	15	15	1
Oct-Dec 2022	17	0	0	1	16	14	1
Jan-Mar 2023	15	0	2	0	15	14	0
Apr-Jun 2023	14	1	2	0	14	14	0

To best serve state goals while maintaining a level of anonymity for individual provider companies, team activity is also presented at the regional level in Table 3. The Eastern region lost one team during this quarter; all other regions maintained the same number of teams.

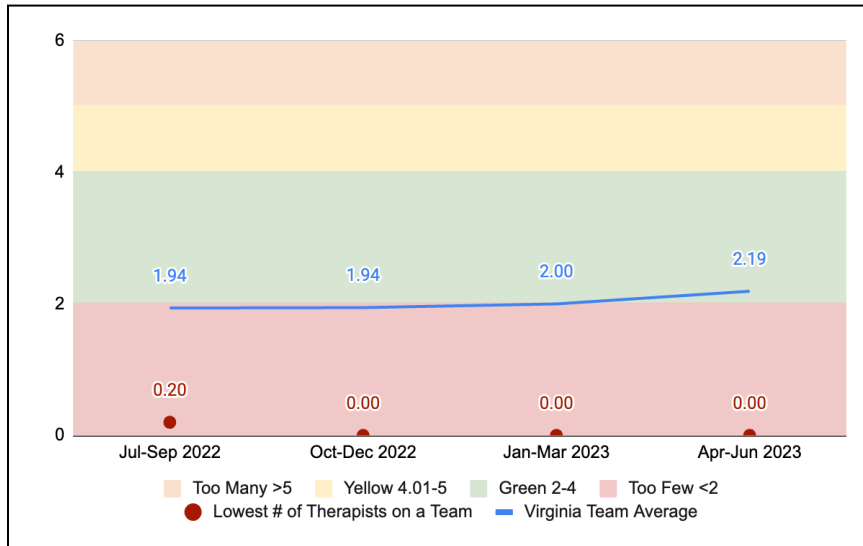
**Table 3. Regional Breakdown of VA Teams**

Quarter	Central	Eastern	Northern	Piedmont	Western
Jul-Sep 2021	3	3	3*	4	2
Oct-Dec 2021	3	3	3*	4	2
Jan-Mar 2022	3	4*	4*	3	1
Apr-Jun 2022	3	4	4*	3*	1
Jul-Sep 2022	3	4	4	3	2*
Oct-Dec 2022	3	4	4	4*	2
Jan-Mar 2023	3	4	4	3	1
Apr-Jun 2023	3	3	4	3	1

\*Contains at least one team that is open with no cases in treatment

## Full-time Therapists

**Figure 2.** Average Number of VA Team Therapists

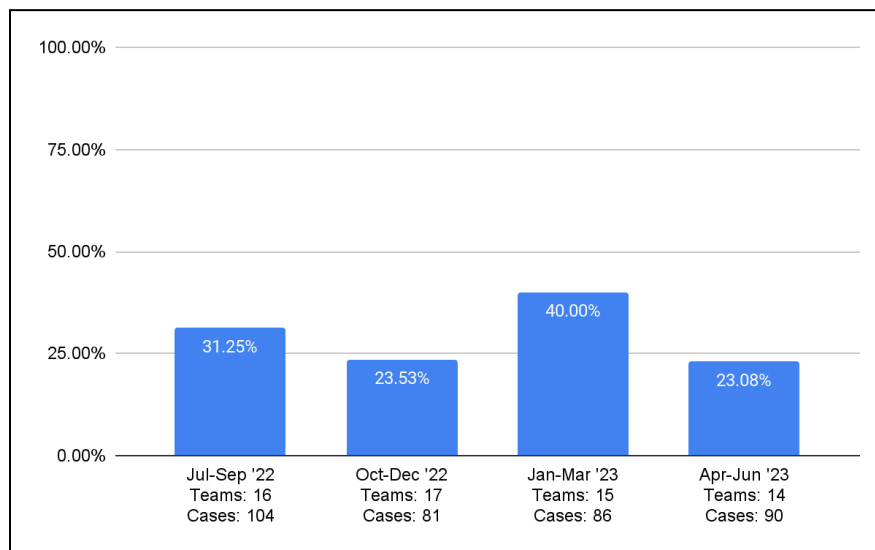


The Multisystemic Therapy Institute (MSTI) has set a target of two to four therapists per team, represented in the green area of Figure 2. This figure shows a modest increase in the average number of therapists per team at 2.19, just above the minimum requirement.

*Note:* Partial numbers in Fig. 2 represent practitioners not carrying a full caseload, for example, a supervisor who carries some cases.

## Cases per Therapist

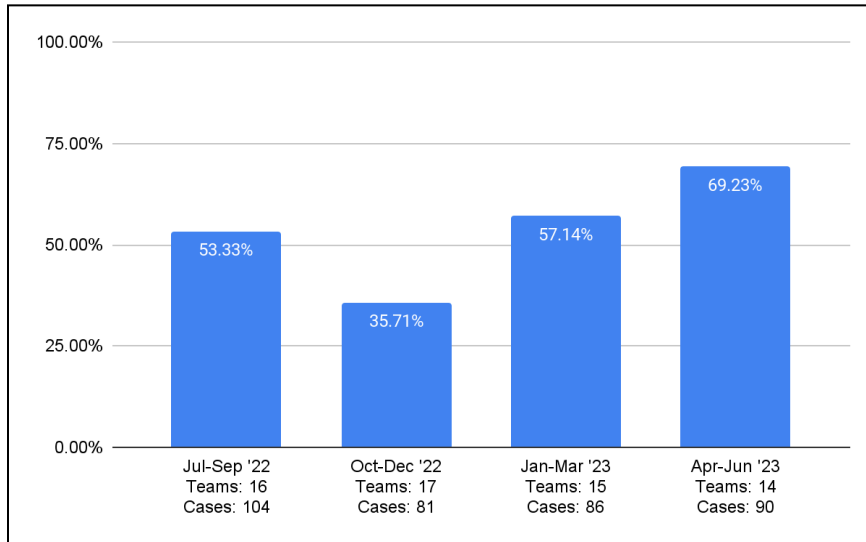
**Figure 3.** Percent of VA Teams with an Average of 4-6 Cases per Therapist



Each therapist is expected to have between four and six cases in their caseload. Figure 3 displays the ratio of teams in Virginia that meet the target. This continues to be a challenge for teams across the state; Figure 1 illustrates that the share of teams able to maintain this target is just 23 percent.

## Cases Completing Treatment

**Figure 4.** Percent of Virginia Teams Meeting or Exceeding the Case Completion Target



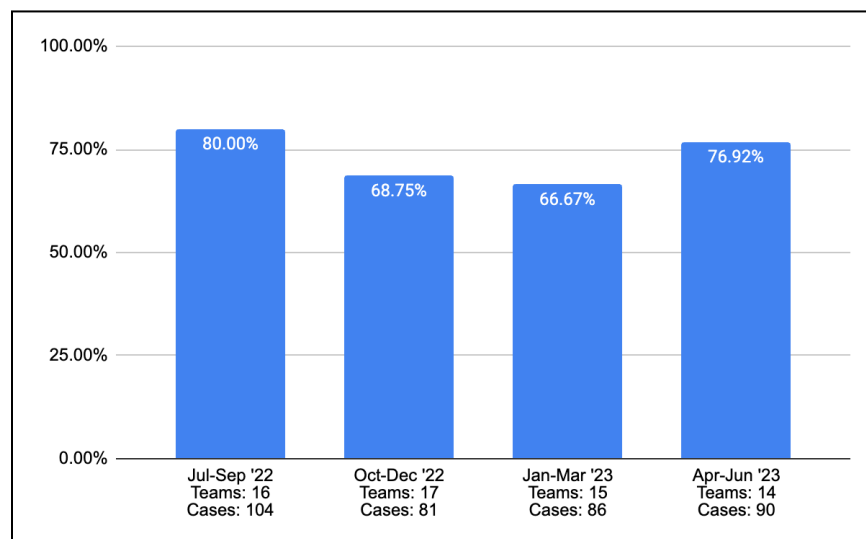
Case completion is characterized by mutual agreement between a youth’s primary caregiver(s) and the MST team to discharge the youth from treatment because there is evidence that 1) treatment goals have been sustained for 3-4 weeks, or 2) treatment goals have not been met and are unlikely ever to be met.

Figure 4 shows a positive change in the share of teams

in Virginia meeting the target of at least 84% of cases completing treatment, climbing to nearly 70 percent, up from 57% in the previous quarter. When reviewing the variability of these percentages, the low number of cases per team (between five and seven active cases, on average) should be considered (e.g., with a caseload of five, one case not completing treatment in a positive manner would lead to a failure on this metric).

## Measures of Fidelity using the Therapist Adherence Measure-Revised (TAM-R) Adherence Scores Across Teams

**Figure 5.** Percent of VA Teams Meeting or Exceeding the Average TAM-R Score Target



The Therapist Adherence Measure – Revised (TAM-R) is a 28-item measure administered to caregivers during the second week of therapy and every subsequent four weeks. The TAM-R measures how well caregivers believe the therapist to adhere to MSTI’s model, with an acceptable level of adherence considered 0.61 or greater.

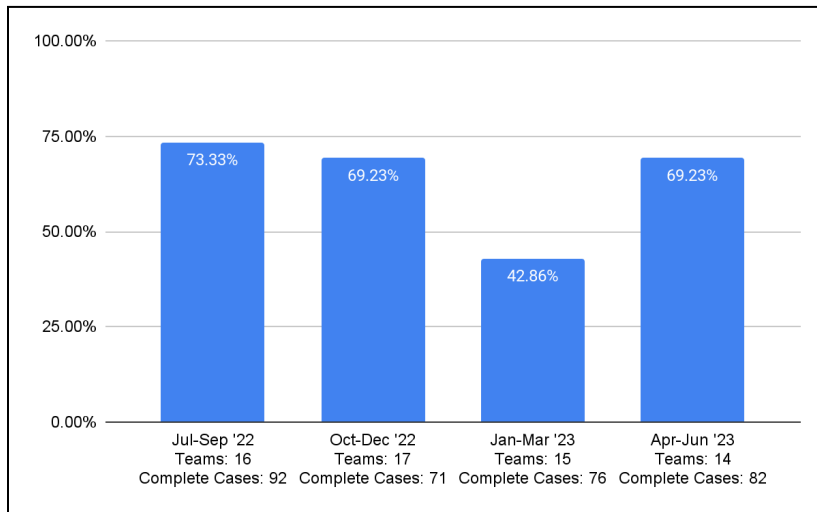
Figure 5 depicts the percentage of teams averaging the MSTI minimum of 0.61 on the TAM-R each quarter, rising to 77% of teams this reporting period up from 67% in the previous quarter.

### Ultimate Outcome Measures

An intent-to-treat approach is applied to these data; in other words, families were included whether or not their treatment was completed in a planned fashion. Exceptions to this include cases withdrawn for funding or other administrative reasons, cases where the family moved out of the service area, or with placements that resulted from actions carried out before the start of treatment. As a result, the data represent a conservative estimate of outcomes achieved.

### Living at Home

**Figure 6.** *Percent of VA Teams Meeting or Exceeding the Target for Youth Living at Home Upon Discharge*

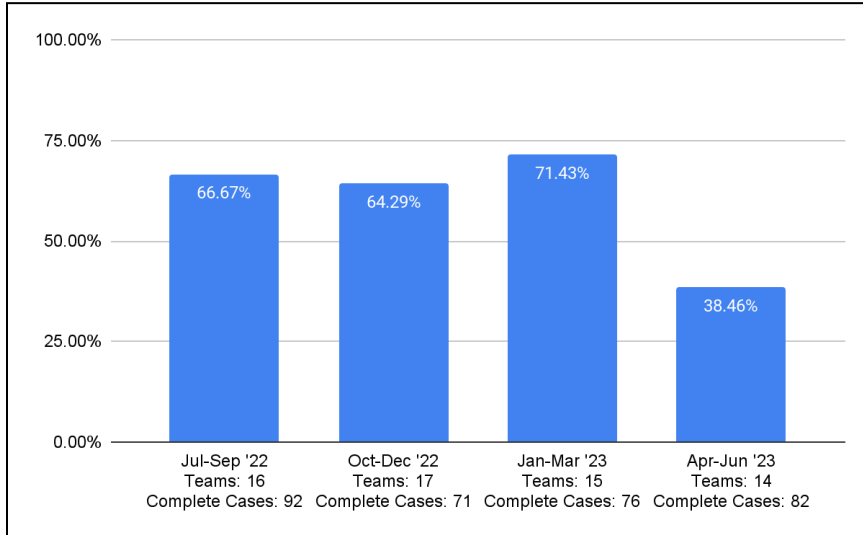


MSTI defines *at home* as the home of a parent or approved relative or friend of the family; youth in runaway status (i.e., youth left home without caregiver permission) or a foster care placement are not considered *at home*. It is expected that at least 88% of youth who complete treatment will be living at home. This reporting period, 69% of teams met this threshold.



***In School or Working***

**Figure 7.** *Percent of VA Teams Meeting or Exceeding the Target for Youth in School or Working Upon Discharge*



For this indicator, a youth is considered in school or working if they are attending school, a school equivalency program, a vocational program, or working part-time to full-time. Correctional or treatment facilities with vocational or educational components are not included in the definition.

Figure 7 illustrates the share of teams that meet the target of 85% of youth in school or

working upon completing treatment. This quarter saw a dip to 38% of teams meeting this target, though again, small caseloads complicate this and other ultimate outcome metrics.

***No New Arrests***

**Figure 8.** *Percent of VA Teams Meeting or Exceeding the Target for Youth Having No New Arrests Upon Discharge*

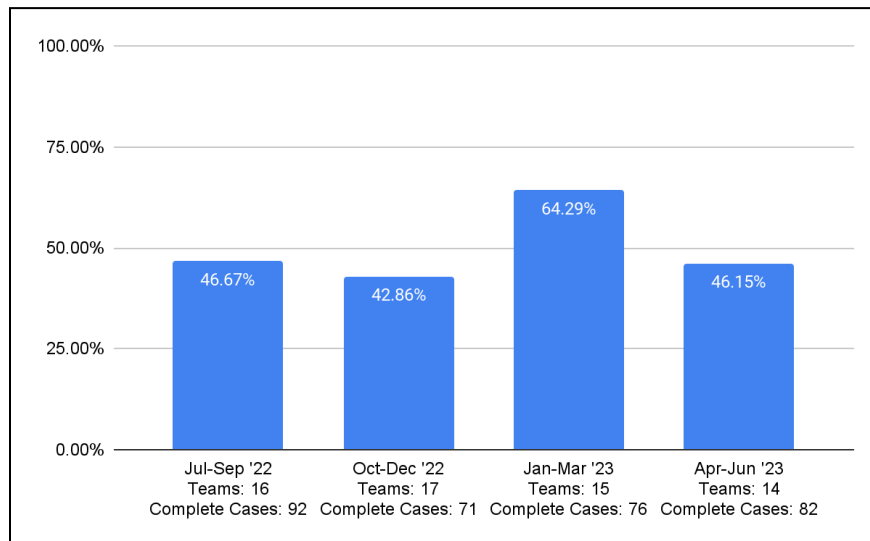


Figure 8 illustrates the share of teams in Virginia that met the target of 85% of youth completing treatment with no new arrests. This quarter, the share of teams meeting or exceeding this target dropped to 46%.