

# REPLICATION MANUAL

The Map Forward Project:  
Neuroscience for Hopeful  
Futures in Fairfield County



Department of  
Children & Youth

Ohio Children's Trust Fund



FAIRFIELD COUNTY  
**Family &  
Children First**  
COUNCIL



**ALBANY**   
Counseling Services

# Introduction

## The Map Forward Project: Neuroscience for Hopeful Futures in Fairfield County

was a collaborative effort between The Map Forward Project, a program of Albany Counseling Services, and the Fairfield County Family and Children First Council. Developed in response to a Child Abuse Prevention RFP issued by the Ohio Children's Trust Fund in the spring of 2023, this project sought to prevent child abuse by addressing a critical yet often overlooked factor: caregiver burden. Research has shown that a range of risk factors contribute to child abuse and neglect, with caregiver burden - a state of overwhelming stress often associated with high-needs caregiving - being one of the most significant.

The project leveraged the Neurosequential Model of Therapeutics (NMT)<sup>™</sup>, an innovative framework and set of clinical practice tools developed by Dr. Bruce Perry and his colleagues, as a foundation for addressing caregiver burden through trauma-informed, brain-based interventions. The Neurosequential Model draws on the latest findings in neurobiology, trauma, and child development to provide an evidence-based approach to support children and families impacted by adversity. For more information about the NMT see [www.neurosequential.com](http://www.neurosequential.com). Additional information and educational handouts can be found at [www.bdperry.com/handouts](http://www.bdperry.com/handouts).

Using the NMT's clinical practice tools, the project delivered targeted assessments and recommendations, equipping caregivers and their support networks with tools and strategies designed to reduce stress, improve parent-child interactions, and enhance children's developmental outcomes. These tools enabled us to create tailored interventions that could address caregiver and child needs in a developmentally sensitive, sequential manner, prioritizing interventions based on the brain's biological order of development

Client (14 years, 3 months)

Report Date: 12/4/2010

|    |    |   |    |   |    |
|----|----|---|----|---|----|
| 4  | 8  | 7 | 2  | 2 | 9  |
| 11 | 10 | 7 | 2  | 6 | 10 |
| 3  | 3  | 8 | 1  | 8 | 8  |
|    | 10 | 5 | 2  | 3 |    |
|    | 11 | 6 | 4  | 3 |    |
|    |    | 4 | 4  |   |    |
|    |    | 8 | 10 |   |    |
|    |    | 9 | 6  |   |    |

Age Typical - 14 to 16

|    |    |    |    |    |    |
|----|----|----|----|----|----|
| 10 | 10 | 10 | 10 | 10 | 10 |
| 12 | 12 | 12 | 10 | 10 | 11 |
| 11 | 11 | 12 | 11 | 10 | 12 |
|    | 11 | 11 | 11 | 12 |    |
|    | 12 | 12 | 12 | 11 |    |
|    |    | 12 | 12 |    |    |
|    |    | 12 | 12 |    |    |
|    |    | 12 | 12 |    |    |

All rights reserved © 2007-2022 Bruce D. Perry

The purpose of this manual is to serve as a comprehensive guide for other Ohio counties interested in replicating a similar project. It includes detailed steps, training components and data measurement strategies needed to establish a sustainable program within diverse communities. **Replication requires access to NMT clinical practice tools and training materials, which are proprietary and require training and certification to utilize.** Communities wishing to implement this approach will need to identify or engage practitioners with this certification (see [www.neurosequential.com](http://www.neurosequential.com) for more information). **The Map Forward Project also offers these services statewide and is available to assist with planning, implementation, and ongoing support for communities adapting this model.** For more information contact Tammy Baumgartel LPCC, Director of The Map Forward Project, at 740-844-3141.





## The Rationale

The Centers for Disease Control have identified numerous risk factors linked to child abuse and neglect, which increase the likelihood of Adverse Childhood Experiences (ACEs) and long-term physical and mental health challenges. Caregiver burden, a significant risk factor, often results from two primary sources:

1. **Overwhelming Parenting Stress:** For caregivers of children with high needs - particularly those with mental health challenges related to trauma and adversity - the added demands can create a measurable increase in caregiver burden.
2. **Information Deficit:** Caregivers, schools, and service providers often lack trauma-informed, brain-based strategies for understanding and managing behaviors in children with high ACE scores.

When caregivers face overwhelming stress without adequate support or guidance, the risk of negative parenting practices increases. This can have a profound impact on child development, potentially creating a cycle of intergenerational trauma and increasing the risk of abuse and neglect.

## Acronyms:

NM - The Neurosequential Model™  
NMT - The Neurosequential Model of Therapeutics™  
NMN - The Neurosequential Model Network™  
FCFCFC - Fairfield County Family and Children First Council  
OCTF - the Ohio Children's Trust Fund  
ACS - Albany Counseling Services  
TMFP - The Map Forward Project  
CCE - Caregiver Challenge Estimator  
MSY - Multi-System Youth

**Notes:** The primary clinical practice tool, sometimes referred to as a “brain map”, will be referred to as the primary metric throughout this document. All metrics utilized during this project are collectively referred to as the NMT clinical practice tools.

The Fairfield County Family and Children First Council (FCFCFC) was the grantee in this project. They are referenced throughout this document. When planning to replicate, replace FCFCFC with the name of your grantee or partnering organization.

# The Plan

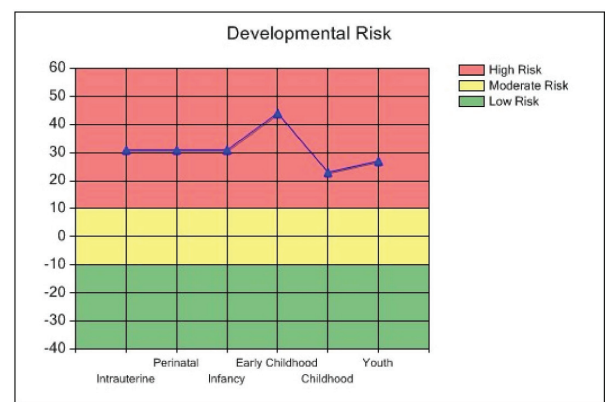
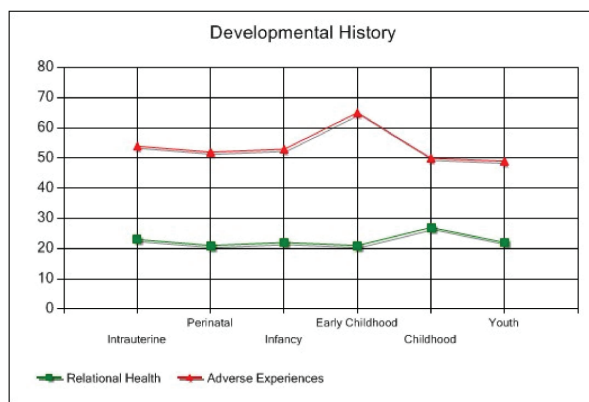
The NMT provided the Map Forward Project with a framework that addressed these challenges by delivering developmentally sequenced recommended interventions tailored to each child’s unique history and brain development. This approach equipped caregivers, educators, and service providers with tools and knowledge that directly supported improved parenting and reduced caregiver stress. By using NMT’s clinical practice tools, we could systematically assess, guide, and measure improvements in parenting efficacy and child functioning—two critical factors closely related to reducing caregiver burden.

The Neurosequential Model approach also focused on building community capacity to provide sustained support, promoting a shared understanding of trauma’s impact and actionable strategies for resilience. By strengthening caregiver and community networks, this project aimed to interrupt cycles of intergenerational trauma and decrease the risk of child abuse and neglect. This manual provides detailed guidance on the structure and implementation of this model to support other communities in achieving similar outcomes.

## Project Summary

Through The Map Forward Project’s Comprehensive Assessment Package (includes assessment coordination, NMT clinical practice tools and follow-up support services) we assessed 25 children and their primary caregiver. The metrics and tools we utilized included the NMT primary metric, a Caregiver Challenge Estimator and individualized recommendations for The Therapeutic Web.

These metrics provided us, the child’s team, and the primary caregiver, with detailed information about how a child’s history and timing of adversity, as well as their history of relational connections (a protective factor), had combined to impact brain development and organization. This helped us understand how these



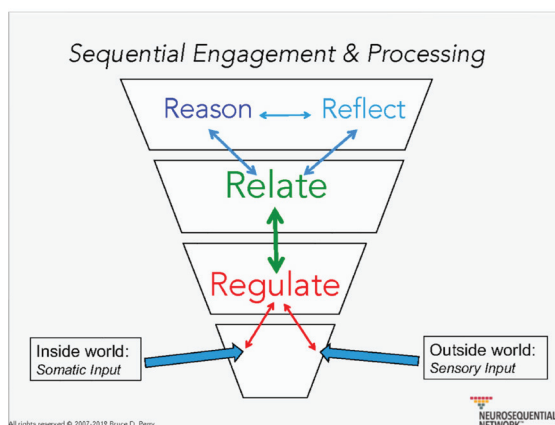
Adverse Experience Confidence: Moderate  
Relational Health Confidence: Moderate

### Developmental History Values

|                 | Adverse Events | Relational Health | Developmental Risk |
|-----------------|----------------|-------------------|--------------------|
| Intrauterine    | 54             | 23                | 31                 |
| Perinatal       | 52             | 21                | 31                 |
| Infancy         | 53             | 22                | 31                 |
| Early Childhood | 65             | 21                | 44                 |
| Childhood       | 50             | 27                | 23                 |
| Youth           | 49             | 22                | 27                 |

All rights reserved © 2007-2022 Bruce D. Perry





*All rights reserved © 2007-2022 Bruce D. Perry*

factors might impact the child's current functioning and provided concrete, developmentally sensitive strategies for addressing these concerns **in the appropriate sequence**. We designed interventions that mirrored and followed the bottom-up order of brain development, giving parents, schools and service providers an order of operations - a "Map" - for how best to support the child across the various settings. This sequential approach adds significant value by reducing caregiver burden, as it prioritizes and targets interventions more effectively, reducing the number of outside professional appointments. This allows for more family time dedicated to maintaining daily structures and healing rituals essential for trauma recovery. It also eliminates the scattershot method of delivering interventions, which can be ineffective, exhausting, and costly for everyone involved.

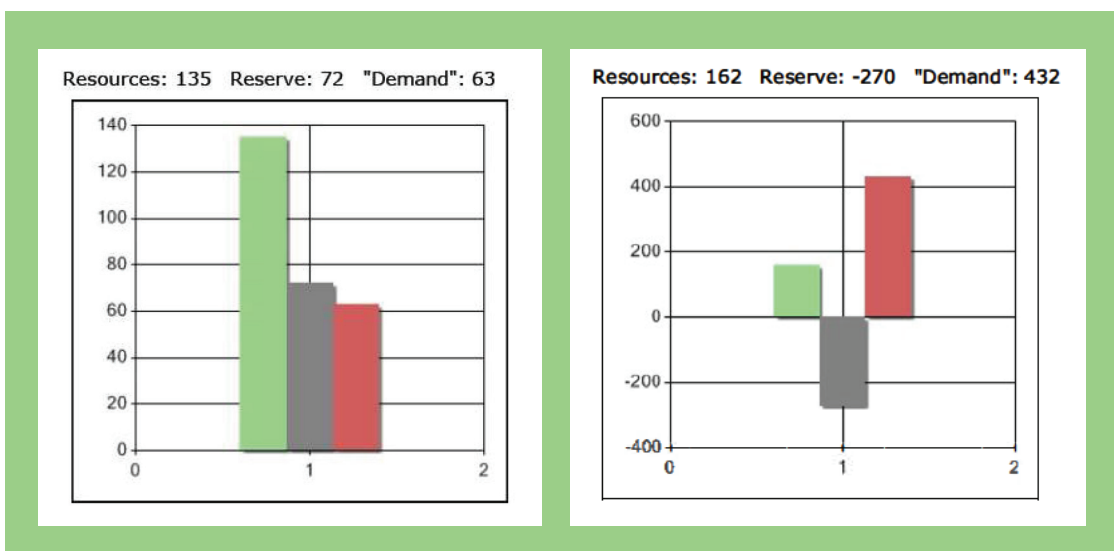
These sequentially designed strategies were provided to the family and the child's team of providers through the primary metric recommendations and the individualized recommendations for The Therapeutic Web. The primary metric findings and the recommendations for The Therapeutic Web were presented to the family and the child's team through reports and a one-hour Zoom meeting, which was recorded to be shared with those who could not attend and with future providers, assuming appropriate releases are in place.

Follow-up services, including referrals, additional planning sessions, and consultation designed to assist the family and team in integrating the concepts and strategies presented into service plans and the daily life of the child, were offered to each participating family, school and service providers.

The caregivers were also assessed using a tool called the Caregiver Challenge Estimator. This gave us a baseline for comparison with our follow-up CCE to determine if interventions had been effective in reducing caregiver burden. This

tool provided **caregiver burden score** score based on the relationship between demands placed on the caregiver and their internal and external resources for meeting those demands. This score can be seen in the column called **“Reserve”**. It identified both the strengths and needs of the primary caregiver, enabling providers to better plan for services and interventions that would be most effective and supportive for the caregiver.

Several months after the initial assessments, fifteen of the assessed children and their primary caregivers participated in follow-up assessments using these same tools to give us insight into whether the recommended interventions were having an impact on increasing the child’s functioning and decreasing the caregiver burden score. These scores served as possible indicators that the child and family were becoming more resilient and that the caregiver and service providers were becoming more effective in their approaches to working with the child and family, thereby reducing the risk for abuse or neglect.



All rights reserved © 2007-2022 Bruce D. Perry

Recommendations resulting from the assessment process were further strengthened and enhanced by training FCFCFC staff, area service providers, school personnel, and community stakeholders. Training focused on providing an overview of the project goals and ACE’s, the core concepts of the NM, and how to

operationalize the recommendations for The Therapeutic Web in their respective settings. Having a community-wide, shared set of concepts, language, and strategies increased the likelihood that the recommendations would be effectively implemented and that all children served by these providers benefited from their new skills.

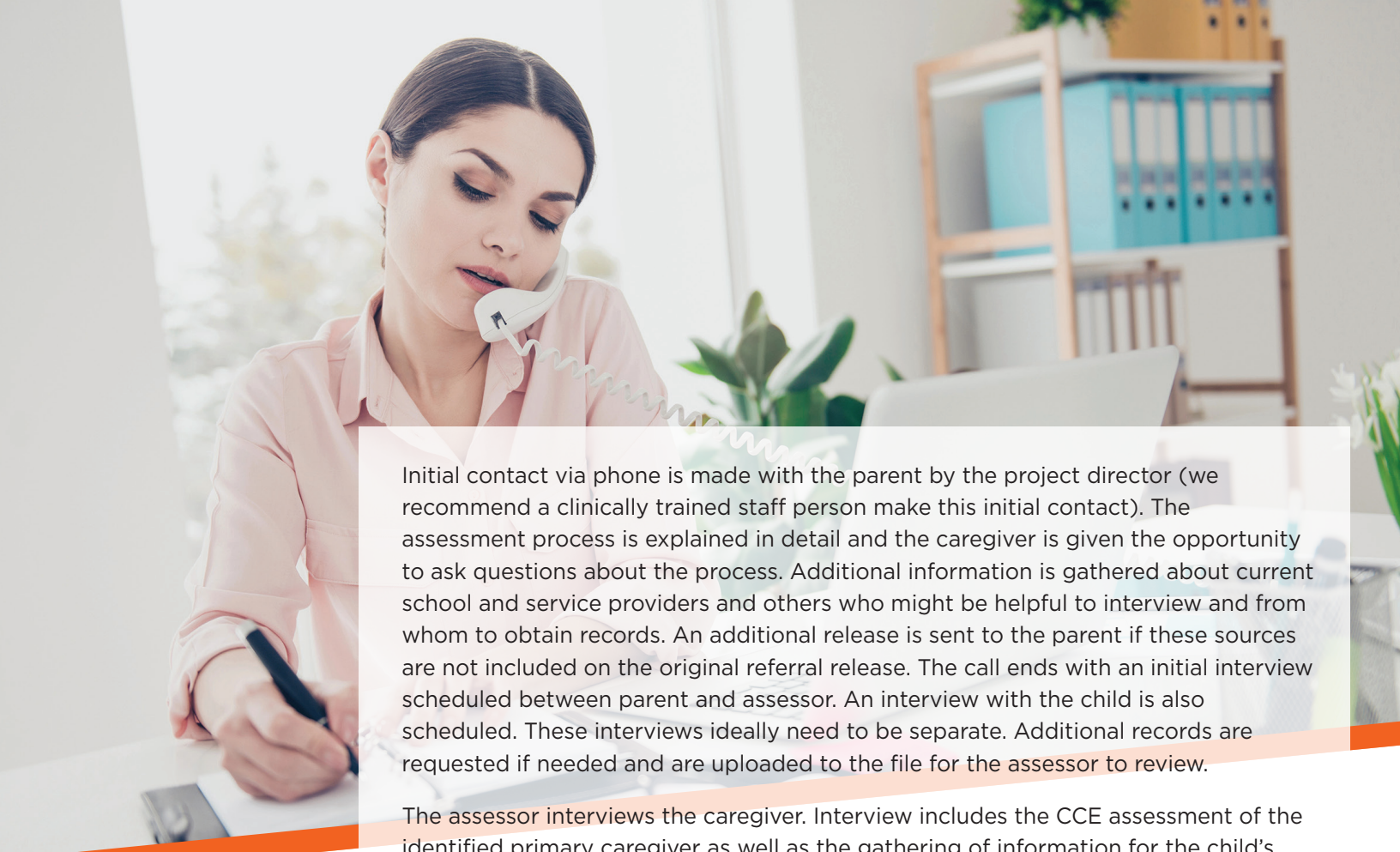
## Project Component Details

### The Assessment Process:

The assessment process begins with a referral to Albany Counseling Services from FCFCFC. The referral includes a referral form with basic information, a completed developmental history form, a signed consent form, releases, and any other records the MSY Service Coordinator may have such as CANS assessments etc.

An electronic health record is created for the youth and all referral documents are uploaded to the file.





Initial contact via phone is made with the parent by the project director (we recommend a clinically trained staff person make this initial contact). The assessment process is explained in detail and the caregiver is given the opportunity to ask questions about the process. Additional information is gathered about current school and service providers and others who might be helpful to interview and from whom to obtain records. An additional release is sent to the parent if these sources are not included on the original referral release. The call ends with an initial interview scheduled between parent and assessor. An interview with the child is also scheduled. These interviews ideally need to be separate. Additional records are requested if needed and are uploaded to the file for the assessor to review.

The assessor interviews the caregiver. Interview includes the CCE assessment of the identified primary caregiver as well as the gathering of information for the child's primary metric. This includes the child's developmental history as well as current functioning. If needed, an additional follow-up interview is scheduled. Parents have the option to fill out a developmental history form prior to the interview so that interview can focus on current functioning but in our project, most chose not to complete this form, so a second interview was frequently required.

In the meantime, service and educational providers and other relevant family members/informants are prioritized, and the project director reaches out to them by phone and or e-mail to explain the assessment process and gauge their willingness to interview. A release is sent to informants and interviews are scheduled. On average, 5-6 hours of interviews are conducted. Each interview lasts 45-60 minutes.

Once all interviews are completed and all records are reviewed by our assessor, the metrics (CCE, primary metric) and the recommendations for the Therapeutic Web are completed. Concurrently, the project director is corresponding with members of the youth's team (family, school, service providers, GAL's others) to schedule a 1-hour Zoom meeting to present the metrics and recommendations. New, onboarding service providers who may not have been interviewed for historical information are also invited if releases can be obtained.

A one-hour Zoom meeting is held and the information is presented. The first half-hour is devoted to reviewing the metrics (CCE, primary metric) and the second half hour is spent presenting the Therapeutic Web. An emphasis is placed on teaching them how to read the documents rather than the detailed content of the document, although the highlights are covered as well. At the end of the meeting the participants are informed of the follow-up services that will be available to them. A follow-up e-mail outlining those services is sent.



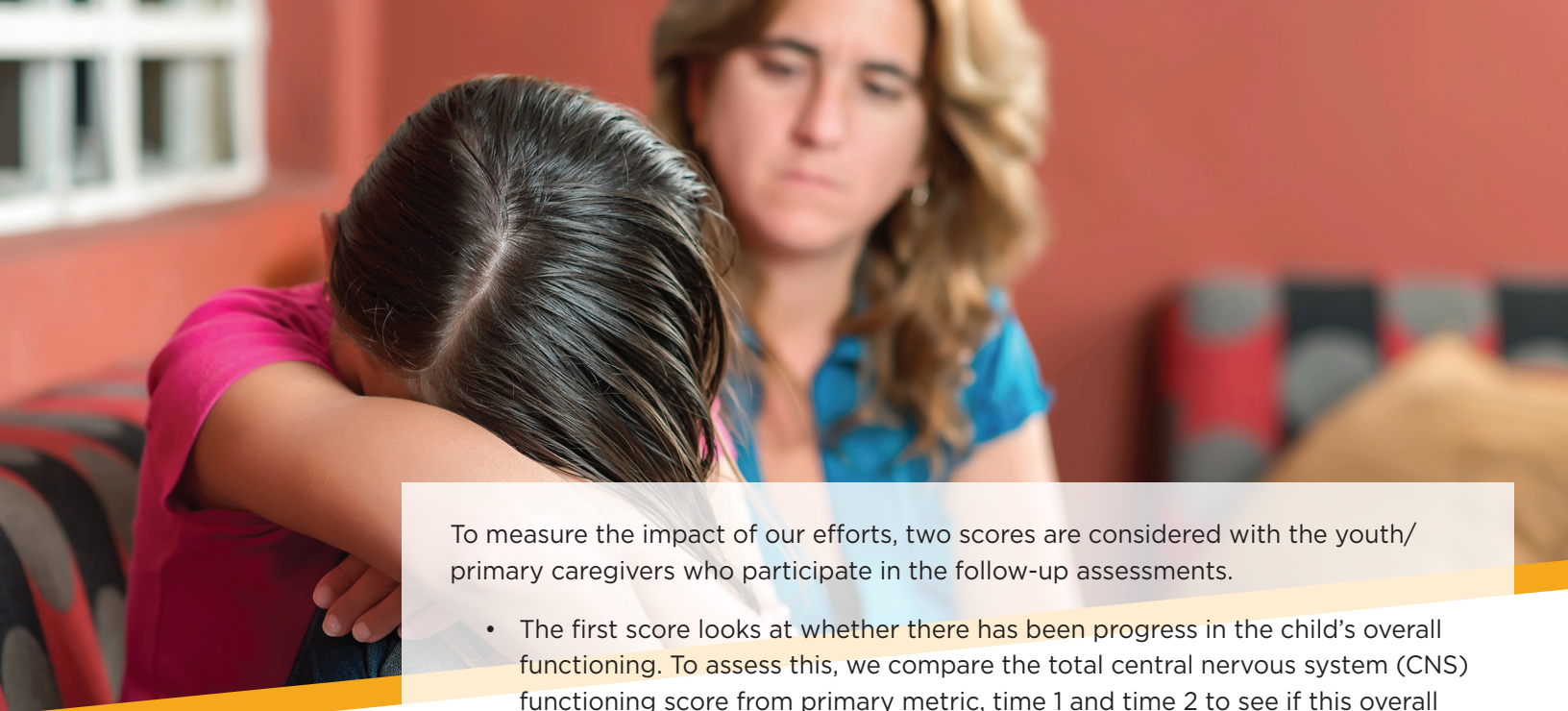
### **What happened between the initial and follow-up assessments?**

One of the underlying assumptions of this project was that through a combination of the community/school training and the information provided through the assessment process that all services would re-focus and become more trauma-informed and more developmentally sensitive. It was beyond the scope of this project to measure this directly, however. All families were provided with the opportunity to participate in some follow-up services through TMFP within 3 months of the initial assessment. In addition to an announcement being made at the end of the metric presentation about this opportunity, an email was sent outlining these follow-up services, most of which were focused on clarifying the information that was presented in the Zoom meeting. Many families did choose to use these services as well as some service providers.

### **Follow-Up:**

Follow-up participants are contacted in the order they are assessed. If we're unable to connect, we move on to the next youth on the list. Primary caregivers are called and sent an e-mail requesting their participation in a follow-up assessment (this is first discussed in the initial contacts as well). We request that the primary caregiver participate in a 30-minute interview to update us on the progress of both child and caregiver. We also speak with the child. Other service providers working with the youth are contacted by e-mail and a brief call or written progress report is requested. If the youth's case is still active with FCFCFC, a progress summary is requested from them as well. From this information, a follow-up metric and CCE is created. Updated reports and recommendations, along with a 30-minute recorded overview, are sent to the primary caregiver and FCFCFC. They can choose who to share these with.



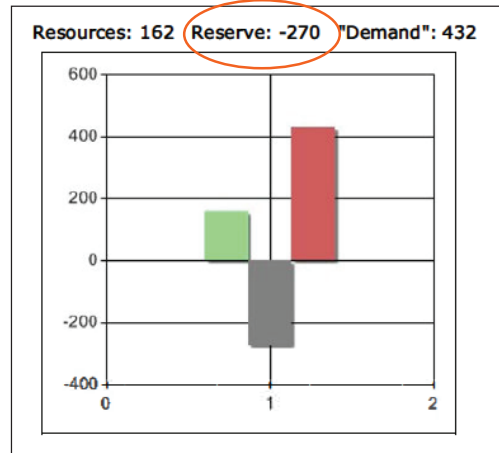


To measure the impact of our efforts, two scores are considered with the youth/primary caregivers who participate in the follow-up assessments.

- The first score looks at whether there has been progress in the child's overall functioning. To assess this, we compare the total central nervous system (CNS) functioning score from primary metric, time 1 and time 2 to see if this overall score has increased.
- The second score looks at whether the caregiver burden has decreased. We assess this by comparing the overall first and second caregiver "Reserve" score. An increase in this score indicates a decrease in caregiver burden.

### Current CNS Functionality

| Brainstem                               | Time 1     | Current    | Typical    |
|-----------------------------------------|------------|------------|------------|
| 1 Cardiovascular/ANS                    | 7          | 10         | 12         |
| 2 Autonomic Regulation                  | 11         | 11         | 12         |
| 3 Temperature regulation/Metabolism     | 9          | 11         | 12         |
| 4 Extraocular Eye Movements             | 5          | 8          | 12         |
| 5 Suck/Swallow/Gag                      | 12         | 12         | 12         |
| 6 Attention/Tracking                    | 5          | 8          | 12         |
| DE/Cerebellum                           |            |            |            |
| 7 Feeding/Appetite                      | 6          | 8          | 12         |
| 8 Sleep                                 | 9          | 9          | 12         |
| 9 Fine Motor Skills                     | 12         | 12         | 12         |
| 10 Coordination/Large Motor Functioning | 12         | 12         | 12         |
| 11 Dissociative Continuum               | 6          | 8          | 12         |
| 12 Arousal Continuum                    | 6          | 8          | 12         |
| 13 Neuroendocrine/Hypothalamic          | 9          | 10         | 12         |
| 14 Primary Sensory Integration          | 9          | 10         | 12         |
| Limbic                                  |            |            |            |
| 15 Reward                               | 4          | 7          | 12         |
| 16 Affect Regulation/Mood               | 4          | 7          | 12         |
| 17 Attunement/Empathy                   | 4          | 7          | 12         |
| 18 Psychosexual                         | 6          | 8          | 11         |
| 19 Relational/Attachment                | 4          | 6          | 12         |
| 20 Short-term memory/Learning           | 6          | 8          | 12         |
| Cortex                                  |            |            |            |
| 21 Somato/Motorsensory Integration      | 10         | 10         | 12         |
| 22 Sense Time/Delay Gratification       | 4          | 7          | 11         |
| 23 Communication Expressive/Receptive   | 4          | 7          | 12         |
| 24 Self Awareness/Self Image            | 4          | 7          | 11         |
| 25 Speech/Articulation                  | 11         | 11         | 12         |
| 26 Concrete Cognition                   | 4          | 6          | 12         |
| Frontal Cortex                          |            |            |            |
| 27 Non-verbal Cognition                 | 4          | 6          | 11         |
| 28 Modulate Reactivity/Impulsivity      | 4          | 6          | 11         |
| 29 Math/Symbolic Cognition              | 7          | 7          | 11         |
| 30 Reading/Verbal                       | 7          | 7          | 11         |
| 31 Abstract/Reflective Cognition        | 3          | 5          | 11         |
| 32 Values/Beliefs                       | 4          | 6          | 11         |
| <b>Total</b>                            | <b>212</b> | <b>265</b> | <b>375</b> |



All rights reserved © 2007-2022 Bruce D. Perry

Here is a table of our findings. Those in red indicate where caregiver burden decreased:

| Child/<br>Caregiver # | Primary Metric<br>(Youth): First<br>Time | Primary<br>Metric<br>(Youth):<br>Second Time,<br>Follow-Up | Age typical | Caregiver<br>Challenge<br>Estimator<br>(CCE) Reserve<br>Score: Time 1 | CCE Reserve<br>Score: Time 2 |
|-----------------------|------------------------------------------|------------------------------------------------------------|-------------|-----------------------------------------------------------------------|------------------------------|
| <b>1</b>              | <b>212</b>                               | <b>265</b>                                                 | <b>375</b>  | <b>-270</b>                                                           | <b>72</b>                    |
| <b>2</b>              | <b>240</b>                               | <b>264</b>                                                 | <b>375</b>  | <b>108</b>                                                            | <b>125</b>                   |
| <b>3</b>              | <b>182</b>                               | <b>232</b>                                                 | <b>338</b>  | <b>-100</b>                                                           | <b>-41</b>                   |
| <b>4</b>              | <b>280</b>                               | <b>295</b>                                                 | <b>338</b>  | <b>55</b>                                                             | <b>77</b>                    |
| <b>5</b>              | <b>272</b>                               | <b>310</b>                                                 | <b>358</b>  | <b>55</b>                                                             | <b>77</b>                    |
| 6                     | 302                                      | 327                                                        | 338         | 14                                                                    | -42                          |
| <b>7</b>              | <b>200</b>                               | <b>240</b>                                                 | <b>375</b>  | <b>68</b>                                                             | <b>78</b>                    |
| <b>8</b>              | <b>241</b>                               | <b>259</b>                                                 | <b>358</b>  | <b>53</b>                                                             | <b>88</b>                    |
| 9                     | 162                                      | 166                                                        | 292         | -43                                                                   | -49                          |
| <b>10</b>             | <b>279</b>                               | <b>291</b>                                                 | <b>317</b>  | <b>-530</b>                                                           | <b>-169</b>                  |
| 11                    | 224                                      | 228                                                        | 317         | -22                                                                   | -119                         |
| <b>12</b>             | <b>279</b>                               | <b>299</b>                                                 | <b>338</b>  | <b>9</b>                                                              | <b>42</b>                    |
| 13                    | 284                                      | 284                                                        | 338         | -33                                                                   | -146                         |
| 14                    | 205                                      | 203                                                        | 338         | -33                                                                   | -146                         |
| <b>15</b>             | <b>206</b>                               | <b>228</b>                                                 | <b>317</b>  | <b>-530</b>                                                           | <b>-169</b>                  |

**Results:** In 13 of the 15 follow-up cases, the youth overall functioning scores improved. Ten of the 15 follow-up scores for caregiver burden also improved. In all ten cases where caregiver burden improved, youth functioning also increased, providing some support for our case that caregiver burden is correlated with, and can be impacted by, overall child functioning.



## Training:

***Important Reminder: To provide training for this project, access to NMT training materials is required. These materials and slides are proprietary and require training and certification to utilize.***

Three training courses were provided by TMFP staff as part of this project. The team facilitated one large all-day community-based training and two shorter school-based trainings but the design and implementation of the training part of this project can be flexible if they meet the following objectives:

- Provide an overview of the project and its goals for those you plan to interact with during the project.
- Provide information related to creating trauma-informed, developmentally sensitive school, home and community environments from a brain-based, neuroscience perspective.
- Introduce all trainees to the NMT clinical practice tools and the core concepts of the Neurosequential Model.
- Provide opportunities for trainees to learn and practice strategies for operationalizing the information, clinical practice tools and NM core concepts and in their respective settings.

Note: Consider offering CEU's for community training. We recommend finding an entity that has an open CEU agreement with the state board to partner with for the community training.

## Our training design:

**Training #1: Community Training:** Service providers and other stakeholders in the community were invited to attend a 6.5-hour live training related to the project. Participants were provided with CEU's.

**Training #2: School Training:** Teachers, paraprofessionals and administrative staff from the Fairfield County School District participated in a remote training, **Beyond the ACE's Checklist**. This is the same training that was provided in the morning session of the community training adapted for the school setting. **Beyond the ACE's Checklist** is a proprietary training developed by one of TMFP's NMT Phase 2 staff. It provided a primer on creating trauma-informed environments and serves as an introduction to the core concepts of the Neurosequential Model. It also draws from several other evidence-based resources.

**Training #3:** Some participants from Training #2, along with other staff from the Fairfield Educational Service Center, participated in a remote training designed to explore the NM Concepts in more depth. The training utilized a video series of conversations with Dr. Bruce Perry entitled ***Stress, Trauma and the Brain: Insights for Educators***. The Map Forward project staff then facilitated a structured training following the video. The video series is available at <https://woub.pbslearningmedia.org/collection/stress-trauma-and-the-brain-insights-for-educators/>

## Project Insights:

1. **A planning period at the project's outset is strongly recommended.**

A change in leadership at the time this project was funded created unexpected challenges and delays in launching, which affected many aspects of the initiative. Any discrepancies between this manual and the original project proposal stem from these unforeseen circumstances. The project was ambitious, with the original leadership teams from both organizations confident they could begin implementation immediately due to prior collaboration. However, new leadership required additional time to become familiar with the project. In hindsight, an extended planning phase could have mitigated these challenges and facilitated a smoother launch.

2. Through our experience with this project, we observed that **families served by FCFCFC often faced significant challenges that made full participation difficult.** The high stress levels and immediate needs of these families meant that the engagement required for both the MSY application process and TMFP involvement was more than some could manage. This underscored how a strictly prevention-focused approach may be challenging to implement effectively within organizations serving populations facing such adversity. Moving forward, aligning project goals (in this case, prevention) and strategies with the unique realities of these populations may enhance engagement and impact. Balancing preventive and responsive support could better address the needs of families navigating substantial challenges.”

3. **This was not a double-blind, peer reviewed scientific study.** Our plan did not include a way to capture what interventions were implemented between the first assessment and the follow-up assessment and whether schools, caregivers or service providers adapted or changed their interventions based on the recommendations. We did demonstrate however that the NMT clinical practice tools could provide a way to measure the two key variables we sought to measure (increase in child functioning and increase in caregiver “reserve”) in terms of developing a more scientific study based on our approach. We are hopeful that this project and the rough framework it provides will be considered a first step in the development of a more rigorous study in the future.

4. Throughout this project, we encountered the reality that service providers and educators, much like the families served, are navigating their own significant workloads and stressors. The requirement to interview these professionals as part of the assessments often meant revisiting the same individuals multiple times within a close-knit community. While we were met with remarkable patience and collaboration during the initial stages, we found it challenging to re-engage these providers during the follow-up phase. This experience highlighted the broader systemic pressures faced by those working in high-demand environments. Moving forward, designing engagement strategies that minimize the burden on service providers—while still achieving the goals of thorough assessment and follow-up—may foster stronger, sustained collaboration and support within these vital community networks.