Readying an Adaptation for Consideration in Family First

A Report from the Family First Evidence-Building Hub

RECOMMENDATIONS:

- Adaptations of existing programs or services can be an important part of the Family First service array. However, ***substantial* adaptations require robust evaluation**.
- Consider study design options such as **hybrid effectiveness, multi-arm trials, or SMART designs to speed the development** of an evidence base for adaptations.
- Using a framework such as the **FRAME model helps ensure consistent reporting and assists in determinations** about whether an adaptation is *substantial* or *not substantial*.

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Introduction

The purpose of this report is to provide a framework for researchers, program developers, and practitioners to think about how to assess and build evidence for an adaptation of a psychosocial intervention, particularly within the context of the Family First Prevention Services Act (FFPSA). This report highlights strategies to assess and test adaptations and offers guidance that crosses the evidence continuum.

This report is oriented towards the end goal of building evidence for an adaptation. Doing so may position the program or service for an evidence designation by the Title IV-E Prevention Services Clearinghouse (Clearinghouse), which is necessary for states to include an adaptation in their Title IV-E Prevention Services Plan. Guidance in this report encourages thoughtful consideration of the learning goals for evidence building and intentionality in sequencing evaluation activities that are informed by the science of adaptations and previously established evidence.

The guidance is informed by:

- The current science of adaptations.
- The learning goal or rationale for creating and/or evaluating an adaptation.
- The end goal of preparing a program or service adaptation for Clearinghouse review.
- Lessons learned from a recent evaluation of an adaptation.
- Strategic guidance from the Colorado Department of Human Services' Family First Evidence-Building Hub.

> **Together with cross-system prevention partners, the Colorado Evaluation and Action Lab's (Colorado Lab) Family First Evidence-Building Hub co-creates a strategic vision for evidence building, communicated annually in a strategy report**

With careful consideration, evidence can be built that readies an adaptation for broader dissemination. Evidence-building strategies for adaptations are of particular interest to ensure that programs and services being considered for inclusion in state Title IV-E Prevention Services Plans can meet the needs of diverse populations and achieve sufficient reach.

Programs and services that receive Clearinghouse evidence designations of "well-supported," "supported" or "promising" are eligible to be included in state's Title IV-E Prevention Services Plan. When the Clearinghouse conducts a review of a program or service, it first selects the manual, book, or writings (hereafter called "the manual" for simplicity) that describe the intervention that is to be reviewed.[1] Only studies of that intervention, as described in the identified manual, are eligible to contribute to that program's or service's evidence base. This is an important consideration because one needs to be clear about what is being evaluated (i.e., "the thing"[2]). However, in practice, adaptations are the rule rather than the exception and are frequently made to either fit interventions to specified contexts or to evaluate applications to other areas.

> **Nothing in this report provides guarantees for how evidence will be considered in an evidence review. The Clearinghouse's *Handbook of Standards and Procedures, Version 2.0* will always be the primary reference point and arbitrate final decisions for considering if program or service adaptations meet the evidentiary requirements of the Clearinghouse.**

Defining Adaptations

Adaptations can happen at the program and service level or at the study level. Program and service level adaptations typically involve proactive, intentional modifications to key aspects of the intervention, such as adding or subtracting content, adjusting sequencing or timing, changing mode of delivery (e.g., from in person to virtual), or adapting the program to make it suitable for different ages, cultural groups, or other populations.

Depending on the extent, the Clearinghouse may deem adaptations to be "substantial" or "not substantial." The Clearinghouse's *Handbook of Standards and Procedures, Version 2.0* (*Handbook 2.0*[3]) provides details about how decisions are made regarding whether adaptations are *substantial* or *not substantial*. For any changes that are deemed *substantial*, studies of that adaptation are considered on their own and not part of the original program or service.

Study level adaptations may occur for a variety of reasons and may or may not be related to program or service level adaptations. For example, delivery constraints at the research site might necessitate making changes to fit the research context that are not part of the original program but are required for the research to proceed.

The focus of this report is on building evidence for:

- Adaptations as defined by *Handbook 2.0.*
- Adaptations that occur at the program or service level.

This report will first describe the science of adaptations, providing references to some of the highest quality writings about adaptations in scientific literature. We follow with a discussion on how adaptations are considered within the Clearinghouse's *Handbook 2.0* and provide ideas for how to advance research along the continuum of evidence.

Science of Adaptations

The science of adaptations for psychosocial programs and services (referred to in this report as interventions) has exponentially advanced in the past decade. There are political and social pressures to ensure that interventions which have been proven to help alleviate suffering and promote well-being are made more widely available. However, the increased dissemination of these interventions has exposed the challenges inherent in transporting interventions to new contexts, populations, cultures, and need areas. Thus, the science of adaptations emerged to

provide guidance for how to consider adaptations alongside the broader literature on evidence-based practices. Here we briefly highlight several key considerations associated with the science of adaptations.

Modifications and Adaptations

Arguably, the most thorough and integrated model for characterizing adaptations is the Framework for Reporting Adaptations and Modifications-Expanded (FRAME).[4] This model specifies the range of reasons and processes that are associated with making adaptations (see here more information and resources, including a fillable coding sheet). Changes to an intervention may be made proactively or reactively to address key implementation considerations at any stage of the implementation process. Whenever possible, making intentional, proactive adaptations in collaboration with key partners is considered best practice.

According to the FRAME, modifications may be made to adjust content, context, training and evaluation, and implementation and scale-up activities. Changes that help fit an intervention to context—such as adjusting the examples used, exact language translations, adjusting length of sessions to fit within pre-existing parameters (e.g., class periods), or forgoing a workbook in exchange for reliance on oral conveying of information for delivery for those with lower literacy—may be done to increase the relevance of the intervention for a particular context. Changes to content, and particularly changes that could impact a program's "core components" should be considered with care, as discussed in the next section. Most, if not all, evidence-based programs and services are predicated on a theory of change; that is, a rationale for how different components of the intervention influence key features of the problem of focus. This is also sometimes called a logic model. These theories of change may help with articulating the core components of an intervention and determining if desired adaptations are likely to influence the delivery of core intervention components or not.

Any modifications that are made for any reason and at any point in the implementation of an intervention have the *potential* to impact program effectiveness.[5] For the purposes of this report, we focus on changes to **program content and dosage** and, if specified, **delivery modality and providers** because these areas are predominantly considered for determining whether the adaptation is substantial or not substantial (i.e., if a study is of a specific intervention or not) and, thus, whether an adaptation requires its own evidence base. Though it may not be realistic to conduct a formal study in alignment with Clearinghouse standards, evaluating modifications anywhere on the implementation continuum is critical for providing an overall picture of how to successfully transport interventions across different contexts and communities.

The flow chart found on page 23 of *Handbook 2.0* clearly describes the process that the Clearinghouse uses for determining substantial adaptations. *Handbook 2.0* provides numerous examples of what is considered a substantial versus a non-substantial adaptation. Substantial adaptations are assessed by examining the extent to which changes 1) are explicitly prohibited within the original program manual (if yes, then substantial adaptation); 2) are explicitly allowed within the original program manual (if yes, then likely not a substantial adaptation); 3) alter a key

component of the original program (if yes, then substantial adaptation); and 4) are considered adaptations by those with expertise in the model (if yes, then substantial adaptation). Exhibit 2.5 on pages 24–25 of the *Handbook 2.0* outlines several guiding examples that illustrate how determinations are made.

Adaptations

Adaptations are defined as any modifications that are made to an intervention. Adaptations may be minor or substantial, and can focus on changes to content, context, or service delivery. Adaptations may or may not result in a new program or service, it depends on the nature and extensiveness of what was modified.

The Stoplight Model is a helpful framework for conceptualizing the adaptation, then Clearinghouse standards are used to determine if an adaptation needs a separate rating from the original intervention.

Stoplight Model

While the FRAME model helps to describe the rationale and extensiveness for adaptations, the Stoplight Model helps consider the potential *impacts* that may be associated with making adaptations. Variations of this model are found throughout the extant literature, but the Stoplight Model is perhaps most succinctly described by the Association of Maternal and Child Health Programs Innovation Hub. While developed to help practitioners make decisions about whether to proceed with desired adaptations, this model can also support researchers in considering the extent to which an adaptation is likely to have an impact on program outcomes. It provides a user-friendly way to assess the extensiveness of proposed adaptations.

According to this model, there are *green*, *yellow*, and *red* adaptations. *Green* adaptations are things that can likely be modified without altering the overall effectiveness of the intervention. Examples of *green* changes include altering pictures or wording to reflect the population being served or considering ways to effectively engage a particular population in the intervention. *Yellow* modifications are those that *may* have an impact on program effectiveness (positive or negative), but they are substantial enough that caution is warranted. Examples of *yellow* changes include altering the intervention length, changing the order or sequencing of activities, or transporting the intervention to a different population. *Red* adaptations are things that, should they be changed, are expected to substantially alter the intervention. This could include altering the focus of the intervention (e.g., altering an intervention designed to treat social anxiety to treat specific phobias), adding or subtracting content, or making substantial changes to program dosage. Of note, the Stoplight Model is helpful for considering how to characterize potential adaptations in program development, but the Clearinghouse only has two designations: *substantial* and *not substantial*. There is not exact alignment between the different designations. It is possible that, for example, *yellow* modifications could result in determinations of either *substantial* or *not substantial* adaptations. The Clearinghouse engages with subject matter experts when the determinations are

not clear. As such, the Stoplight Model should be considered a priori and can help developers themselves consider and articulate the anticipated impacts of the adaptations.

A critical consideration for understanding adaptations is whether core model elements have been changed, or if modifications are only made to an intervention's "adaptable periphery." The Consolidated Framework for Implementation Research (CFIR) is a determinant framework that specifies how contextual factors influence implementation.[6] The adaptable periphery refers to those parts of implementation that can be changed without changing the core elements of a treatment model. A key challenge in differentiating what can and cannot be changed is that program developers frequently do not 1) clearly articulate the intervention's core components, or 2) conduct dismantling studies to identify core components.[7,8,9]

Cultural Adaptations

Cultural adaptations are a specific type of intervention modification where components of the intervention are altered, added, or otherwise changed to better meet the needs of specific cultural groups.[10] Some interventions are developed from the outset with a specific population in mind (e.g., Strong African American Families[11] and Familias Unidas[12]). However, frequently, interventions are developed without a specific cultural population in mind and thus culturally focused tailoring of interventions is common.

Though the research is somewhat mixed as to whether cultural adaptations impact treatment effectiveness, in general, positive effects are found for target symptoms and other treatment outcomes such as engagement.[13] Of note, this is specific to cultural adaptations and not necessarily to adaptations more generally where research is substantially more mixed and reporting methods make it hard to assess impacts.[14] The same Stoplight Model can be used to consider the potential impact of modifications that are made specifically for cultural considerations.

Bundled Interventions

Another type of adaptation involves bundling interventions (see section 2.3.2 in *Handbook 2.0*). This occurs when two or more interventions are combined. Sometimes, both interventions have an independent evidence base, and other times one or neither does. For example, a clinic might choose to combine an intervention with motivational interviewing (designed to increase a patient's motivation to change[15]) with the intention of increasing patient participation in and completion of treatment. While there may be theoretical reasons to believe that combining interventions would improve efficacy, some research indicates that often "less is more."[16] Conversely, if effectiveness of the bundled intervention is found, it does not necessarily mean that the effects were due to each intervention being effective. Therefore, bundling interventions should be considered as a new intervention for the purposes of evidence reviews. An example of a bundled intervention that has been evaluated on the Clearinghouse is Community Reinforcement Approach + Vouchers. In this example, community reinforcement is a psychosocial therapy, and vouchers are used to provide incentives for abstinence.[17]

Reporting Adaptations

Understanding the nature of and rational for adaptations is critical for determining how to position a particular adaptation within the evidence base for a specified intervention. The previously described FRAME is a useful rubric to support reporting of adaptations and to ensure sufficient details are provided to determine if modifications constitute substantial changes.[18] Detailing features such as whether the adaptation was planned, the rationale behind the modifications, what was modified and at what level, and what precisely was involved with the modification provides necessary clarity and will improve the scientific literature on adaptations overall.

The FRAME model encourages thinking about the relationship of adaptations with fidelity and core treatment elements. It is likewise important to specify, if known, how any modifications may impact the theory of change for the intervention. Some modifications are made because there are reasons to address key components of the theory of change to make the intervention more effective for different populations or focus areas. Other modifications are not expected to impact the theory of change, but they are made for reasons such as enhancing intervention fit to implementation context, improving intervention recruitment or retention, and widening the service provider characteristics.

Adaptations within Family First

FFPSA was designed, in part, to provide program and service options within communities that can help support prevention of foster care placements.[19] Programs and services eligible to include in state Family First plans include in-home skill-based parenting, substance use, mental health or kinship navigator programs or services. They must also meet evidentiary criteria of *well-supported*, *supported*, or *promising* according to the Clearinghouse *Handbook 2.0*.

What about the same program with different names?

It is not always possible to determine whether a program or service is an adaptation from the name alone. There are several examples of programs and services that have different names in different states but are substantively the same program. For example, implementations of Healthy Families America include local names such as Healthy Families Oregon, Hawaii's Healthy Start program, Healthy Families New York, Healthy Families Alaska, Healthy Families Arizona, etc. However, regardless of the name, each of the implementations follow the model requirements so that they are determined to be the same program.

Does calling something an adaptation make it a substantial adaptation?

Not necessarily. Frequently, program developers or study authors use the term "adaptation" when what they are describing are minor modifications that would fit in the *green* light rubric mentioned above and, thus, not considered a substantial adaptation.

Does a program developer have to designate if an adaptation is acceptable?

Not necessarily. However, when evaluating an adaptation, it is best practice to be in close collaboration with a program developer during the adaptation process. This helps to avoid potential conflicts and ensure that a program or service maintains its "in use and active" designation, which is a requirement for Clearinghouse review (see section 2.2.2 of *Handbook 2.0*).

Is a study of an adaptation automatically eligible for Clearinghouse review?

Not necessarily. One of the requirements for review by the Clearinghouse is that the program or service is *in use and active* (page 17). A study could be eligible if the program or service adaptations are clearly defined and there is an associated manual. However, adaptations that are made *for the purposes of a study* but are not part of program implementation options more broadly are considered "one-offs." Because these *one-offs* don't meet the requirement of having a manual, they would not be eligible for review per Clearinghouse standards (section 2.1.2, page 15).

> **Clearly citing the manual that was used as the basis for the adaptation is helpful in making determinations about how substantial the adaptations are and if the original program or service explicitly allowed for such changes.**

Evaluating Adaptations

The following section highlights ways that program developers and researchers can support evaluating the effectiveness of adaptations.

Clearinghouse Standards

The Clearinghouse standards are clearly outlined in *Handbook 2.0* **and should be consulted** for the definitive requirements for a program or service to move through the evidence review process. Program and service adaptations must go through the same evidence review process as any other program or service. If an intervention is determined to be substantially different (i.e., an adaptation), it is reviewed independently from the original program or service. Any outcomes that are associated with the main program or service are not considered as part of the evidence base for an adaptation unless they are also included in the studies associated with the adaptation.

It may not be practical, feasible or, in some cases, ethical, to go straight to a randomized controlled trial (RCT). However, because the only designs that meet Clearinghouse eligibility standards are RCTs and quasi-experimental designs (see section 4.1.5, page 31), it may not be realistic for studies of adaptations to align with the standards right away. The Clearinghouse standards are set up to answer the question, *"Is this intervention effective when compared with approved comparison conditions?"* This excludes head-to-head comparisons of a program or service and its adaptation or variant. However, frequently with adaptations, other questions take precedent, such as *"Does this work as well as the standard program?"* or *"Are non-clinical outcomes better, such as client recruitment, retention, acceptability, etc.?"* These questions are vitally important to answer, yet they may not immediately align with Clearinghouse standards for evaluation. Researchers should

consider designs such as hybrid effectiveness[20] or multi-arm trials as options to speed the process of developing the evidence base for adaptations.

> **There are frequently important questions particular to adaptations that extend beyond Clearinghouse requirements.**

Defining Scope of Evaluation

Prior to any evaluation efforts, it is important to be clear about the rationale for the adaptation (e.g., learning goal and target rating in the Clearinghouse). Articulating why the adaptation is necessary and how the newly adapted program or service meets a gap or need is important. Positioning the adaptation within extant literature on the original intervention, any other adaptations of the intervention (if applicable), and any other programs or services that have been adapted to meet similar needs is helpful. Additionally, one should be clear about the underlying theory of the original intervention and how the new adaptation fits within and/or extends the framework (i.e., the theory of change on which the intervention and associated adaptation relay). These components will help to ensure that the evaluation has a clearly articulated theory of change, which will be the basis for any evaluation. Reporting on the nature of the adaptation, using the previously described FRAME model, is helpful to ensure all aspects of the adaptation are articulated.

Learning Goals

Learning goals refer to specific priority areas that have been identified with partners (e.g., local/program implementation, program developers, intermediary, and state) to inform program improvement, reach, and scale, above and beyond Clearinghouse requirements. Aligned with the Steps to Building Evidence, these could include: 1) informing program design and improvements and integrating non-Clearinghouse outcomes that are of interest to Colorado leaders and policymakers; 2) assessing feasibility, including acceptability to clients/providers and delivering with fidelity; 3) obtaining early evidence that adaptations are tracking toward original intervention (similar or better outcomes); and 4) exploring equitable reach & achievement of outcomes across populations and settings.

Particularly when an adaptation is being made to address the needs of a specific population, careful consideration is warranted around how to include perspectives and considerations of those who will be impacted by the intervention. The Culturally Responsive Evaluation (CRE) method[21] provides helpful tips and strategies for ensuring inclusion in evaluation design (see here for a more in-depth description of CRE and an associated example).

The first critical step is defining the scope of the evaluation of the adaptation. For the purposes of this report, we are assuming that the adaptation meets the definition of “substantial adaptation” and, as such, is required to develop its own evidence base. To build a case for evidence for an adaptation, there are several important questions that could guide the scope of the evaluation:

1. What is the purpose of the adaptation (e.g., extend to a new population, explore effectiveness with different types of service providers or service settings, increase completion rates, expand reach, reduce costs, and enhance flexibility in delivery modality)?
2. Do you need/want to collect data on key *implementation* outcomes or just *intervention* outcomes? Examples of implementation outcomes to consider include acceptability, adoption, appropriateness, cost, feasibility, fidelity, penetration, and sustainability.[22]
3. Are there data collection approaches that are practical and feasible (e.g., using already collected administrative data) or do you need to design a new approach (e.g., random assignment)?

Here we recommend mapping out an evaluation strategy starting with the end in mind. If the ultimate goal is to prepare the adapted program or service for an evidence review by an evidence Clearinghouse, then backward planning an evaluation approach that sets the stage for such a review is important. One important consideration here is the follow-up period that is required for a *supported* (6-month) and *well-supported* (12-month) designation. There is no requirement for follow-up periods when being considered for a *promising* rating (see exhibit 7.1, page 94).

Preparing a Program or Service for an Evidence Review

To prepare an adaptation for an evidence review, it is critical that some initial efforts are made to set the stage for an effective review. The first major question to address is: *Is the adaptation now **part of** the original program or service, or does it represent a **new** program or service?* If it will be an option to integrate within the existing program or service, then that fundamentally changes the original program or service. If it is a separate, stand-alone adaptation, then there are different considerations associated with building the evidence base for the adaptation specifically.

For example, for the evidence base of a program or service to be assessed for eligibility, the program or service must be clearly defined. Typically, programs or services have manuals that guide the delivery and implementation of the intervention. This holds true for adapted programs as well. Considerations that are helpful to articulate for the adaptation, in addition to the technical aspects of the intervention, include:

- **Specification of dosage:** What is a minimally acceptable dosage? If the program or service contains specific content to cover during sessions, does all of the content need to be covered or is it acceptable if it is only partially covered? Are there components that must be delivered (non-negotiable)? When is the end of treatment (and if there is no defined end, when would you consider a sufficient dosage of treatment has been attained? This is important for calculating the length of follow-up post-treatment. What kinds of flexibility are allowed and not allowed (e.g., can sessions be combined or lengthened or shortened?)?
- **Specification of modality:** Does the program or service have to be delivered in a specific setting (e.g., in-home or at school)? If flexibility of delivery setting is generally allowed, are there any settings that are excluded (e.g., milieu or exclusively online)? Can the program be delivered as an individual program and a group-based program?

- **Specification of content:** What kinds of flexibility with content is allowed? Can providers add or subtract content? If so, are there any content-specific components that are non-negotiable? Can content be added to meet specific needs? If so, what are the parameters around adding content (e.g., culturally specific additions are acceptable, but additions for different developmental stages are not)?
- **Specification of providers:** Who should be delivering the program? What kind of background or education is required? What kind of training is required? Can the intervention be delivered in other languages?
- **Specification of other implementation requirements:** Are there other requirements for implementation such as monitoring fidelity, ongoing training, accreditation, etc.?

Once these features of the adaptation are specified, a research agenda can be developed. Frequently with adaptations, there are time-sensitive opportunities to engage in implementation efforts that could present a good chance to contribute to the evidence base. For example, an engaged community group that serves a hard-to-reach population may express timely interest in adapting a program for their unique population. In another example, an intervention that was developed to support families with general traumatic experiences was quickly rolled out to support families experiencing a devastating earthquake. This afforded an opportunity to expand evidence of effectiveness for families experiencing natural disasters.

The challenge is to identify the right cadence for the evaluation. It is important to establish feasibility/acceptability **and** efficacy, though efficacy is the only criteria for an evidence review. Frequently, the first step is to determine feasibility and acceptability, determining what features may need to be altered or adapted to improve uptake. It may be that challenges with feasibility and acceptability were the underlying reasons for the adaptation in the first place. Either way, these are critical to establish if an intervention is to be reasonably disseminated beyond the initial trial.

Researchers can determine whether to sequence these assessments or to attempt to address both feasibility/acceptability and efficacy at the same time. As mentioned above, Hybrid Trials offer a good option to simultaneously evaluate the implementation and impact of an intervention. An additional design for consideration is the Sequential Multiple Assignment Randomized Trial (SMART) design. This design can help researchers determine how to adapt an intervention to produce optimal outcomes. This may not be appropriate for all adaptation questions, but it is worth considering when the purpose of the adaptation is to address treatment non-response.

Lessons Learned from Recent Evaluation of an Adaptation

Here we present a case example of a decision to engage in an evaluation of an adaptation of Multisystemic Therapy (MST).[23] MST is an intensive home and community-based intervention for youth ages 12 to 17 who have serious behavioral problems and/or substance use issues that put them at high risk of out-of-home placements. MST is a highly effective intervention that received a *well-supported* evidence designation from the Title IV-E Prevention Services Clearinghouse and other clearinghouses.

The challenge, however, is that some of the requirements around MST program delivery create unique barriers in achieving intervention reach. Specifically, MST therapists are required to go into family homes to deliver the treatment, frequently three to five times per week. They are also required to serve families within a 90-minute radius to ensure that they can reach families in a timely manner if there is a crisis. Telephone or video-based sessions were typically limited to extraordinary circumstances or for reminder calls or case coordination. This structure is particularly challenging for more rural and frontier areas to have access to MST, where drive times exceed the recommended distance and there are increased costs associated with model delivery (e.g., therapists may need lower caseloads due to extra drive time, thus decreasing overall billable productivity).

In 2022, The Kempe Center for the Prevention and Treatment of Child Abuse and Neglect at the University of Colorado Anschutz Medical Campus received funding from the Colorado Department of Human Services and the Colorado Lab to implement and evaluate an adaptation of MST that enables enhanced service delivery through telehealth (we called it Telehealth-Enhanced MST, or TE-MST). Because we proposed making substantial changes to the service delivery method, we were fairly certain that this constituted a substantial adaptation. However, because no core components were being altered, it was in the *yellow* category for the Stoplight Model. We were not sure if these service modality changes would have a significant impact on outcomes.

To design the adaptation, we first surveyed MST therapists and supervisors about the aspects of the MST model that they thought would be particularly challenging to implement in a telehealth-based service delivery method. We then designed strategies to address these aspects of the model and collaborated with the model developer, MST Services Inc., to ensure that the adaptations were still adherent to the overall MST model and did not compromise model fidelity. We then developed a training module and, likewise, had that reviewed and approved by MST Services Inc.

The learning goal for this adaptation was to determine the feasibility and acceptability study to ensure that the new adaptation would be determined to be practical and desirable for MST teams. We had concerns that the technology needed to deliver sessions via telehealth could have issues with reliability and/or redirection when not being used for the intervention. We also did not want to eliminate in-person sessions, as we have heard from therapists and families that, particularly in the beginning of treatment, building rapport and understanding the nature of the home environment is critical for effective delivery. Based on our consultations with MST therapists and MST Services Inc., we were confident that the telehealth-enhanced model delivery would maintain all of the core components of MST, so the purpose of the evaluation was to focus on acceptability of the service delivery modality.

We designed the evaluation to be a pre-post mixed methods approach that combined repeated-measures quantitative surveys that assessed therapist and supervisor perspectives on clinical and implementation outcomes with qualitative feedback from MST administrators, supervisors, and therapists. We also designed a propensity score-matched evaluation with the goal of establishing "non-inferiority," meaning that TE-MST and standard delivery MST do not differ on any key clinical

or service implementation outcomes. In this case, we were able to establish very strong feasibility and acceptability, and we found that there were no perceptual significant differences between youth who received TE-MST compared to those that received standard delivery MST. The data and results emerging from this initial study set a strong stage for a more robust evaluation of the model, which should include an appropriate comparison condition and follow-up period.

In summary, we developed the adaptation to address a key implementation barrier, with the goal of increasing reach. We based the specific approach to adaptation in close collaboration with therapists and supervisors with experience delivering the model. We consulted with the program developer to ensure that the design did not alter key intervention components or the theory of change. The evaluation was designed to provide preliminary feasibility and acceptability metrics, as well as a "light touch" comparison to ensure that the intervention results were robust and there was no indication of harm. Now the adaptation is ready for a more substantial trial to meet the specific requirements for Clearinghouse review.

Table 1. FRAME Assessment of the TE-MST Adaptation

FRAME Questions	TE-MST Responses
When did the modification occur?	Pre-implementation pilot.
Were adaptations planned?	Yes, all changes were proactive/planned.
Who participated in the decision to modify?	• Program leadership. • Funders. • Program developer/purveyor. • Therapists/supervisors.
What is modified?	Content: • Added a flow-chart for decision making (when to have a telehealth session). Contextual: • Telehealth service delivery option. Training and Evaluation: • Added a one-day training and specialized ongoing consultation. • Evaluated using standard MST data collection procedures plus monthly surveys.
At what level of delivery?	Individual practitioners.
Contextual modifications?	Format and setting.

FRAME Questions	TE-MST Responses
What is the nature of the content modification?	Tailoring/tweaking/refining.
Relationship fidelity/core elements?	Fidelity consistent/core elements or functions preserved.
What was the goal?	• Increased reach/engagement. • Improve feasibility. • Reduce cost.
Reasons:	• Time constraints. • Location/accessibility. • Recipient lack of access to resources.

Conclusion

Adaptations can play a critical role in ensuring a responsive Family First service array. Though adaptations may be based on previously proven-effective programs or services, those adaptations that are considered substantial are required to establish their own evidence of effectiveness. It is important to clarify the reason for the adaptation and any impacts the adaptation may have on the original intervention's theory of change. When designing the evaluation, if the goal is to develop an adaptation for broader scale implementation, it is important to establish feasibility, acceptability, and other implementation-based outcomes even though those outcomes are not considered eligible outcomes for the Title IV-E Prevention Services Clearinghouse. Designs such as hybrid effectiveness trials should be considered to simultaneously evaluate implementation and effectiveness outcomes, reducing the length of time needed to establish the evidence base for the adaptation.

Endnotes

[1] Wilson, S. J., Brown, S. R., Kerns, S. E. U., Dastrup, S. D., Hedberg, E., Schachtner, R., Jackson, C., Norvell, J., Campbell, W., & Wall, A. (2024). *Title IV-E Prevention Services Clearinghouse Handbook of Standards and Procedures, Version 2.0,* (OPRE Report # 2024-127). Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services. https://preventionservices.acf.hhs.gov/sites/default/files/attachments/psc_handbook_v2_508c.pdf

[2]. Curran, G. M. (2020). Implementation science made too simple: a teaching tool. *Implementation Science Commun*ity, *1*, Article 27. https://doi.org/10.1186/s43058-020-00001-z

[3] Wilson, S. J., Brown, S. R., Kerns, S. E. U., Dastrup, S. D., Hedberg, E., Schachtner, R., Jackson, C., Norvell, J., Campbell, W., & Wall, A. (2024). T*itle IV-E Prevention Services Clearinghouse Handbook of Standards and Procedures, Version 2.0* (OPRE Report # 2024-127), pp. 21–23. Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services. https://preventionservices.acf.hhs.gov/sites/default/files/attachments/psc_handbook_v2_508c.pdf

[4] Wiltsey Stirman, S., Baumann, A. A. & Miller, C. J. (2019). The FRAME: an expanded framework for reporting adaptations and modifications to evidence-based interventions. *Implementation Science, 14*, Article 58. https://doi.org/10.1186/s13012-019-0898-y

[5] Durlak, J. A., & DuPre, E. P. (2008). Implementation matters: A review of research on the influence of implementation on program outcomes and the factors affecting implementation. American *Journal of Community Psychology, 41*(3-4), 327–350. https://doi.org/10.1007/s10464-008-9165-0

[6] Damschroder, L. J., Reardon, C. M., Widerquist, M. A. O., & Lowery, J. (2022). The updated Consolidated Framework for Implementation Research based on user feedback. *Implementation Science, 17*, Article 75. https://doi.org/10.1186/s13012-022-01245-0

[7] Cuijpers, P., Cristea, I. A., Karyotaki, E., Reijnders, M., & Hollon, S. D. (2017). Component studies of psychological treatments of adult depression: a systematic review and meta-analysis. *Psychotherapy Research, 29*(1), 15–29. https://doi.org/10.1080/10503307.2017.1395922

[8] Damschroder, L. J., Aron, D. C., Keith, R. E., Kirsh, S., Alexander, J., & Lowery, J. C. (2009). Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. *Implementation Science, 4*, Article 50. https://doi.org/10.1186/1748-5908-4-50

[9] Stirman, S. W., Miller, C. J., Toder, K., & Calloway, A. (2013). Development of a framework and coding system for modifications and adaptations of evidence-based interventions. *Implementation Science, 8*, Article 65. https://doi.org/10.1186/1748-5908-8-65

[10] Cardona, J. R. P., Rodríguez, M. D., Forgatch, M. S., Sullivan, C. M., Bybee, D., Holtrop, K., & Bernal, G. (2012). Culturally adapting an evidence-based parenting intervention for latino immigrants: the need to integrate fidelity and cultural relevance. *Family Process, 51*(1), 56–72. https://doi.org/10.1111/j.1545-5300.2012.01386.x

[11] Brody, G. H., Murry, V. M., Gerrard, M., Gibbons, F. X., Molgaard, V., McNair, L., & Neubaum-Carlan, E. (2004). The strong African American families program: Translating research into prevention programming. *Child Development, 75*(3), 900–917. https://doi.org/10.1111/j.1467-8624.2004.00713.x

[12] Coatsworth, J. D., Pantin, H., & Szapocznik, J. (2002). Familias Unidas: A family-centered ecodevelopmental intervention to reduce risk for problem behavior among Hispanic adolescents. C*linical Child and Family Psychology Review, 5*(2), 113–132. https://doi.org/10.1023/A:1015420503275

[13] Rathod, S., Gega, L., Degnan, A., Pikard, J., Khan, T., Husain, N., Munshi, T., & Naeem, F. (2018). The current status of culturally adapted mental health interventions: a practice-focused review of meta-analyses. *Neuropsychiatric Disease Treatmeant, 14,* 165–178. https://doi.org/10.2147/NDT.S138430

[14] Movsisyan, A., Arnold, L., Evans, R., Hallingberg, B., Moore, G., O'Cathain, A., Pfadenhauer, L. M., Segrott, J., & Rehfuess, E. (2019). Adapting evidence-informed complex population health interventions for new contexts: a systematic review of guidance. *Implementation Science, 14*, Article105. https://doi.org/10.1186/s13012-019-0956-5

[15] Rollnick, S., & Miller, W. R. (1995). What is motivational interviewing? *Behavioural and Cognitive Psychotherapy*, *23*(4), 325–334. http://dx.doi.org/10.1017/S135246580001643X

[16] Merz, J., Schwarzer, G., & Gerger, H. (2019). Comparative efficacy and acceptability of pharmacological, psychotherapeutic, and combination treatments in adults with posttraumatic stress disorder: A network meta-analysis. *JAMA Psychiatry*, *76*(9), 904–913. https://doi.org/10.1001/jamapsychiatry.2019.095

[17] Bickel, W. K., Amass, L., Higgins, S. T., Badger, G. J., & Esch, R. A. (1997). Effects of adding behavioral treatment to opioid detoxification with buprenorphine. *Journal of Consulting and Clinical Psychology, 65*(5), 803–810. https://doi.org/10.1037/0022-006X.65.5.803

[18] Wiltsey Stirman, S., Baumann, A. A. & Miller, C. J. (2019). The FRAME: an expanded framework for reporting adaptations and modifications to evidence-based interventions. *Implementation Science, 14*(58). https://doi.org/10.1186/s13012-019-0898-y

[19] Testa, M. F., & Kelly, D. (2020). The evolution of federal child welfare policy through the Family First Prevention Services Act of 2018: Opportunities, barriers, and unintended consequences. T*he Annals of the American Academy of Political and Social Science, 692*(1), 68–96. https://doi.org/10.1177/0002716220976528

[20] Curran, G. M., Bauer, M., Mittman, B., Pyne, J. M., & Stetler, C. (2012). Effectiveness-implementation hybrid designs: combining elements of clinical effectiveness and implementation research to enhance public health impact. *Medical Care*, *50*(3), 217–226. https://doi.org/10.1097/MLR.0b013e3182408812

[21] Hood, S., Hopson, R. K., & Kirkhart, K. E. (2015). Culturally responsive evaluation. In *Handbook of Practical Program Evaluation* (pp. 281–317). John Wiley & Sons, Inc. https://doi.org/10.1002/9781119171386.ch12

[22] Proctor, E., Silmere, H., Raghavan, R., Hovmand, P., Aarons, G., Bunger, A., Griffey, R., & Hensley, M. (2011). Outcomes for implementation research: conceptual distinctions, measurement challenges, and research agenda. Administration and policy in mental health, 38(2), 65–76. https://doi.org/10.1007/s10488-010-0319-7

[23] Henggeler, S. W. (1999). Multisystemic therapy: An overview of clinical procedures, outcomes, and policy implications. *Child Psychology and Psychiatry Review*, *4*(1), 2–10. https://doi.org/10.1017/S1360641798001786