

Center for Evidence-based Partnerships  
Virginia MST Fidelity and Outcome Report  
Coverage Period: July 2021-March 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 July 1, 2021 through March 31, 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 evidence-based programs 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)

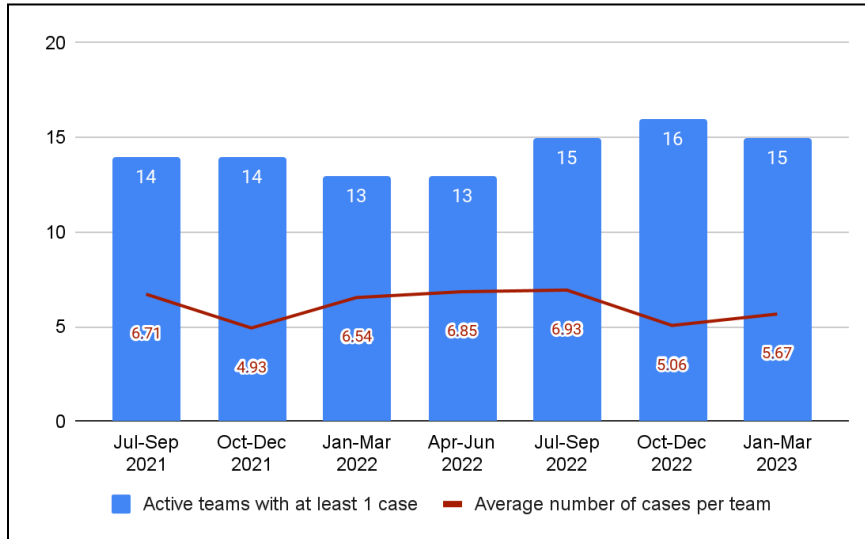
Fidelity and outcome data presented in the current report are aggregated at the team level and frequently averaged across the state.



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

### Team and Case Data

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



Across the seven reported quarters, the total number of MST teams with at least one active MST case across the state exhibited relative stability, ranging from 13-16 teams. The average number of cases per team in a given quarter showed similar stability, as seen in Figure 1.

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. For each reporting period, one to two Virginia teams had zero active cases in treatment.

**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

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. From summer 2021 to spring 2023, we see stability or modest growth in the Central, Eastern, and Northern regions, while the Piedmont and Western regions show fluctuation and net team losses.

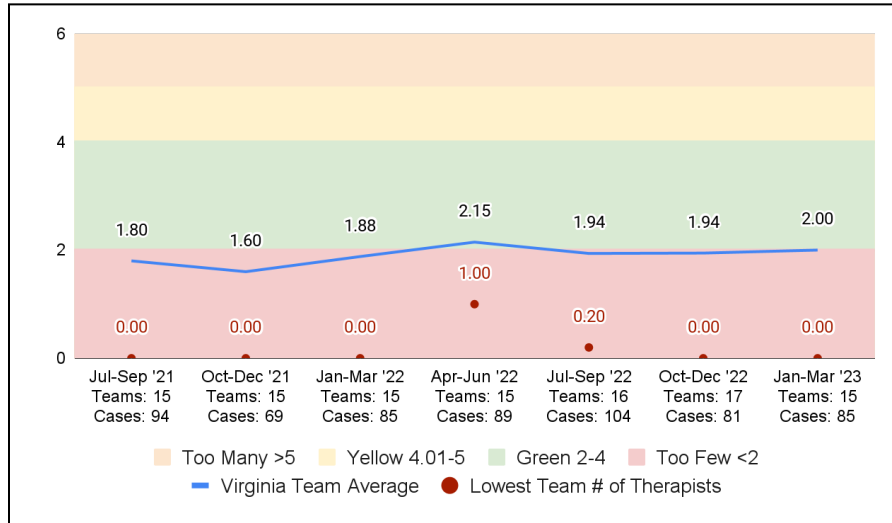
**Table 3.** *Regional Breakdown of VA Teams*

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

\*Team open but no cases in treatment

## Full-time Therapists

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



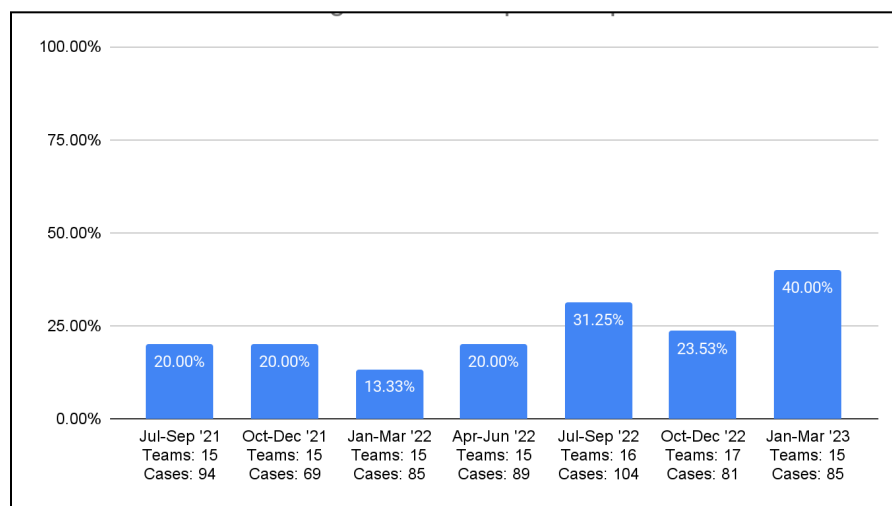
The Multisystemic Therapy Institute (MSTI) has set a target of two to four therapists per team, represented in the green area of Figure 2. For five of seven quarters reported, the average number of therapists per team across Virginia fell below the minimum requirement. When analyzed on a team level, only three active teams have been appropriately staffed for every quarter of this

reporting period.

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

## Cases per Therapist

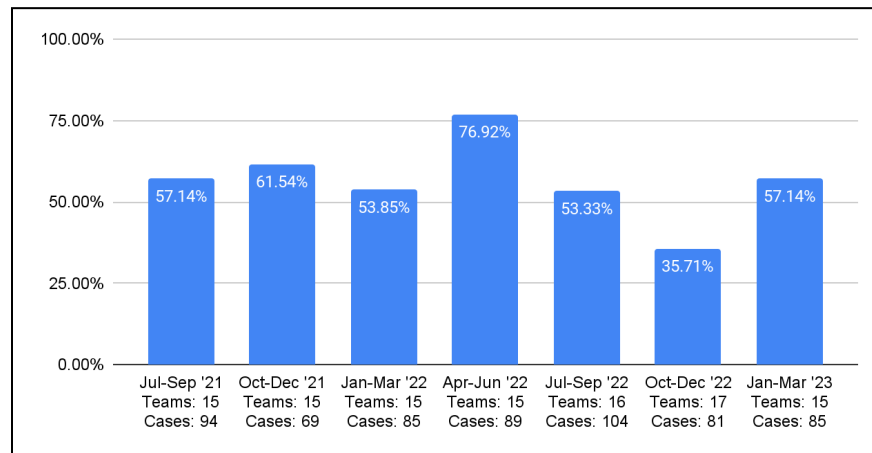
**Figure 3.** Percent of VA Teams with an Average of 4-6 Cases per Therapist



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. As is plain from these data, this is an area of notable challenge for Virginia MST teams. During the reporting period, the average number of cases per therapist across the state ranged from 2.52 to 4.77.

## Cases Completing Treatment

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

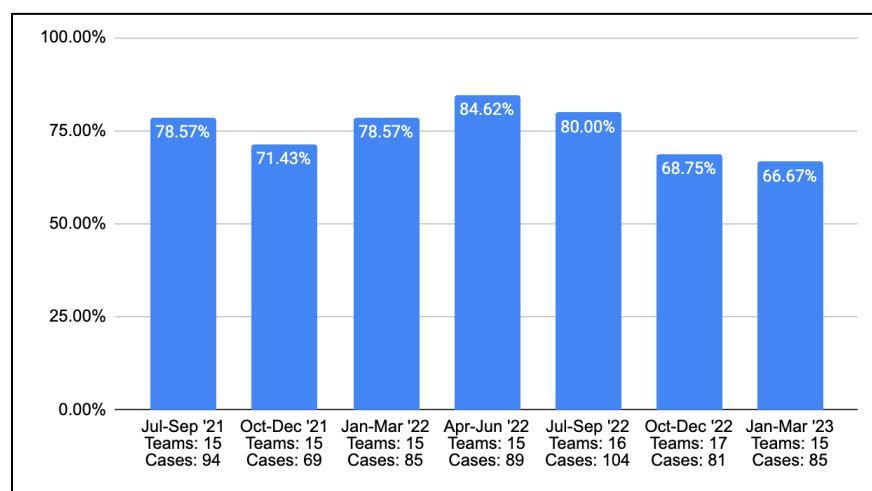


Case completion is characterized by mutual agreement between a youth's primary caregiver(s) and the MST team to discharge the youth from treatment because there is evidence that 1) treatment goals have been sustained for 3-4 weeks, or 2) treatment goals have not been met and are unlikely ever to be met.

Figure 4 shows the share of teams in Virginia meeting the target of at least 84% of cases completing treatment. When considering 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.

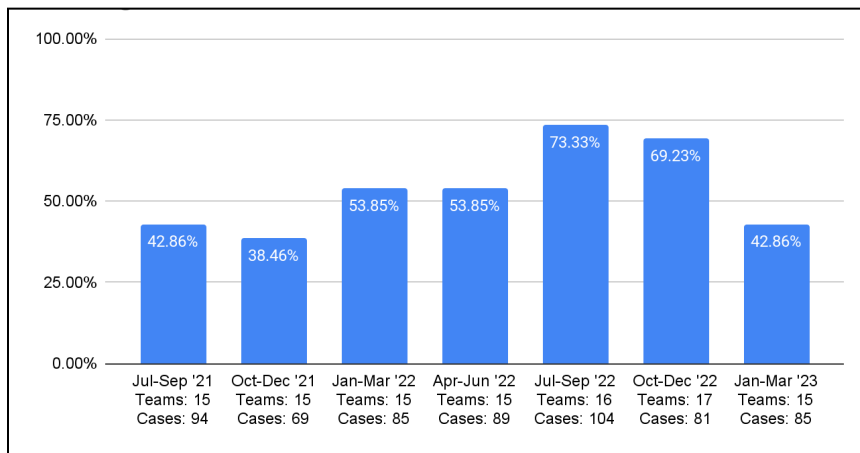
Figure 5 depicts the percentage of teams averaging the MSTI minimum of 0.61 on the TAM-R in a given quarter. Between two-thirds to four-fifths of teams in Virginia meet this standard each quarter.

## 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.

### *Living at Home*

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



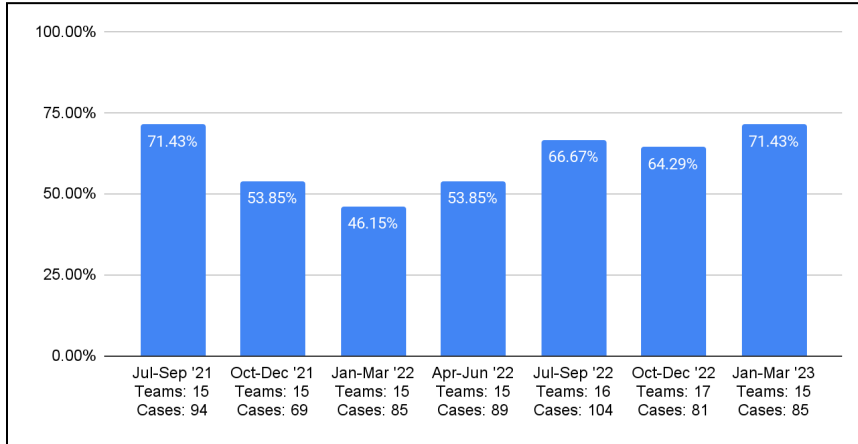
MSTI defines *at home* as the home of a parent or approved relative or friend of the family; youth in runaway status (i.e., youth left home without caregiver permission) or a foster care placement are not considered *at home*. In the reporting period, 38 to 73% of teams met the threshold of 88% of youth completing treatment living at home upon discharge. Again, small

caseloads make success on this metric more challenging.



***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. The share of teams who met the 85% threshold ranged

from 46 to 71%.

***No New Arrests***

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

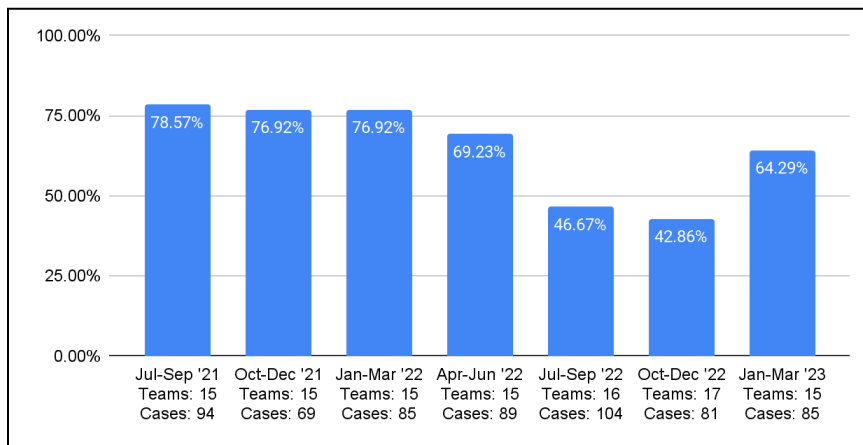


Figure 8 illustrates the share of teams in Virginia that met the target of 85% of youth completing treatment with no new arrests. During this reporting period, the second half of 2022 saw a dip in the share of teams meeting the 85% target (46.67% and 42.86%). For all other quarters, 64% of teams or more met this target.