NESST® (Newborns Exposed to Substances: Support and Therapy)

An Innovation Station Emerging Practice

Purpose: This document is intended to support MCH professionals to implement a practice found in Innovation Station. This resource provides the information needed to replicate the practice and is divided into two sections: the first section provides a high-level overview of the practice while the second section describes how to implement the practice. For additional information on any of the content provided below, please reach out to the practice contact located at the bottom of this document.

Section I: Practice Overview

Location:	Greater Boston, MA	**Title V/MCH Block Grant Measures Addressed**
Category:	Emerging	N/A
Date Submitted:	07/2020	

Practice Description

We designed NESST to support the health and well-being of parents and infants impacted by substance use disorder (SUD).

We created a two-provider home- and community-based program providing dyadic parent-child therapy and peer recovery support in order to enhance parents' emotional health and functioning, reduce stressors and barriers to success, and improve children's developmental trajectories.

Purpose

Background, Population and Need: Each year, an estimated 15% of births in the U.S. are impacted by use of alcohol or illicit drugs (NCSACW, 2018). Among adults of prime childbearing age (18-29 years), 18-25% have used an illicit substance in the past month, including medications used not as prescribed (SAMHSA, 2014). Healthcare providers cite a lack of integrated and coordinated care, gaps in providers' knowledge about care for affected dyads, and lack of specialized post-partum care as limiting the impact of existing health services on the long-term health outcomes of infants and parents affected (Commonwealth of Massachusetts, March 2017).

Infants and young children living with parents with SUD face major risks to their social-emotional development and mental health, in part because of high rates of co-occurrence with other mental health disorders and family violence (Kaltenbach, 2013). Their parents are likely to have experienced high rates of trauma, which leave these children vulnerable to the intergenerational impacts of trauma, disrupted attachments, and high rates of victimization (Velez et al., 2006).

Mothers' pregnancies often involve exposure to multiple teratogens – including maternal stress, depression, alcohol, tobacco, and other drugs – and many parents with SUD struggle to be responsive, reflective, and attuned caregivers, placing their children at risk for poor developmental outcomes (Boris, 2009). Affected children are more likely to face difficulties in preschool and childcare settings, suffer from executive function disorders, attention deficit hyperactivity disorder, and experience higher rates of child abuse and neglect (Beekman and Neiderhiser, 2013). Families impacted by SUD also often face environmental stressors like poverty and housing insecurity that may be caused by or contribute to their chronic illness (Velez and Jansson, 2013).

To further understand the specific needs in this population in our service area, we conducted a needs assessment that included a qualitative interview study of mothers of substance-exposed newborns, to better understand the needs of this vulnerable population. Additional data included a literature review, stakeholder communications, and review of existing programs nationally and internationally. The responses from all sources supported the critical development of provider education and interventions that addressed this population and led to several key elements of NESST: training for health and social service providers; hiring of staff with lived experience in recovery; and clinical work focused on reducing shame and stigma.

Operationalized Values: Project NESST was developed within the Center for Early Relationship Support, a division of Jewish Family and Children's Service of Greater Boston, a "cradle to grave" human services agency dedicated to supporting families across the lifespan. Project NESST explicitly asks clients about their strengths and uses a focus on family members' safety to help parents identify the supports they need in order to maintain family well-being despite their chronic disease diagnosis. We partner with parents in goal-setting, track progress on these goals each session, and consider successful achievement of individual goals as one measure of program impact.

Intended Benefit/Beneficiaries: Project NESST targets the many impacts of parental substance use disorder (SUD) on the mother, the parent-infant relationship, and infants and young children. Project NESST addresses these needs by providing weekly, long-term, multi-provider support to families with a great deal of attention to flexibility in service delivery. Clinicians target maternal mental health and parenting practices using strategies from the evidence-based practice of Child Parent Psychotherapy (CPP; Lieberman and VanHorn, 2008) and enhance parents' reflective capacities using techniques identified in the Mothering from the Inside Out approach (Suchman et al., 2013). Clinicians support parental emotion regulation, attunement, reflection, and parent-child interactions in order to ameliorate the risks dyads face. They provide developmental guidance in order to both promote practices that support healthy development and reduce the use of harmful or unsafe parenting practices. Maternal Recovery Specialists (MRS) provide parenting support in the form of shared observation, exploration, and problem solving; case management to reduce the impact of stressors on a family's well-being; explicit tools and strategies for harm reduction and long-term sobriety; and recovery coaching and service linkage to other recovery supports in order to address SUD. To mitigate the impact of stress on development, our MRS staff deliver the well-tested model of peer support for vulnerable families. They engage in collaborative goal-setting with parents to addresses recovery stability, housing, food security, employment, benefits, and interpersonal safety, and to reduce barriers to service access. They successfully link parents to concrete resources within their communities. Program staff work together to improve child developmental progress

through regular developmental screening using the DECA (Devereux Early Childhood Assessment), provide developmental guidance to parents, make referrals to Early Intervention services, and support families in EI engagement.

Practice Foundation

Project NESST has been built from multiple sources of evidence in the fields of early childhood and parent development, attachment and trauma theory, neuroscience, and early childhood policy research.

The understanding within clinical psychoanalysis in the 1940s-60s of the importance of the earliest relationships for healthy psychological development spurred the articulation of the theory and practice of Infant/Early Childhood Mental Health. Clinical, ethological, field, and lab research by John Bowlby (Bowlby, 1969), Mary Ainsworth (Ainsworth et al, 1978), Mary Main (Main and Solomon, 1986), and Peter Fonagy (Fonagy et al., 1993) have provided the foundational evidence for attachment-informed approaches that focus on building sensitive and supportive caregiving. The Infant/Early Childhood Mental Health field has influenced, and in turn incorporated, learning and evidence from fields of early childhood education/care, child development, maternal/child health, and parenting programs. Project NESST draws on key concepts from this multi-disciplinary Infant/Early Childhood Mental Health (I/ECMH) field. Central to our work are the ideas of parallel process (Pawl, 1995), disruption and repair (Tronick, 1989), holding the baby in mind (Slade, 2002), and reflective practice (Heffron and Murch, 2010). Each of these practice pillars reinforces the stance that each NESST provider holds, that of non-judgmental care, curiosity about feelings and the meaning of behavior, and belief that "it's never too late" to heal relationships. NESST values the central role of creating safety in relationships, attending to the needs behind a child's behavior, and building pleasure between parent and child.

The work of Nancy Suchman (Suchman, Pajulo, and Mayes, 2013) and colleagues with mothers in substance use recovery brings together many of these same I/ECMH concepts and integrates the findings from the neuroscience of addiction. Chronic substance addiction hijacks the pleasure centers in the brain; one strategy in Suchman's programs and ours is to facilitate the positive experience of parenting as a potential pathway to brain healing. Her manuals and research (Suchman et al., 2010) also support the central importance of building parental reflective capacities, one of the goals in NESST work.

As NESST has evolved from a new to a developed intervention, we have looked at existing frameworks that can best hold the foundations of our work and capture our theory of change. The work of Jack Shonkoff and the Harvard Center on the Developing Child (HCDC) is well-suited to modeling how interventions that target multiple goals for parents, children, and their broader environments can produce positive outcomes over time. This biodevelopmental framework articulates a theory of change for improving long-term outcomes for children and their families (Shonkoff, 2010). Based in scientific understanding of the critical importance of early experiences and environments for young children's brain development and long term capacities for learning and relationships, the HCDC framework highlights the necessity to build resilience and reduce toxic stress in the lives of children and families. In 2018, several staff deepened this engagement through participation in a 3-day HCDC workshop, Innovation in Action, focused on integrating the framework into practice.

Guiding the NESST theory of change are the three core principles identified by HCDC (Center on the Developing Child, 2017): supporting responsive relationships; building core life skills; and reducing sources of stress. Improving life course trajectories for infants and young children affected by parental substance use entails attending to their caregiving environments and strengthening the relational capacities of their parents. NESST embraces a two-generational approach that highlights the interconnections among the needs of the parent, the child, and the dyad. NESST clinicians and peer staff hold the baby in mind even as they attend to the needs of the parent and vice versa. Supporting parental responsiveness begins from the modeling of reflection and responsiveness in the relationship of NESST supervisor and direct care provider. Reflecting the concept of "parallel process" (Heffron and Murch, 2010), the NESST provider can then offer a relationship that is non-judgmental, open, and caring as a model for the parent in being with her child.

Strengthening the capacities of the caregiving adults in a child's life is the second HCDC foundational pier for NESST. Adult life skills that are central to the work of NESST are in the areas of emotion regulation and reflective function. Research in the field of substance abuse and treatment of parents challenged by addiction supports this focus as essential to improving parent-child relationships (Suchman et al., 2010). Substance mis-use can be seen as a problem of emotion regulation (Kober, 2013) and NESST staff work with parents to identify, understand and manage their strong feelings. Reflective function—the capacity to understand the link between external behavior and internal feeling states—has been found to be a central mechanism in the intergenerational transmission of attachment patterns (Fonagy et al., 2002; Slade, 2005). Through a stance committed to curiosity and reflection, NESST clinicians highlight the "why" behind behavior, helping parents to better understand themselves and their children. These interconnected capacities for regulating affects and for making sense of behavior form the foundation for sensitive and confident parenting.

The third principle of the HCDC frame—reducing sources of stress—is exemplified in the work of NESST staff through a focus on case management and recovery support. This focus is further supported by the research on social determinants of health and well-being and the interaction of these environmental factors with substance use vulnerability and consequences (Matthew, 2018). Healthy outcomes for children and families necessitate addressing sources of toxic stress that overwhelm coping capacities and reinforce intergenerational cycles of adversity. Beginning in intake meetings, NESST clients are asked about their needs in areas of housing, food insecurity, childcare, recovery, relationship safety, and public benefits. Maternal Recovery Specialists and clinicians work to develop plans to meet these needs and focus on building skills in navigating social service systems and in self-advocacy. NESST is embedded within JF&CS, a human services agency with capacities to support families across the lifespan with services that specifically address interpersonal violence, legal challenges, food and housing insecurity, and other basic needs.

The inclusion of Maternal Recovery Specialists (MRSs) on the NESST team is supported by research showing the efficacy of peer coaches in promoting client recovery (Bradstreet, 2006). NESST deploys MRSs to 1) facilitate engagement in clinical services by reducing stigma and normalizing treatment, 2) help clients access basic-needs resources that reduce sources of stress, and 3) help clients maintain recovery. Studies show that mothers with SUD who participate in peer mentoring are more motivated to think and act in ways that promote their well-being and that of their child (Boles, Young, & Pogue, 2010).

Core Components

Project NESST addresses the impact of substance use, trauma and environmental stress on parents' mental health, the early parent-child relationship, and infant development. Services are available free of charge for up to three years to pregnant women and mothers of infants/toddlers in the greater Boston area referred by hospitals, child welfare, and addiction recovery programs. The NESST team includes mental health clinicians and peer recovery specialists who work together to offer services in the home or community that are flexible and client-driven. Program interventions aim to: build maternal capacities for self-understanding, emotion regulation and healthy decision-making, including around substance mis-use, and reduce external stressors related to limited resources and isolation. Staff also provide training to community partners on relationship-based treatment and the specialized needs of this population. NESST serves pregnant women as early as the first trimester and parents with and without custody of their children; clients can be in various stages of substance use disorder from active use to prolonged recovery.

Core components of the NESST intervention are:

- engagement and intake
- client-centered treatment planning
- clinical services
- peer services
- therapeutic case management
- system collaboration and training
- reflective supervision

Practice Activities

Core Component	Activities	Operational Details
Engagement and intake	- Strategies to enhance engagement of a vulnerable population - Assessment of needs and program fit - Clinical intake meeting covering: history - (mental health, - pregnancy/postpartum, family, substance use), parent-child dyad, emotional health, strengths, needs, and initial sense of goals	- Engagement begins with reaching out to referred clients and continues through intake process - Can be a "long and winding road" - Importance of flexibility and "persistence through discomfort" - Clinician meets with referred client for intake and assessment - Use of open, curious stance without assumptions - Hold in mind feelings of fear, shame, and ambivalence that may underlie responses - Assessment of resource needs - Identify key collaterals and obtain consents - Decision re: need for clinical services, peer recovery services, or both. For clients with primary services from MRS, clinician provides case oversight.

Client-centered treatment planning	- Clinician and/or Maternal Recovery Specialist (MRS) develop service plan(s) with client	- Client and staff identify goals in any of following areas: life/self-care skills; perinatal support/transition to parenthood; parent-child relationship; relationship with partner/family; recovery; and concrete/social supports. - Clients can set goals with clinicians in areas of emotion regulation and self-understanding
Clinical services	- Masters/doctoral level clinicians provide mental health treatment to parent and parent-child dyad within attachment/trauma sensitive lens. - With parent, clinician works on building capacities related to affect regulation and tolerance, narrative coherence, self-compassion, and links between past and present. - With dyad, clinician works on shared observation, increasing mutual regulation, and building capacities for shared pleasure.	- Regular visits with parent in home or community setting; frequency determined by need and may change during course of treatment. - Clinician works to establish relationship of trust and openness - Clinician understands challenges of client ambivalence, "layers of truth", and impact of guilt and shame. - Common mental health issues include: grief/loss, interpersonal violence, trauma consequences, perinatal mood difficulties. - Clinician holds understanding of risk management responsibility and ongoing assessment of child safety. - With client, complete Plan of Safe Care to identify client supports and needs related to recovery and prevention of relapse. - Manage situations of risk with attention to needs of both parent and child, identifying family supports, and utilizing reflective supervision. - Close collaboration with MRS when both are involved with a family.
Peer services	- Maternal recovery specialist (MRS) with lived experience as parent in recovery provides supportive services, explicit focus on recovery, and concrete resource aid.	- MRS offers a relationship with "someone who's walked the walk" parenting in recovery. - Meets with client weekly in home or community at frequency depending on need. - Communicate stance of reliability, nonjudgmentalness, and curiosity. - Focus on understanding needs in areas of recovery, parenting techniques, connectedness to their community/supports, and concrete resources. - With client, complete Plan of Safe Care to identify client supports and needs related to recovery and prevention of relapse. - Close collaboration with clinician when both are involved with a family.

Therapeutic case management	- From intake onward, staff assess strengths and needs of clients for resources and referrals.	- Assessment of needs and facilitation of referrals and obtaining services in areas including access to benefits, housing, food, childcare, recovery support, legal aid, domestic violence, education. - Addressing these needs can make space to focus on emotional needs of parent and baby. - Key step in building trust and capacities for collaborative problem solving. - Meeting concrete needs buffers stress, a significant protective intervention.
System collaboration and training	- Clinicians and MRS have ongoing communication with systems of care (e.g. child welfare; healthcare) to support clients in their needs and goals. - Clinicians and MRS provide consultation and training to service providers through workshops, conferences, collaborative networks, and case consultation.	- NESST staff obtain consents to communicate with collateral providers. - Many clients report difficulties in relationships with providers in other settings; supporting clients in this area can improve communication and understanding on both sides and build life skill capacities. - Consultation and training provide opportunities for impact beyond individual families. - Providers express interest in hearing from staff with lived experience.
Reflective supervision	- All staff have individual supervision as well as small group consultation within a frame that supports self-reflection and builds capacities for managing complex feelings and situations of risk.	- Work with parents in recovery and their young children can be very emotionally challenging for staff. Feelings of anger, frustration, guilt, confusion are common experiences for both clinicians and MRS. Regular opportunities for supervision within a safe context for exploration of these challenging feelings is essential for successful intervention and for professional development. Over time, staff learn ways to anticipate, step back from, regulate, and make sense of their responses and how to use them in support of their clients.

Evidence of Effectiveness (e.g. Evaluation Data*)*

NESST partnered with our internal Department of Evaluation and Learning (DEL) and the Boston University School of Social Work (BUSSW) to incorporate program evaluation from the beginning of our work. Together with BUSSW staff, we identified anticipated outcomes and potential measures for a pilot mixed method study that included quantitative client measures, qualitative interviews with clients and staff, and a staff focus group. The initial study began in March 2014 involving BUSSW research assistants (RAs) gathering baseline and follow-up measures and interviewing clients after program completion. Challenges in fulfilling the scope of

the proposed study led to a process of shared exploration regarding the problems encountered and considerations for a redesign. The redesigned evaluation process considered feedback from clients and staff about the length of the evaluation interview and the utility of some of the measures themselves. In the redesign, clients completed questionnaires related to demographics, mental health (Brief Symptom Inventory), addiction (Addiction Severity Index), trauma exposure (Life Stressors Checklist-Revised), and motherhood experience (Being A Mother). At follow-up, mental health and motherhood experience were reassessed and clients were interviewed by BUSSW staff about their experiences in the program. The redesigned evaluation was undertaken from January 2016 to September 2017, with noticeable increase in participation at baseline but continued challenges in gathering follow-up measures. Results demonstrated feasibility of service delivery and successful engagement of the target population. Of note in the baseline measures, NESST clients were found to have extensive histories of trauma exposure, endorsing an average of 12 traumatic events in their lives. This both confirms the knowledge from clinicians' work with clients as well as underlining the importance of an approach that is informed by an understanding of the impact of trauma in clients' lives and in their parenting.

Further, from the final report summary of the BUSSW evaluation:

"Results of baseline analyses ... showed that lower satisfaction with being a mother was associated with greater psychological distress. Additionally, greater trauma history was associated with using cannabis at a younger age and early start of cannabis use was associated with use of heroin at a younger age as well. In essence, this was a very high-risk population in great need of an intervention. Although we did not see mean level change in psychological distress and satisfaction with motherhood for the group of participants where we had pre and post data, we did see that a percentage of these mothers' scores changed in a clinically meaningful way. Given that a number of mothers had baseline scores that did not indicate problems on either of these measures, the fact that we saw change in a sizable group on each measure is promising and makes substantive sense given the focus of the intervention and the findings we saw from the qualitative analysis. Further examination of the mothers who were found to experience meaningful change is warranted to better understand the processes of the intervention and for whom it may work."

The qualitative interviews with clients yielded rich testimony to the range of ways NESST clients saw their own needs, viewed the program as helpful and experienced the focus of the intervention. From the final report summary:

"Overall, the 22 participants interviewed at the end of their NESST involvement perceived the intervention very positively. They broadly understood what NESST could offer and anticipated assistance with being a (new) mother in recovery, mental health challenges, questions about their children's growth and development.... and their concrete needs. Most participants described receiving a range of assistance from their NESST provider. These included guidance and advice around parenting, therapy for mental health challenges and for maintaining their recovery, along with case management and concrete support.... All mothers described being helped by the NESST intervention and believed that they had changed given their involvement.... Perceived benefits of NESST for the participants included improvements in self-perception (empowerment for some), development of new parenting skills and parenting competence, changes in attitudes and beliefs toward recovery and needed supports, and expansion of insight and coping skills regarding their substance use, recovery and emotional health."

Regarding NESST's strengths-based approach and focus on individual goal attainment: "Most [clients] spoke of receiving emotional and instrumental support about anything they chose to bring up. They described that they led the topics of sessions, not the clinician or mentoring mom (when involved). Some

chose to focus on the challenges of being a mother in recovery and others shared their mental health struggles."

Beginning in 2016, NESST began using our electronic medical record software to collect and monitor client demographics, referral and intake pathways, pregnancy and birth information, substance use and mental health history, referrals to collaborating services and partners, and staff efforts including visits, work with collateral contacts, and treatment planning. NESST and DEL staff collaborated in 2018 on an internal process evaluation project. Using this process data, we explored questions such as:

- *Census*: How many clients has NESST served, with what staffing levels? What are the demographic characteristics of clients upon intake to NESST?
- *Outreach and Intake:* How many people were referred to or inquired about NESST services? Of those referred to NESST, how many became clients? What are the factors promoting engagement? What are reasons a referral may not engage? From where are referrals to NESST coming? Examples of what we learned from these questions include: Sixty-five percent of our referrals came from a hospital social worker, primarily from three hospitals in Boston. Our data indicated that NESST staff often had to be persistent and make several attempts to reach clients who were referred due to difficulties contacting them.
- *Service Delivery:* For how long were NESST clients enrolled? How many sessions did NESST clients receive? What types of services do NESST clients receive? What is the average dosage of NESST clients? Examples of what we learned from these questions include: Over 2000 clinical sessions and over 600 Maternal Recovery Specialists' encounters had been provided to 133 NESST clients between July 2012 and December 2017; clients who had been dismissed from the program had spent on average 28 weeks enrolled in the program.

Replication

In 2018, CERS and Project NESST were invited to apply for a state-wide grant to use State Opioid Response grant funds to provide technical assistance and training as the state created eight service sites at existing organizations to deliver peer support and clinical services to parents in recovery and their infants and young children. The Department of Public Health's particular interest in this dual-provider strategy came in part from our work demonstrating the feasibility and impact of NESST work to partners across the state. Our response to this proposal highlighted our demonstrated success implementing Project NESST and delivering training on the topics of parental substance use and parent-infant mental health. In particular, we noted our expertise working with pregnant women, delivering mental health treatment to women with SUD, and training and supporting peer staff.

The resulting pilot intervention, FIRST Steps Together (Families In Recovery SupporT) is not strictly a replication of Project NESST but our technical assistance, training and leadership on the project have significantly shaped the work of the service sites. (Project NESST also became a contracted service site.) Four NESST clinicians serve in supervisory, consultation, and training roles in the state-wide effort. In 2020, based on the success of the two-year state-wide pilot, funds were expanded and re-awarded to continue the work for two more years.

Section II: Practice Implementation

Internal Capacity

NESST was created at the Center for Early Relationship Support of JF&CS, and guided by its 20 years of reflective, relationship-based work with vulnerable perinatal families. Some understanding of family- and community-based work will help the provider team conceptualize home-based work with vulnerable parents and infants.

NESST is at its core a two-provider model. This has not meant that two providers serve every family, but that the two types of providers work collaboratively as a team and on most cases. Clinicians have experience and training in the parent-infant relationship and can prioritize the dyadic relationship and mental health needs during clinical work. They have received additional training in substance use disorders and treatment and, where applicable, in reflective supervision and supervision of paraprofessional staff.

When our model was applied state-wide in 2018, we learned several lessons about staffing needs, spurred, at times, by challenges faced at other sites.

- Notably, sufficient clinical capacity is necessary to ensure that the mental health needs of traumatized parents can be attended to, and that reflective supervision can be provided to all team members.
- Maternal Recovery Specialist staff will be most successful when they have sufficient “recovery capital” - tools to support their long-term recovery – as well as extensive training in a peer recovery coach model. (Massachusetts offers a week-long Recovery Coach Academy)
- Sufficient staffing is needed to reach a wide enough geographic service area that referring providers can feel reasonably optimistic that their referral will be accepted. A county, or hospital catchment area, or child welfare region, are reasonable examples.

While a detailed electronic medical record and experience in assessment and data collection with perinatal dyads enabled us to evaluate our work, it is not strictly necessary for direct services success. The agency that houses this program must be open to supporting clients and staff with a history of substance use disorder or be willing to grow into this capacity as the program develops. Agencies who hire people in long-term recovery may need to consider their human resources policies around review of criminal records and allocating medical leave, to name two key policies. Agencies with multiple departments will be most successful when all programs and staff are given the opportunity to learn about substance use disorder and its successful treatment.

Collaboration/Partners

Our most important stakeholders are women impacted by substance use. Our program model relies on the active participation of women who fit this definition as integral staff members of our NESST team. As full participants in every aspect of programming, from planning to service delivery to discussions of process and planning, women with substance use disorder are an active part of our work. They bring their voices on the dual challenges of substance use recovery and parenting to the table and improving our care for families. In order to ensure that they have spaces where their voices are especially amplified and protected, they have a twice-monthly process group, a place to be mindful of experiences of stigma or limitations in the workplace that colleagues without this lived experience might not be aware of.

For the NESST needs assessment in 2013, we interviewed parents, social services providers, hospital staff, substance use experts, and clinicians who referred to other CERS programs. As we transitioned from service planning to delivery, these relationships have evolved into key partnerships for shared referrals and consultations.

During the first three years of NESST operations, we partnered with Boston University School of Social Work (BUSSW) to conduct a pilot evaluation of our work with families who had received NESST services during our first years. This partnership with a major research university has enabled us to think critically about program evaluation, find avenues for publication and dissemination of our learning, and disseminate practice principles through invited talks and lectures.

NESST staff find collaborations with birth hospitals particularly important for identifying potential clients and facilitating successful referrals. These partnerships also yield opportunities for consultation at clinical meetings and teaching at grand rounds. We share client and resource information and offer to meet clients in their healthcare setting when it may enhance their engagement. A final key collaboration is our participation on the District Attorney's regional opioid task forces as well as a statewide Perinatal Quality Improvement Network that focuses on care for this population.

Practice Cost

NESST began with philanthropic funding and a small staff. While we have grown in budget, sources of funding, and staffing over the years, we offer this budget to reflect what we believe is the minimum to have an effective team and meaningful impact.

Budget			
Activity/Item	**Brief Description**	**Quantity**	**Total**
Staff Salary: PD	Masters' level 5+ years experience; leadership, administrative oversight, and supervision	.5 FTE	$30-35K/year
Staff Salary: Clinicians	Masters' level, 2+ years experience; at least one with supervisory skills	1.5-2 FTE	$100-140/year
Staff Salary: MRS	Lived experience in recovery, extensive recovery capital, prior work experience	2-3 FTE	$80-120K/yr
Mileage	Budget reimbursement depending on geographic area for HVs	Varies	Varies
Program Supplies	Emergency supplies or fund for clients, transportation vouchers, "traveling toys" for HVs		$2K/year
Agency overhead	Rent, technology, mobile phones, publicity etc.	Varies up to 20%	Estimate 20% of total
		Total Amount:	**About $250K/yr**

Practice Timeline

Practice Timeline				
Phase	**Description of Activity**	**Date/ Timeframe**	**# of hours needed to complete/ oversee activity**	**Person(s) Responsible**
Planning/ Pre-implementation	Assessing Readiness in Agency/Community	Months 1-6	20 hours/week	Project Director; Evaluator (internal or outside partnership)
	Hire and Train Clinical Staff	Months 3-9	6 hours/week	Project Director; Clinical leadership across agency/partners
	Hire and train Recovery Specialists	Months 6-12	12 hours/week	RS supervisor, outside recovery-focused agencies
	Secure Funding	Months 1-6	Varies	Varies
Implementation	Active engagement with stakeholders	Year 1 & 2	5 hours/week	Project Director, senior agency leadership
	Training/learning partnerships with traditionally “siloed” providers	Year 1 & 2	3 hours/week	Project Director, Clinicians
	Deliver services to clients	Ongoing	2+ FTE Clinicians; 3+ FTE Recovery Specialists	Clinicians, Recovery Specialists

	Supervision and team "cross-pollination"	Ongoing	1 hour per week supervision + 1 hour per week team/meetings	Team
Sustainability	Long-term financial sustainability	1 year before end of current funding	6 hours/week	Agency leadership; Project Director
	Dissemination of Program Resources to Other Providers	Year 2 and beyond	2-4 hours/week	Clinicians, Project Director, RS Supervisor

Resources Provided

The following are the resources we use most often; examples of some are attached and we would be happy to share internal program documents we have developed over our history with others:

- Publicity materials: informational flyer for providers; list of available trainings (1, 2)
- Intake materials: Clinical intake questions; agency-required paperwork; client strengths and needs questions
- Intervention materials: Plan of Safe Care (3); Client-driven treatment plan; notes to monitor goal-related progress, referrals made
- Program materials: Common resources to share with clients [will vary by program, but include recovery, housing, child-care referral, food and basic needs security, applications for benefits, etc.]
- Webinar and Publication:
    - AIA National Resource Center Webinar: Shame, Guilt and Fear: Understanding and Working with the Complex Feelings of Mothers of Substance-exposed Newborns (link to view webinar: https://www.youtube.com/watch?v=xoS5ax5ZDss&t=6s)
    - Spielman, E., Herriott, A., Paris, R., & Sommer, A. (2015) Building a model program for substance exposed newborns and their families: From needs assessment to intervention, evaluation and consultation. Zero to Three, 36(1), 47-56. (link: http://bit.ly/zttNESST)

Lessons Learned

Assets, challenges, and lessons learned:

From the initial needs assessment onward, Project NESST has been built around an ongoing process of learning from the work—listening to clients, stakeholders, staff; developing program structures; implementing strategies; tracking the work; building on what's going well; reflecting on what's not going so well; problem solving trouble spots; shifting resources; sharing lessons

with diverse audiences. Taking time for reflection and creativity, challenges can be understood, mitigated, and become assets. Several examples highlight this cycle of learning and change.

Lessons from data tracking and evaluation:

- During data collection with BUSSW we used the Life Stressors Checklist – Revised (LSC-R) to gather the number of traumatic experiences women endorsed. The mean was over 12, suggesting we serve a population with extremely high levels of trauma exposure and chronicity. We have used this data as well as clinical experience which supports the finding, to heighten the importance of trauma-based treatment in our clinical work. We provide psycho-education, support coping strategies, normalize trauma responses, help to support parent-infant relationships marked by traumatic occurrences, refer for additional specialized trauma treatment, and help women establish links between trauma triggers and possible relapse to substance use.
- NESST and DEL staff undertook an internal process evaluation in 2018, using two years of data from our electronic record system. In focusing on what was working well in our intake process, we discovered that for some clients, multiple outreach attempts (>3) led to successful engagement, and that this might explain an overall high rate of engagement for referred clients (>50%). As a result, we continue to offer active, flexible outreach despite the level of staff time it requires. We also learned that pregnant women were more likely than others to engage in our program and increased our outreach efforts to providers serving these women.
- In thinking about next step possibilities for evaluation, we hold in mind lessons that relate to the heterogeneity of the NESST population, the value of flexibility in our intervention (and the impacts of this flexibility on evaluation considerations), and the limitations of existing meaningful measurement for this population. When clients enter a program with different needs and baseline realities, it is challenging to have a "one size fits all" set of measures to evaluate outcomes. In addition, assessing the important outcomes related to improving parenting and the parent-child relationship bumps up against the realities of both what's feasible in a community intervention (rather than a lab setting) and how few measures exist for parenting of very young children.

Lessons from direct services:

- For both providers and parents, tolerating strong emotions is both challenging and necessary in this complex work; providers find that engagement is more successful, and parents learn both self-compassion and compassion for their children's emotional dysregulation. A review of our clinical notes and treatment plans shows work on difficult feelings as a major theme. Given what we know about substance use disorder disrupting regulatory capacities, and the importance of regulatory capacities in parenting, it makes sense that this is both a vulnerability for our clients and one they seek help in addressing. Reflective supervision and mindful self-regulation support providers in their own emotion regulation, creating space for them to bring tools for mindfulness and curious observation to the work with parents.
- Staff working with parents in recovery encounter frequent situations of potential risk to parent and/or child. Balancing the needs of parent and child can represent a significant challenge and stir strong emotions for the provider. Holding the responsibility for child

safety while understanding the vulnerability to relapse can be a source of high stress for the clinician and potential rupture for the treatment relationship. Our approach to risk management has evolved as we have learned how critical it is to address issues of relapse prevention and safety from the start and to build a strong therapeutic alliance that can hold difficult conversations. We share with the parent our observations of "states of arousal" without attribution of cause. We work on parents' evaluation of safety and danger and we bring their attention to the questions of impact on the child. All situations of risk are discussed in supervision and supervisors support clinicians in managing their own emotions, in considering what can be known and what is uncertain, and in making decisions regarding child protective services when indicated.

- In interviews and when asked to speak about their experiences with NESST, clients mention that support in meeting their own concrete goals is valuable to them. Clients name achievements like making rent payments on time, completing educational courses, becoming certified recovery coaches themselves, and meeting their children's basic needs for the first time. We have come to understand advocacy, connection to resources, and facilitating the reduction of financial and environmental stressors as key to our work.
- Staff consistently report during supervision and staff meetings that working as part of a two-provider model, in a team where there are two distinct sets of skills and training, is a benefit to the work. Clinicians enhance their knowledge about the processes of addiction and recovery; peer recovery specialists learn a reflective approach to home-based work. As articulated in the Internal Capacity section, we have learned that peer work is best supported in the context of a strong clinical presence. Our current pilot study with Child Trends will yield an understanding from the client perspective of the experience of a two-provider team.
- Issues related to separation and reunification are common in our NESST work. We have learned to listen closely to the ways that grief about a long history of losses may underlie the anger at a current removal. We work at gently challenging possible distortions of the situation and encouraging consideration of the baby's needs. Our experience supports our belief and our message to parents that disrupted relationships can be repaired and we commit to supporting parents and their children in finding their way to repair.

Lessons from training and advocacy work

- Many NESST parents have experienced relationships with healthcare, child protection, and other systems of care that have felt stigmatizing and blaming. NESST staff have developed trainings for a wide range of audiences, bringing the experiences of parents to providers, indirectly through interview quotes and directly through participation from our Maternal Recovery Specialists. We have learned both of the interest health and social service providers have in learning from women's lived experience of parenting in recovery and of the impact this can have on attitudes and practices in systems of care.

Next Steps

As we move forward in considering evaluation possibilities, and based on lessons learned from prior efforts, we have shifted our focus to a client-centered goal-setting approach that respects the individuality of client goals and process. We are interested in understanding how clients view their initial needs in entering the program, how these may change over time, and if/when/how they meet their chosen goals. This approach is grounded in research findings which

suggest that in complex populations where disease impacts multiple domains of functioning, patient-centered outcomes may be most meaningful in terms of clinical impact (Van Der Eijk et al, for IOM, 2011) In our new data collection system, we have defined potential areas of focus for the intervention: emotion regulation; self-understanding; life skills/self-care; transition to motherhood; parent-child relationship; relationship with family/partner; recovery; and resources/concrete supports. In collaboration with their NESST providers, clients will set goals and clients' progress towards these personalized goals will be regularly evaluated and tracked in our data system. In addition, we will continue to work with DEL to mine our data collection system for understanding what pieces of our NESST intervention are working for which group of clients.

Through our funding from the Department of Public Health, we are currently in the first stages of a small qualitative study of our current participants' views of the program. We are interested in understanding the ways that clients describe their work with their providers, varying by whether they were seeing a NESST clinician alone, a Maternal Recovery Specialist alone, or had support from both. The interview protocol developed by Child Trends, our partner in this study, uses our list of intervention goals to ask clients for "ratings" along a scale reflecting on the degree of help they received from their providers in different areas. Project NESST is unique in having both clinician and peer staff working closely together as a team and we hope this study will contribute to understanding the strengths and potential limits of this model.

We continue to be interested in deepening our understanding of the ways that the NESST intervention impacts the parent-child relationship. In 2018, we collaborated with Child Trends in writing a proposal to SAMHSA that would have expanded the work of NESST in direct services and training. Although not ultimately successful in being funded, we used the opportunity to map an evaluation that felt meaningful and feasible. In terms of client outcomes (in addition to goal attainment as described above), we proposed piloting the use of DC0-5 Axes II and V (Zero to Three, 2016) for assessing treatment outcomes related to parent-child relationship and child development. This new diagnostic manual for mental health and development disorders of infancy and early childhood includes a framework for clinician assessment of the relationship context for a child's development. Axis II provides a systematic way to characterize the key dimensions of each caregiving relationship and the infant/young child's contribution to the relationship. Axis V offers a method for clinician assessment of a child's developmental competencies across a broad range of domains. If we secure additional funding in the future, we would be very interested in training in the use of DC0-5 Axis II and V for their potential viability as useful measures of program impact.

Practice Contact Information
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Resource 1: Overview for Providers

Project NESST®

Newborns Exposed to Substances: Support and Therapy

Project NESST offers support for substance-exposed newborns and their families.

Services are flexible, individualized to meet each family's needs, and may include:

- Meetings to support physical and emotional health during pregnancy and help plan for baby's arrival
- Support during the baby's hospital stay and the transition from hospital to home
- Infant-parent therapy sessions in the home, office, or community
- Support and case management services from a Maternal Recovery Specialist who can offer connections to community resources, including recovery services
- Consultation to address the baby's unique development, sleep, and feeding needs,including calming and soothing strategies such as infant massage

We work with parents, caregivers, and infants to address the impact of substance use and trauma on parents' mental health, the early parent-child relationship, and infant development. Services are available **free of charge** to families of all faiths and races throughout Greater Boston who are caring for infants who were exposed to opiates, cocaine, prescription medications, or other substances that may have contributed to challenges in the infant's postpartum course or in the parent-infant relationship.

Clinicians are also available to provide technical assistance and training to interested community partners on relationship-based treatment and care for these newborns and their families.

For more information or to make a referral, please contact the NESST Intake Coordinator at NESST@jfcsboston.org or 781-693-5006.

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Waltham Headquarters | Brighton | Canton | Central MA | North Shore

Resource 2: Training Menu

Infant-Parent Training Institute

Project NESST Newborns Exposed to Substances: Support and Therapy®
Training Opportunities

Project NESST offers support to substance-exposed newborns and their care-givers. We work with parents, caregivers, and infants to address the impact of substance use and trauma on parents' mental health, the early parent-child relationship, and infant development. As part of our commitment to supporting families in recovery, Project NESST offers training in a variety of formats to organizations who also serve this vulnerable population.

NESST training opportunities can be tailored to your program's needs. Recent examples include:

Shame, Guilt and Fear: Understanding and Working with the Complex Feelings of Mothers of Substance-Exposed Newborns

Pregnancy, birth and early mothering of a substance-exposed newborn are experiences of emotional complexity. Feelings of guilt, shame and fear are commonplace and often underlie the external behaviors we encounter with mothers with substance-use disorders: secrecy, shifting truths, avoidance and denial. We share findings from our qualitative interview study and our clinical work to illustrate the challenging emotional landscape and suggest ways forward in psychotherapeutic work with mothers in recovery. (2 hours)

Treating Infant-Parent Relationships Impacted by Substance Use Disorders

This training explores the connections between addiction and parent capacities, as well as outlines key treatment components when improving impacted parent-child relationships. We explore promising practices and future directions of care, including program design and funding opportunities. (16 hours)

Home Visiting with Families in Recovery

This training is developed as contracted by the Children's Trust for Healthy Families programs state-wide, and will address the unique challenges that face Healthy Families Advocates when working with young/teen parents in recovery and newborns born exposed to substances. (6 hours)

Bringing "Baby Friendly" Practices to Families Impacted by Medication and Addiction

This training shares the voices of mothers impacted by addiction regarding their experiences with medical care and connecting to their babies. Participants learn about our qualitative study results, program development, and the importance of having a recovery voice when working with mothers in recovery. Trauma, neurobiology, and the development of being a mother are also explored. (2 hours)

From Hospital to Home: Supporting Parents & Infants

This training reviews symptoms of opiate exposure as experienced by newborns, as well as supports for parents and newborns. We review non-pharmacological care principles and offer concrete guidance for materials and strategies for soothing and reducing stimulation. (2 hours)

The Infant-Parent Training Institute is a Training Affiliate of the Cambridge Health Alliance Department of Psychiatry, which is a teaching hospital of Harvard Medical School.

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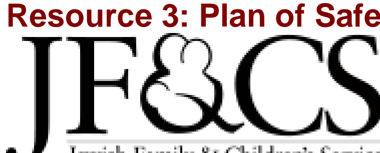
Resource 3: Plan of Safe Care



Caring for Generations

Project NESST®

Planning for Delivery and Safe Care	
Name: Prepared with:	Due date:
About me	
I live at…	
People who live with me…	
Current Medications:	I take this for…

My Support Network		
Family Support		
Name: Relationship: Phone Number:	Name: Relationship: Phone Number:	Name: Relationship: Phone Number:

Friends	
Name: Relationship: Phone Number:	Name: Relationship: Phone Number:
Peer Recovery Support	
Name: Relationship: Phone Number:	Name: Relationship: Phone Number:
DCF Case Worker (if applicable)	

<table>
<tr><td>Area Office:
Name:
Phone Number:</td><td>Supervisor’s Name:
Supervisor’s Phone Number:</td></tr>
<tr><td colspan="2">Healthcare Providers</td></tr>
<tr><td colspan="2">Primary Care Physician
Name:
Phone Number:
Release of information signed: ☐
Letter of Support: ☐</td></tr>
<tr><td colspan="2">OB/GYN
Name:
Phone Number:
Release of information signed: ☐
Letter of Support: ☐</td></tr>
<tr><td colspan="2">Pediatrician
Name:
Phone Number:
Release of information signed: ☐
Letter of Support: ☐</td></tr>
<tr><td colspan="2">Mental Health and Substance Use Treatment Providers</td></tr>
<tr><td colspan="2">Program:
Who do I see?
What do I see them for?
Phone Number:
Release of information signed: ☐
Letter of Support: ☐</td></tr>
<tr><td colspan="2">Medication Assisted Treatment Program
Program:

Prescribing Physician Name:
Phone Number:
Release of information signed: ☐
Letter of Support: ☐

Counselor Name:
Phone Number:
Release of information signed: ☐
Letter of Support: ☐</td></tr>
</table>

Other:
Who do I see?
What do I see them for?
Phone Number:
Release of information signed: ☐
Letter of Support: ☐

Pregnancy and Hospitalization

My Hospital: My Doctor:
Next appointment: Last appointment:
Scheduled C-section Date (if applicable):

Things to talk to my doctor about before my baby is born

- What can I expect during pregnancy? What is prenatal care? Who can help me with the cost of prenatal vitamins?
- Are there childbirth classes I could attend?
- What should I expect during birth and my stay in the hospital?
- Can someone be with me during birth? How many people can be in the room with me?
- What if I feel too much pain during and/or after birth? What are my options for pain medications? What kind of medications are they (narcotic vs non-narcotic)?
- What is rooming-in? Can I room-in with my baby? For how long can I room-in?
- What happens if my baby has to stay in the NICU? Who can be there with me? Is there a social worker that can help me if I have questions?
- Can I stay with my baby in the NICU? What would that look like? Are there special rules?
- If I'm on Medically Assisted Treatment (MAT), will that affect my baby? Has my doctor talked to me about Neonatal Abstinence Syndrome (NAS)? How can I help my baby if goes through NAS?
- Will the hospital call DCF and who can support me if this is necessary?
- What will happen once DCF is called? Can I have a letter of support from my doctor in case DCF asks for it?
- Can the hospital help me get things like diapers or a carriage?

Things to talk to my doctor about after my baby is born
• Let's talk about safe sleep, how should I lay my baby down in the crib? What can be in the crib with my baby? • Can the hospital help me get a car seat if I don't have one or can't afford it? • Is there someone I can talk to about WIC and other public benefits? Are they going to change when my baby arrives? Am I eligible for more assistance? • What happens to my medical insurance? Is my baby covered or is there someone that helps me get my baby coverage? • How soon can I start breastfeeding? What are the benefits of breastfeeding my baby? Is there someone that can help me if I have questions feeding my baby? • What about breastfeeding if I'm on a form of Medically Assisted Treatment (MAT)? • How often will the medical team visit me and my baby? Can I ask to be a part of their conversations about my baby? • What does skin-to-skin mean? How can I do help my baby by doing skin-to-skin? • How can I specify who can and cannot visit my baby?
What are my needs?

Housing:	who is helping me with this?
Food/WIC:	who is helping me with this?
Finances:	who is helping me with this?
Transportation:	who is helping me with this?
Car Seat:	who is helping me with this?
Diapers and wipes:	who is helping me with this?
Other:	who is helping me with this?

Relapse Prevention and Safety Plan

Things that help me stay sober are: (examples: AA or NA meetings, exercising, seeing my therapist regularly, talking to a positive friend, doing something I feel good at or enjoy, etc.)

Things I need to avoid to support my sobriety:

People

Places

Things

I know I'm coming close to relapse when I feel… My body starts to… My thoughts go to… I start to…
Supports that help me with these warning signs: (example, church, talking to certain people, AA or NA, providers, etc.)
If a relapse happens, these are the steps that will get me back on track:
If relapse happens, this is how I will keep my children safe:
If relapse happens, this is how I will keep myself safe:

If there's another reason my NESST provider is concerned about my own or my child's safety (examples, if there are concerns about my ability to stay awake, my mood/health, domestic violence impacting me or my child's safety) they will call:

Someone who can stay with me and my child. Please call the following:

Name: _____________________________ **Phone Number:**___________________________

If I cannot reach these contacts, my NESST provider is will call emergency responders including the DCF hotline (1-800-792-5200) or 911.

If my NESST provider is unable to contact me for an extended period of time she can call:

Name: ______________________________ **Phone Number:** __________________________

Name: ______________________________ **Phone Number:** __________________________

My NESST provider may also call my other providers (examples, DR, DCF worker, MAT clinic, social worker, therapist, etc.).

____ _________________

Signature **Date**