



CHRYSALIS HOUSE, INC.

# Pregnant and Postpartum Women Evaluation Project

Grant Year 03

December 15, 2020

CHRYSALIS HOUSE, INC. PREGNANT & POSTPARTUM  
WOMEN

EVALUATION PROJECT ANNUAL REPORT

GRANT YEAR 03

OCTOBER 1, 2019 – SEPTEMBER 30, 2020

Prepared by:  
The University of Kentucky  
Center on Drug and Alcohol Research  
Lexington, KY 40508

**December 15, 2020**

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## GRANT IDENTIFICATION INFORMATION

*Grantee Federal Identification Number:*

H79 TI 080358

*Project Name:*

Chrysalis House, Inc. Pregnant & Postpartum Women

*Grantee Organization:*

Chrysalis House, Inc.

*Project Director:*

Shannon Bailey, LCADC

1589 Hill Rise Drive

Lexington, KY 40508

E-mail Address: ShannonBailey@chrysalishouse.org

*Evaluation Team:*

Megan F. Dickson, Ph.D.

UK College of Medicine

Department of Behavioral Science

Center on Drug & Alcohol Research

141 Medical Behavioral Science Building

Lexington, KY 40536

Erin McNees Winston, M.P.A.

Center on Drug & Alcohol Research

643 Maxwellton Court

Lexington, KY 40508

## PROJECT TEAM

### *Chrysalis House, Inc.*

Shannon Bailey, LCADC, Project Director/ Project Coordinator

Demi Jacobs, LPCC-S, Primary Therapist

Destinee Austin, CSW, Children's Coordinator

Dawn Brown, BSW, Case Manager

Jessica White, CADC, Admissions & Transitions Coordinator

Karen McClain, PSS, Outreach & Engagement Coordinator

Lisa Ware, PSS, Peer Engagement Specialist

### *University of Kentucky*

Dr. Megan F. Dickson, Principal Investigator and Evaluator

Erin McNees Winston, Project Management Director

Sophia Shalash, Project Director

Dr. Joseph M. Calvert, Data Research Analyst

Hope Tevis, Data Coordinator Sr.

Martha Tillson, Administrative Research Assistant

Tianna Acree, Administrative Research Assistant

## EXECUTIVE SUMMARY

With funding from the Center on Substance Abuse Treatment (CSAT), Chrysalis House implemented an enhanced biopsychosocial model of treatment services for pregnant and postpartum women (PPW) on October 1, 2017. Chrysalis House's comprehensive treatment program addresses the multiple needs of substance using women, and with new funding from CSAT, continued to expand their services to include children and families in a holistic manner. The agency emphasizes evidence-based programs and services associated with successful treatment outcomes for areas including employment, family support, and integrated treatment for co-occurring disorders. Chrysalis House combines cognitive-behavioral therapy (including motivational therapy and Dialectical Behavior Therapy) with counseling to help clients achieve their goals. With funding from CSAT, Chrysalis House has used science and evidence-based curricula for parenting skills and family strengthening as the program evolved from women-centered treatment to family-centered treatment.

This annual evaluation includes two primary components: an outcome evaluation and a process evaluation. The outcome evaluation included an interview at intake (baseline) and at approximately six months post-intake (follow-up). The CSAT Government Performance and Results Act (GPRA) instrument was used for data collection, as well as a local evaluation form, which consisted of several other evidence-based instruments.

During the third year of the project (October 1, 2019 through September 30, 2020), 63 women received services under the CSAT PPW grant<sup>1</sup>. Of these 63 participants, 59 consented to participate in the evaluation and completed a baseline evaluation interview, which is nine more women than the target sample of 50 for the year.

Women in the evaluation were mostly White (96.6%) and about half (52.5%) reported living with someone else prior to entering treatment. Participants who were mothers prior to treatment entry (94.2%) had an average of 2.5 children, and 78.6% reported that at least one of their children was living with someone else due to a court order. Upon entry into treatment, nearly three-fourths of the women (72.9%) were pregnant with an average gestational age of 22.7 weeks. Most of the women (84.7%) were unemployed during the 30 days before entering treatment. Methamphetamine was the most commonly used substance, with 61.0% of the women reporting use during their past 30 days on the street. This was followed by marijuana (47.5%) and heroin (42.4%) use. About one-third of participants indicated that their health was fair or poor (32.2%) prior to entering treatment. They also reported an average of 18.2 unprotected sexual contacts during the 30 days before entering treatment, 11.9 of which were with a partner who was high on substances and 10.8 with a partner who injects/has injected drugs. Lastly, although a minority of women reported mental health treatment (22.0% reported being prescribed medication for a psychological or emotional problem, and 6.8% had received outpatient mental health treatment in the past 30 days), about three-quarters reported experiencing depression (71.2%) and/or anxiety (79.7%) in the last 30 days.

Mothers were eligible for a follow-up interview between five and eight months after their baseline intake date. From the start of the grant (October 1, 2017) through September 30, 2020, 152 women were eligible for a follow-up interview (i.e., had reached six months post-baseline) and a total of 115 women had completed the interview for an overall follow-up rate of 75.7%. All but five of the 115 women who completed follow-up interviews reported 30-day abstinence from alcohol and illegal drugs. In addition, the percentage of participants who reported mental health problems decreased from baseline to follow-up. Specifically, the percent of participants reporting depression

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<sup>1</sup> Admissions were suspended in the month of April due to COVID-19.

decreased from 71.2% to 27.0% at follow-up, and those reporting anxiety symptoms decreased from 79.7% to 49.6%. Participants also reported overall increases in core measures of quality of life.

The purpose of the second project component, the process evaluation, was to assess project implementation using qualitative interviews with project administrators, project staff, and project participants. Process evaluation findings included the following key themes from project administrators/staff: (1) Grant funds during the third year of implementation allowed Chrysalis House to expand and enhance the services it provided over the grant year; (2) Staff continued to prioritize family-centered services as they shifted away from a client-specific approach; and (3) Staff look forward to the next grant year and described specific plans to improve treatment services delivered to clients and their families.

Participants receiving services also participated in the process evaluation and the following themes emerged from their responses: (1) An internal desire for positive change was cited as a primary motivation for engaging in treatment services at Chrysalis House; (2) Clients described the comprehensive services offered to them and their families, of which, nurturing and prenatal care classes were universally acclaimed; and (3) Clients rated the services provided by Chrysalis House favorably, praising staff for their caring nature and commitment to help.

This evaluation report highlights services provided through the CSAT-funded PPW grant during the current grant year and successes throughout the grant at the Chrysalis House, Inc, including information regarding adaptations due to the current global pandemic to ensure that service delivery was not interrupted. A number of women and their children and families benefitted considerably from agency programming and services.

## OVERVIEW OF CSAT SUPPORTED SERVICES

Consistent with grant goals, most (94.9%) women who entered the PPW Program at Chrysalis House during the third year of the grant were already mothers, and 72.9% of women were pregnant at the time of admission. High percentages of Chrysalis House clients have been involved with the Department of Social Services system and have lost custody of their children (at least temporarily). Many have had involvement with the legal system, and most have few employment skills.

With CSAT funding awarded by this grant, Chrysalis House implemented a biopsychosocial model of treatment as was used as the core of its previous PPW participation. Chrysalis House's comprehensive treatment program addresses the multiple needs of substance misusing women and their families in a holistic manner. The agency stresses programs and services that are evidence-based and associated with successful treatment outcomes, including employment, family support, and integrated treatment for co-occurring disorders. Chrysalis House combines cognitive-behavioral therapy (including motivational therapy and Dialectical Behavior Therapy) with counseling to help clients achieve their goals.

Chrysalis House implemented science- and evidence-based curricula for parenting skills and family strengthening as the program evolved from one of women-centered treatment to one of family-centered treatment. For parents with younger children, Make Parenting a Pleasure (MPAP; Swartz, Seeley, Gau, Singer, & Schroeder, 2016) is used. MPAP is a nationally recognized comprehensive parenting education curriculum that addresses the stress, isolation, and lack of adequate parenting information and social support that many of women in recovery experience. Additionally, Chrysalis House has implemented the evidence-based Nurturing Parenting program (Bavolek, 1985), including Prenatal Families and Nurturing Skills for Families (for children up to age 11). Nurturing Parenting is competency-based, aiming to teach parents nurturing skills as an alternative to abusive or neglectful parenting, evaluating parents' progress continuously to track and chart their successes. For families with older children, Chrysalis House staff also offers Strengthening Families (Kumpfer, 1989), which includes an integrated and early approach to support healthy child development and relationships in families with multiple risk factors for child abuse or neglect. This approach incorporates interventions such as therapeutic child care, life skills, social skills training, resiliency building, and parenting and family relationship enhancement programs that involve children, such as family skills training (Kumpfer, 1998).

The selected approaches acknowledge that the target population is especially vulnerable in areas of family and relationships, having developed norms and expectations that mirror their own family environments. Much of the women's functioning reflects generations of substance misuse, victimization, and co-dependency. Most of the women in this target population have low rates of employment and may lack valuable employment skills, yet are tasked with managing single parent households with incomes well below the federal poverty line. Many women in the target population have previously been involved with treatment and other services and institutions, such as the criminal justice and/or social service system. Most feel a profound sense of isolation and demonstrate poor coping skills. The practices chosen by the Chrysalis House help women and their families achieve recovery while building self-esteem and addressing issues of shame and inferiority.

## Additional CSAT-Supported Services

In addition to support for Chrysalis House's residential substance use treatment services offered to pregnant and postpartum women and their children, funding also supported continuation of several new or recent programs offered by the organization or community partnerships, described below.

### Pre-treatment Services

Chrysalis House works to establish a connection with women seeking services through their peer engagement specialist. The specialist provides phone contact, in-person meetings, referrals to providers for services before admission (including detox, short-term treatment, or outpatient), and transportation if needed. Additionally, a Treatment Services Navigator was added to the admissions team in the last grant year in order to enhance waitlist services. The primary function of the navigator is to increase access to prenatal care and medications for opioid use disorder after the appropriate screenings and diagnoses have been made.

### Evidence-Based Parenting Curriculums

The Chrysalis Child & Adolescent Therapist is trained in the EBP *Parent-Child Interaction Therapy (PCIT)* recommended for children between the ages of 2-7. The therapist works individually with each family to strengthen the parent-child relationship and the ability to effectively guide and direct the child's behavior, set limits, calmly discipline, and restore positive feelings in their interactions. PCIT is the only EBP in which the parent and child are treated together throughout the course of all treatment sessions; it is an intensive parenting intervention and most applicable for parents with significant limitations (e.g., severe trauma, substance abuse, limited intellectual ability, mental health problems), and/or parents at risk for child maltreatment (PCIT International).

The Child & Adolescent Therapist is trained in the EBP *Circle of Security (COS)*. The intervention is individualized for each parent-child relationship through identification of the child's attachment pattern and the parent's caregiving pattern. COS capitalizes on the fact that the caregiver has more ability to change patterns of attachment than does the child. This focus does not imply that the problematic pattern is caused by the caregiver. Rather, the implication is that no matter the age of a child, the most effective intervention for problematic attachment-caregiving patterns may be to focus on the caregiver and work toward shifting the caregiver's patterns of behavior with a child (COS International).

*Promoting First Relationships (PFR)* is incorporated into Chrysalis' parent-child dyad therapy to facilitate strong attachment between parent and child. PFR is a strengths-based EBP based on attachment theory for families of children 0-5 years. PFR seeks to increase caregivers' awareness of the children's social and emotional needs, including their need for a sense of safety and security, as well as increasing caregivers' understanding of their own needs as parents.

### Job Readiness Program

The Job Readiness program at the Chrysalis House has been revamped in the past grant year to provide more person-centered services in an individualized format based on assessment of past job history, skills, education, computer skills, aptitude and individual interests rather than group services.

### Naloxone Training and Kits

Chrysalis House is an active partner with the University of Kentucky in the HEALing Communities Study (HEAL), a multiyear study under a cooperative agreement supported by the National Institute of Drug Abuse. HEAL has provided Chrysalis House with Naloxone training videos, tablets for clients to use to view the videos, and Naloxone kits to keep onsite and to provide to all clients while in treatment and upon discharge.

### **Hepatitis-C and HIV Testing**

Gerri Botts, T-CADC, Chrysalis House Treatment Navigator, conducts onsite Hep C and HIV testing via a partnership with the Kentucky Department of Public Health and AVOL Kentucky. Clients are offered testing upon admission and at any point during participation in Chrysalis House residential or outpatient treatment. Clients are provided counselling prior to administration of the test and appropriate referrals upon receiving results.

### **Prep Academy**

Offered at the Chrysalis House Community Center, Community Action Council's Prep Academy provides inclusive early childhood education programming for children ages birth through three and their families, including critical and expressive thinking skills, self-confidence, problem-solving, creativity, and social and emotional competencies.

### **GET FIT and QUIT**

Eligible clients at Chrysalis House were given the opportunity to participate in the "Get Fit and Quit" program, offered through a partnership with the University of Kentucky College of Nursing, which aims to reduce cigarette smoking and increase physical activity. Specifically, the program consists of ten 90-minute sessions conducted over a span of six months, focusing on smoking cessation and group physical activity.

### **Outreach at Fayette County Health Department Syringe Exchange**

Given the high proportion of Chrysalis House clients reporting recent or lifetime intravenous drug use, conducting outreach at the local syringe exchange program is useful to identify and connect with potential clients. At least once a month, Chrysalis House staff are present at the exchange program (open from 1-4 PM on Mondays, 3-6:30 PM on Wednesdays, and 11 AM-4 PM on Fridays) to offer screening for participants who express an interest in treatment or recovery.

### **Male Mentor Initiatives**

Continued efforts to increase male involvement in women's treatment has supported women's success, both during and after treatment. Staff have made particular efforts to engage fathers, partners, and supportive male adults in parenting groups and weekend activities, especially Family Day. Chrysalis staff can also provide referrals to community partners for men seeking substance use treatment or other case management services.

## EVALUATION OVERVIEW

### OUTCOME EVALUATION & METHOD

Recruitment for the evaluation began when clients completed the “pre-treatment” phase of the program at Chrysalis House. Once the program identified a potential participant, the University of Kentucky Data Coordinator met with the participant within two weeks of treatment entry, provided information about the evaluation, discussed the informed consent forms, and if the participant agreed, administered the evaluation interview. Data collection for the evaluation included an interview at intake (baseline) and at approximately six months post-intake (follow-up). The CSAT Government Performance and Results Act (GPRA) instrument was used for data collection as well as several other instruments. Those instruments are a local evaluation form, the BASIS-24 (Behavior and Symptom Identification Scale), the CJ-CEST (Criminal Justice-Client Evaluation of Self and Treatment), the PSI-SF (Parenting Stress Index – Short Form), the Family Functioning Scale, the Quality of Life Scale, the PCRI (Parent-Child Relationship Inventory), and the BASC-2 (Behavior Assessment System for Children-2<sup>nd</sup> Edition). Participants were only asked supplemental questions about their children with the PSI-SF, the PCRI, and the BASC-2 when they had substantial contact with their children (i.e., living with them or visiting with them at least weekly). In addition, the children’s therapist at Chrysalis House collected child assessment information using the Denver Developmental Assessment and completed the Children’s Discharge Tool to document services received by clients’ children.

During the third year of the project (October 1, 2019 through September 30, 2020), 63 women received services under the grant. Of these participants, 59 women consented to participate in the evaluation and completed a baseline interview. Since the beginning of the grant, 178 participants received services and participated in the evaluation and of those, 148 have been discharged. Of the 148 women who were discharged, 74 completed treatment (50.0%) and 74 women were discharged for other reasons prior to treatment completion (50.0%). Other discharge reasons included leaving against staff advice, being involuntarily discharged due to rule violations or nonparticipation, and being referred to other programs.

Participants were eligible for a follow-up interview between five and eight months after their baseline interview date. From the start of the grant (October 1, 2017) through September 30, 2020, 115 of the 152 women who were eligible for follow-up interviews completed interviews. Given that one woman completed her interview two days outside of the follow-up window, the final follow-up rate was 75.7%.

### PROCESS EVALUATION

The purpose of the process evaluation was to assess grant project activities during the implementation year using qualitative interviews with project administrators, project staff, and project participants. The process evaluation provided descriptive information about program services, perspectives on program successes, and proposed program recommendations. The process evaluation also addressed the extent to which the program matched the proposed grant aims, modifications or deviations from the original plan, factors that led to modifications or changes, and impact of changes to the program.

Process evaluation data were collected at the end of the grant year between August and September of 2020. The methodology included interviews with administrators, staff, and participants. All respondents were interviewed over the phone and reminded that their participation was voluntary and confidential. The interviews were transcribed and then examined to identify common themes within each respondent category. Administrator/staff themes and participant themes were developed based on consistent discussion of constructs across interview respondents.

## EVALUATION SNAPSHOT

50	Target number of clients to receive SAMHSA-funded services over the third year of the project
59	Number of clients served during the third grant year who consented to study participation
118%	GPRa baseline coverage rate
152	Total eligible participants for 6-month follow up*
115	Number of completed GPRa follow-up interviews**
75.7%	GPRa 6-month follow-up rate for eligible participants

\*Does not include participants deceased within follow-up window (n=1).

\*\*One follow-up interview was completed outside of the window and is not included in the follow-up rate.

## PPW PROJECT GOALS

The overall goals of the project include:

**Goal 1:** To ensure that the project implementation and evaluation adhere to objectives and facilitate continuous quality improvement (CQI).

**Goal 2:** To provide residential treatment for 50 pregnant and postpartum women annually, thus providing residential treatment services for up to 250 women and 250 children by the fifth project year.

**Goal 3:** Decrease the use and/or abuse of prescription drugs, alcohol, tobacco, illicit and other harmful drugs (e.g., inhalants) among pregnant and postpartum women.

**Goal 4:** Increase safe and healthy pregnancies, improve birth outcomes, and reduce perinatal and environmentally related effects of maternal and/or paternal drug abuse on infants and children.

**Goal 5:** Improve the mental and physical health of the women and children; prevent mental, emotional, and behavioral disorders among the children.

**Goal 6:** Improve parenting skills, family functioning, economic stability, and quality of life.

**Goal 7:** Decrease involvement in and exposure to crime, violence, and neglect, as well as physical, emotional and sexual abuse for all family members.

## GOAL 1: TO ENSURE THAT THE PROJECT IMPLEMENTATION AND EVALUATION ADHERE TO OBJECTIVES AND FACILITATE CONTINUOUS QUALITY IMPROVEMENT (CQI)

### SUMMARY OF YEAR 03 EVALUATION

The first grant goal aimed to ensure that project implementation and evaluation adhere to project objectives while facilitating Continuous Quality Improvement (CQI). One way in which this goal was met was through ongoing CQI meetings. Monthly CQI meetings were held during the grant implementation year. Regular attendees at the meetings include the Chrysalis House's Project Director, Project Coordinator, Primary Therapists, Children's Therapist, Case Manager, and Waitlist Coordinator. Also in attendance were members of the Evaluation Team from the University of Kentucky's Center on Drug and Alcohol Research including the Evaluator, Project Director, and Data Coordinator.

This goal was further addressed through the dissemination of the evaluation team's data reports at each CQI meeting. Data reports described the number of completed baseline and follow-up interviews and the number of administrative discharges. Women's information reported at CQI meetings included demographics, mental health, substance use history, and the geographic region from which women originated (e.g., rural vs. urban). Tables 1-4 provide a profile of the women who received services during the third grant year

### SUMMARY OF PARTICIPANT CHARACTERISTICS

Table 1 displays characteristics of PPW evaluation participants (N=59). All information was self-reported by women at intake and based on the last 30 days that the women were living on their own, as opposed to in a controlled environment.

On average, women were 28.5 years old and majority White (96.6%). In the 30 days prior to entering treatment, about half of women (52.5%) reported living with someone else, while 16.9% reported living independently. Additionally, 15.3% reported experiencing homelessness, 5.1% reported being in an institution (hospital or jail), and 3.4% reported living in a shelter or halfway house.

**TABLE 1. PARTICIPANT CHARACTERISTICS (N=59)**

<b>DEMOGRAPHICS</b>	
AGE (mean years)	<b>28.5</b>
RURAL RESIDENCE	<b>30.5%</b>
<b>RACE</b>	
White	<b>96.6%</b>
Black	<b>3.4%</b>
Native Hawaiian or other Pacific Islander	<b>1.7%</b>
<b>LIVING ARRANGEMENTS IN THE PAST 30 DAYS</b>	
Someone else's apartment, room, or house	<b>52.5%</b>
Own/rent apartment, room, or house	<b>16.9%</b>
Homeless	<b>15.3%</b>
Institution	<b>5.1%</b>
Shelter or halfway house	<b>3.4%</b>
Other	<b>6.8%</b>
<b>CHILDREN</b>	
Participants with children	<b>94.9%</b>
<i>Of participants with children...</i>	<i>(n=56)</i>
Average number of children	<b>2.5</b>
Percentage of women with children living with someone else due to child protection court order	<b>78.6%</b>
<i>Average number of children living with someone else due to child protection court order</i>	<b>2.4</b>
Percentage of women who reported losing parental rights of any children	<b>35.7%</b>
<i>Average number of children for whom women had lost parental rights</i>	<b>0.7</b>
<b>CRIMINAL JUSTICE INVOLVMENT</b>	
On Probation/Parole	<b>34.5%</b>
Past 30-Day Arrest	<b>28.8%</b>
<b>EMPLOYMENT</b>	
Unemployed	<b>84.7%</b>
Part-time or seasonal	<b>6.8%</b>
Full-time	<b>8.5%</b>
<b>AVERAGE INCOME SOURCES IN THE LAST 30 DAYS</b>	
Non-legal income	<b>\$684</b>
Wages	<b>\$284</b>
Family/friends	<b>\$164</b>
Public assistance	<b>\$92</b>
Disability	<b>\$35</b>
<b>EDUCATION LEVEL</b>	
Less than 12 <sup>th</sup> grade	<b>23.7%</b>
12 <sup>th</sup> grade	<b>40.7%</b>
Some college	<b>35.6%</b>

Women who had children prior to treatment entry (94.9%) reported an average of 2.5 children. Of those women, approximately seventy-nine percent had at least one child in the custody of someone else due to a court order, and more than one-third (35.7%) reported having lost parental rights to at least one of their children.

Slightly more than one-third (34.5%) of women reported being on community supervision (e.g., probation, parole) with 28.8% having been arrested in the past 30 days. These figures represent sharp decreases from the prior grant year (54.5% and 61.9%, respectively) and are more consistent with the first grant year (50.0% and 28.6%, respectively). A majority of women reported past 30-day unemployment (84.7%) with only 8.5% reporting having worked full-time in the past 30 days. The greatest income source listed by women was money obtained through non-legal channels (average of \$684 in the past 30 days), though friends and family also constituted a significant source of money (average of \$164 in the past 30 days). The average monthly income from legal wages was \$284, an increase from \$239 in the previous grant year. Seventy-six percent of women reported having at least a high school degree or equivalent.

## SUBSTANCE USE

Table 2 profiles substances used by mothers during their last 30 days on the street, as reported at treatment entry during the current grant year. The three most-commonly reported drugs were methamphetamine (61.0%), marijuana (47.5%), and heroin (42.4%). This has remained consistent across project years. Many women reported illicit use of prescription drugs in the last 30 days on the street, including 20.3% who reported benzodiazepine (e.g., Xanax) use, 13.6% who reported Suboxone/Subutex use, 8.5% reporting OxyContin or Oxycodone use, and 6.8% reporting Percocet use.

In comparison to the previous grant year, there were increases in reported use of methamphetamine (+7.0%), tranquilizers (+5.1%), marijuana (+4.6%), morphine (+3.5%), heroin (+2.7%), and Oxycontin/condone (+2.2%), while there were decreases in reported use of alcohol (-12.1%), synthetic drugs (-4.6%), non-prescription Suboxone/Subutex (-3.9%), and cocaine/crack (-3.7%).

Almost half of the women (45.8%) during the current grant year reported injecting drugs in their last 30 days on the street – a slight increase (+2.9%) from the previous grant year. Of women reporting past-30-day

**TABLE 2. SUBSTANCE USE AND RECOVERY RESOURCES IN PAST 30 DAYS AT BASELINE (N=59)**

SELF-REPORTED USE IN PAST 30 DAYS	
Methamphetamine	61.0%
Marijuana	47.5%
Heroin	42.4%
Alcohol	8.5%
Benzodiazepines	20.3%
Cocaine/crack	15.3%
Non-prescription Suboxone/Subutex	13.6%
Percocet	6.8%
OxyContin/Oxycodone	8.5%
Synthetic drugs	1.7%
Morphine	5.1%
Codeine	0.0%
Non-prescription methadone	0.0%
Tylenol 2/3/4	1.7%
Inhalants	0.0%
Barbituates	1.7%
Dilaudid	1.7%
Hallucinogens	3.4%
Tranquilizers/sedatives	5.1%
SEVERITY INDICATORS	
Any illicit drug use	89.8%
Both alcohol and drugs on the same day	5.1%
Injected drugs in the past 30 days	45.8%
<i>Of past-30-day injectors (n=27), shared injection equipment in past 30 days</i>	70.4%
OVERDOSE EXPERIENCES	
Ever overdosed	55.9%
<i>Of those reporting overdose (n=33), lifetime # of overdoses (mean)</i>	2.7
Ever seen someone else overdose	76.3%
PAST 30-DAY RECOVERY SUPPORT	
Attended voluntary self-help group	15.3%
Attended religious/faith-affiliated self-help group	11.9%
Attended any other support meetings	10.2%
Interacted with friends/family supportive of recovery	78.0%

injection use, 70.4% reported having shared injection equipment, which represents an increase of more than 22 percentage points from the prior year.

This year, fewer women reported having attended non-religious/faith-affiliated voluntary self-help groups in the 30 days before treatment entry (-11.7%), while more reported attending religious/faith-affiliated self-help groups (+7.1%). There was also an increase of participants reporting attendance at “any other support groups” (+8.6%). More than three-fourths of women (78%) reported they had recently interacted with friends and family who supported their recovery.

Overdose experiences were common among participants, with more than one-half reporting having overdosed in their lifetime (55.9%). Women who had previously overdosed reported a lifetime average of 2.7 overdoses. Additionally, 76.3% of women reported having ever witnessed someone else overdosing.

## MENTAL AND PHYSICAL HEALTH

As shown in Table 3, just over one-third of participants indicated that their health was fair or poor (32.2%) prior to entering treatment, while 42.4% described their overall health as good. Despite more than three-fourths of women reporting past 30-day anxiety symptoms (79.7%) and 71.2% reporting past 30-day depressive symptoms, only 22.0% of women reported being recently prescribed medication for psychological or emotional problems and only 6.8% reported receiving past-30-day outpatient mental health treatment. Additionally, nearly 1 in 10 (8.5%) women reported experiencing past-30-day suicidal thoughts.

Women also reported an average of 18.2 unprotected sexual contacts, 11.9 of which were with a partner who was high on substances and 10.8 with a partner who injects/has injected drugs. In addition, 88.1% of women reported a history of violence or trauma during their lifetime, while nearly one in four women had experienced physical abuse in their last 30 days on the street (23.7%) – both an increase from last year (+11.9% and +6.2%, respectively).

Nearly 90% of women  
had experienced  
violence or trauma.

**TABLE 3. PHYSICAL AND MENTAL HEALTH STATUS (N=59)**

<b>RATING OF OVERALL HEALTH</b>	
Excellent	<b>3.4%</b>
Very good	<b>22.0%</b>
Good	<b>42.4%</b>
Fair	<b>16.9%</b>
Poor	<b>15.3%</b>
Average rating	<b>3.2 (“Good”)</b>
<b>IN THE LAST 30 DAYS, EXPERIENCED...</b>	
Anxiety	<b>79.7%</b>
Depression	<b>71.2%</b>
Cognitive difficulties	<b>54.2%</b>
Prescribed medication for psychological/emotional problem	<b>22.0%</b>
Violent behavior	<b>8.5%</b>
Hallucinations	<b>6.8%</b>
Suicide attempts	<b>0.0%</b>
Suicidal thoughts (n=5)	<b>8.5%</b>
<b>VIOLENCE, TRAUMA, AND PHYSICAL ABUSE</b>	
Ever experienced violence or trauma	<b>88.1%</b>
Experienced any physical abuse in the last 30 days	<b>23.7%</b>
<b>SEXUAL ACTIVITY &amp; RISK</b>	
Engaged in sexual activity	<b>74.6%</b>
Average number of sexual contacts in the past 30 days	<b>19.8</b>
Average number of unprotected sexual contacts	<b>18.2</b>
Average number of unprotected sexual contacts with high partner	<b>11.9</b>
Average number of unprotected sexual contacts with partner who injects/has injected drugs	<b>10.8</b>
Ever been tested for HIV	<b>91.5%</b>
<i>Of those who have been tested, know test results</i>	<b>91.5%</b>

## GOAL 2: TO PROVIDE RESIDENTIAL TREATMENT FOR 50 PREGNANT AND POSTPARTUM WOMEN ANNUALLY

The second goal of the PPW project is to provide residential treatment for 50 pregnant and postpartum women annually, thus providing residential treatment services for up to 250 women and 250 children by the fifth project year. The 59 women who consented to project participation during the third grant year had a total of 142 children who were identified as additional potential service recipients.

### SERVICE PROVISION

As a result of this grant award, the residential substance use, mental health, and employment readiness services traditionally provided to women at the Chrysalis House were able to be enhanced and expanded. Each of the 59 women who participated in the PPW project during the third year, as well as their 142 children, had the opportunity to utilize the services listed in Box 1 as deemed clinically appropriate.

#### **BOX 1. COMPREHENSIVE LIST OF SERVICES PROVIDED TO CHRYSALIS HOUSE CLIENTS**

<b>Clinical services</b>	<b>Clinical Services</b>
<b>Childcare services</b>	Substance use education and treatment
<b>Transportation and Housing services</b>	Individual substance use counseling
Bus passes or taxi vouchers	Group substance use counseling
Permanent housing referrals	Mental health treatment services
Budgeting education	Emotional, sexual, and physical abuse trauma-informed services
<b>Medical Services</b>	Individual psychiatric services
Prenatal healthcare	Peer support services
Postpartum healthcare	Parent-Child Interaction Therapy
Physical exams	<b>Family-focused Services</b>
Urinalysis testing	Mother-child parent/bonding classes
Dental assessments	Mother-child counseling
Medical diagnosing and follow-up treatment	Family therapy services
<b>Employment Readiness</b>	Family education
Resume creating/building	Child and adolescent therapy
<b>Education services</b>	<b>Discharge Planning</b>
GED tutoring and referrals	<b>Aftercare</b>

### SERVICE UTILIZATION AMONG DISCHARGED CLIENTS

In total, 148 women who had consented to participate were discharged from treatment by the end of the third grant year. Seventy-four of the women discharged completed treatment (50.0%), and 74 women (50.0%) were discharged for other reasons prior to treatment completion. Some discharged women received more services than others, due to variation in the overall length of time in residential treatment (average of 136.9 days). Table 5 displays the average number of services received by discharged women, the range of sessions or days, and the proportion of women who received each service at least once before discharge. For example, 100% of discharged women participated in group counseling sessions during their time at the Chrysalis House, with an average of about 133.3 sessions; some women received up to 265 sessions. For substance misuse education, discharged clients received an average of 87.4 sessions, with some receiving up to 175

On average, women stayed in residential treatment for 136.9 days.

sessions. Other services received include family services (average of 36.2 sessions), pre-employment services (average of 15.5 sessions), and individual services coordination (average of 18.1 sessions). Approximately 14% of women also engaged in aftercare services post-program completion.

**Telehealth services were launched during COVID-19.**

Chrysalis House adapted to the COVID-19 pandemic by making several changes to service delivery. A secure telehealth email account and telehealth therapy room were set up to enable outside medical providers (including providers of medication assisted treatment and OB care) to see clients via telehealth. Chrysalis House therapists and case managers also provided some telehealth sessions to minimize contact and provide physical distancing. Women stopped attending outside community support meetings, although they continued accessing support meetings through Zoom and other virtual recovery support groups.

**TABLE 5. SERVICES RECEIVED AMONG DISCHARGED CLIENTS (N=148)**

	Mean Sessions or Days	Range	% of Clients Who Received Service
Residential Rehabilitation (days)	<b>136.9</b>	<b>10-362</b>	<b>100%</b>
Case Management	<b>34.1</b>	<b>0-5</b>	<b>100%</b>
Group Counseling	<b>133.3</b>	<b>8-265</b>	<b>100%</b>
Substance Misuse Education	<b>87.4</b>	<b>5-175</b>	<b>100%</b>
Individual Counseling	<b>19.7</b>	<b>0-63</b>	<b>99.3%</b>
Family Services (e.g., marriage, parenting, child development)	<b>36.2</b>	<b>0-83</b>	<b>99.3%</b>
HIV/AIDS Education	<b>1.6</b>	<b>0-4</b>	<b>99.3%</b>
Other Education Services (e.g., HCV, intimate partner violence)	<b>11.3</b>	<b>0-29</b>	<b>99.3%</b>
Individual Services Coordination	<b>18.1</b>	<b>0-45</b>	<b>98.6%</b>
Pre-Employment	<b>15.5</b>	<b>0-43</b>	<b>79.1%</b>
Employment Coaching	<b>9.6</b>	<b>0-30</b>	<b>76.4%</b>
Family and Marriage Counseling	<b>3.6</b>	<b>0-14</b>	<b>70.3%</b>
Transportation	<b>4.6</b>	<b>0-23</b>	<b>69.6%</b>
Outreach	<b>1.1</b>	<b>0-5</b>	<b>62.2%</b>
Child Care	<b>3.0</b>	<b>0-145</b>	<b>27.7%</b>
Aftercare (post-program completion)	<b>19.1</b>	<b>0-237</b>	<b>13.5%</b>

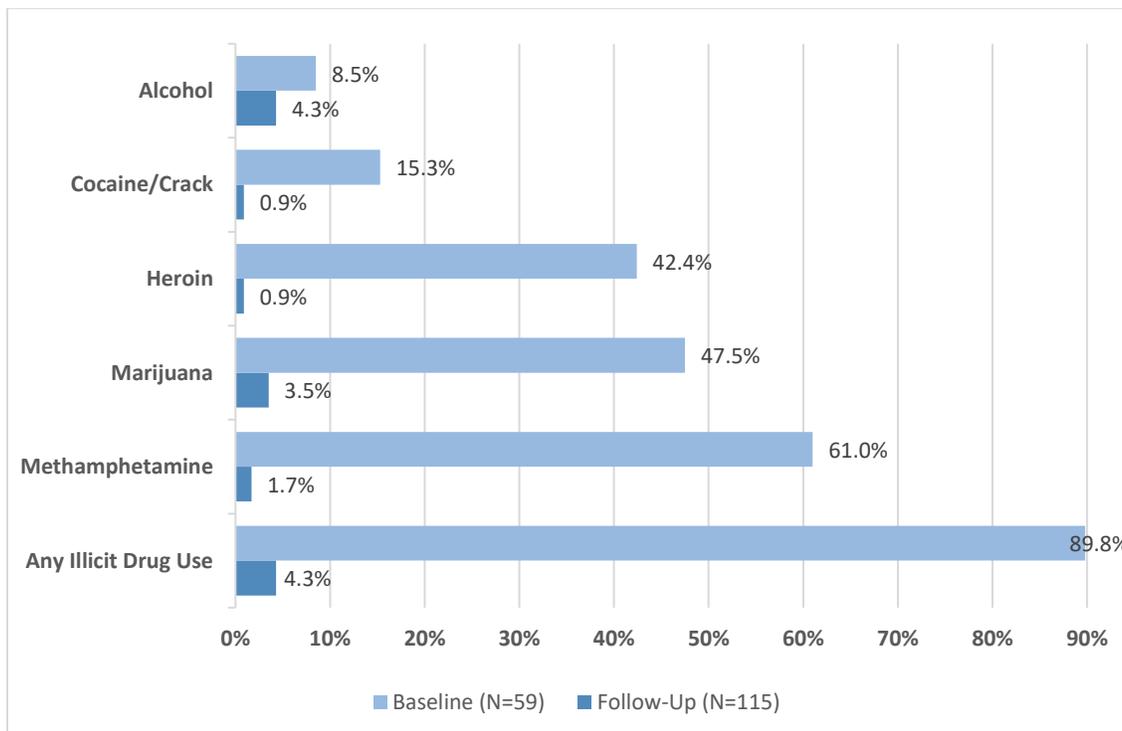
### GOAL 3: DECREASE THE USE AND/OR ABUSE OF PRESCRIPTION DRUGS, ALCOHOL, TOBACCO, ILLICIT, AND OTHER HARMFUL DRUGS AMONG PREGNANT AND POSTPARTUM WOMEN

The third PPW project goal includes achieving a reduction in use and misuse of alcohol and illicit drugs among pregnant and postpartum women. At baseline, 89.8% of women reported past-30-day illicit drug use; the most commonly-reported drugs of use were methamphetamine (61.0%), marijuana (47.5%), and heroin (42.5%).

After treatment, 30-day illicit drug and alcohol use decreased from 89.8% to 4.3%.

Figure 1 shows the proportion of women reporting substance use at baseline in comparison to follow-up. As presented in Figure 1, at 6-month follow-up, alcohol and illicit drug use had decreased. Specifically, only 4.3% (n=5) participants reported past-30-day illicit drug use, including marijuana (3.5%), methamphetamine (1.7%), cocaine and heroin (both 0.9%). Drugs that were reported at baseline but not follow-up are not shown in Figure 1, but include: benzodiazepines, non-prescription Suboxone/Subutex, Oxycontin/Codone, Percocet, morphine, tranquilizers/sedatives, hallucinogens, synthetic drugs, Tylenol 2/3/4, barbiturates, and Dilaudid. Additionally, the percentage of participants reporting alcohol use decreased from 8.5% at baseline to 4.3% at follow-up. These decreases suggest that, for the majority of women, Chrysalis House is successful in supporting clients in achieving and maintaining recovery.

**FIGURE 1. PROPORTION OF WOMEN REPORTING USE OF ALCOHOL AND ILLICIT DRUGS AT BASELINE AND FOLLOW-UP**



## GOAL 4: INCREASE SAFE AND HEALTHY PREGNANCIES, IMPROVE BIRTH OUTCOMES, AND REDUCE PERINATAL AND ENVIRONMENTALLY RELATED EFFECTS OF MATERNAL AND/OR PATERNAL DRUG ABUSE ON INFANTS AND CHILDREN

One way that Chrysalis House has sought to increase safe and healthy pregnancies is the addition of a Treatment Services Navigator to the admissions team. A primary responsibility of the Treatment Services Navigator is to increase access to prenatal care. Planned changes to evaluation procedures will provide more detailed data related to prenatal services and pregnancy outcomes, including the collection of infant's APGAR scores following birth. It is anticipated that this information will be available at the end of the following grant year.

Chrysalis House also seeks to enhance positive outcomes for women and their families over time by providing comprehensive services to infants and children whose mothers are enrolled in the PPW program. Comprehensive clinical, educational, physical health, and family-focused services were offered to all children of PPW participants along with opportunities for additional services, such as recreational or spiritual activities. Children up to the age of three may live at Chrysalis House facilities with their mothers during treatment, while older children are invited to visit every weekend and in the evenings<sup>2</sup>.

Table 6 shows all of the services offered, as needed, to the 142 children whose mothers were PPW program participants during grant year three. As noted in the table, many services were offered on-site with off-site referrals made to community partners where appropriate. In some instances, women and infant needs were addressed using both on- and off-site services. Given that transportation is a common barrier for many Chrysalis clients, the ability to offer services on-site – or referrals off-site to known partner organizations – is a valuable resource for many mothers and children.

**TABLE 6. COMPREHENSIVE SERVICES OFFERED TO PPW PARTICIPANT CHILDREN AS NEEDED**

CLINICAL SERVICES	
Developmental assessments	On-site
Mother/father/child counseling/classes	On-site
EDUCATIONAL SERVICES	
Special/remedial education	Off-site
Preventive education	On-site
PHYSICAL HEALTH SERVICES	
Physical exam by a healthcare professional	Off-site
Laboratory testing	Off-site
Immunizations	Off-site
Vision screening	Off-site
Speech and hearing assessments	Off-site
Dental assessment	Off-site
Nutritional education	Both
Medical diagnosis & follow-up treatment	Off-site
Physical/occupational/speech therapies	Off-site
FAMILY-FOCUSED SERVICES	
Mother-child parenting/bonding classes	On-site
Individual nurturing	On-site
Child and adolescent therapy	On-site
Psychosocial assessment	On-site
Aftercare planning	Off-site
Parent-Child Interaction Therapy (PCIT)	On-site
OTHER SERVICES	
Recreational activities	Both
Spiritual activities	Off-site

<sup>2</sup> Chrysalis House restricted minor children from visiting during critical "red" incidents of COVID-19.

## CHILD FUNCTIONING

Part of grant Goal 4 includes assessing and addressing the perinatal and environmental effects of parental substance misuse on infants and children. In order to help measure functioning across domains for the children of women receiving PPW services, the Parental Behavior Assessment System for Children-2<sup>nd</sup> Edition (BASC-2) was used. Women were asked to respond to items on the BASC-2 Parent Rating Scale for each child between the ages of 2-18 with whom they had regular contact (i.e., weekly or more) within the past six months. The BASC-2 includes subscales that indicate behavioral functioning and well-being for particular domains. Table 7 displays ranges of standardized T-scores of the BASC-2 for domains of functioning that can become adversely impacted as a result of parental or environmental exposure to substance use and substance use-related risks (e.g., stress). Changes from baseline to 6-month follow-up are noted. Score ranges are presented for each of the three age groups in accordance with BASC-2 scoring wherein children's scores are compared to aggregated scores of children of a similar age.

Children's social functioning improved in many areas.

For the BASC-2, raw subscale scores are converted to standardized T-scores (with the mean equal to 50). A standardized T-score falling between 41 and 59 is considered average or typical. Two-thirds of children in the general population will fall within this normative range. T-scores that are one or two standard deviations apart from the mean indicate the child is either "at risk," "at high risk," or "at very high risk." For clinical scales (i.e., somatization, hyperactivity, and withdrawal), higher scores represent greater risk, while for adaptive scales (i.e., activities of daily living, social skills, and functional communication), lower scores indicate areas of concern.

The ranges of scores for preschool age children (2-5) at baseline (N=6) were particularly wide, with scores falling both higher and lower than average T-score ranges. However, across all age groups, ranges of scores for many scales narrowed between baseline and follow-up, suggesting that participants' children are becoming comparable with the general population of age-matched children. Exceptions included activities of daily living and withdrawal for child-age children (6-11); withdrawal and functional communication for adolescents (12-18); and hyperactivity for all three age groups. All other domains exhibited indicators of improved functioning.

**TABLE 7. STANDARDIZED NORMATIVE T-SCORE RANGES FOR BASC-2 PHYSICAL HEALTH AND SOCIAL FUNCTIONING SUBSCALES AT BASELINE AND 6-MONTH FOLLOW-UP\***

	Baseline	Follow-up
<b>PRESCHOOL AGE (AGES 2-5)</b>	(N=6)	(N=7)
Somatization	<b>38-73</b>	<b>48-71</b>
Activities of Daily Living	<b>35-74</b>	<b>44-69</b>
Hyperactivity	<b>40-65</b>	<b>40-83</b>
Withdrawal	<b>41-77</b>	<b>43-67</b>
Social Skills	<b>31-72</b>	<b>43-67</b>
Functional Communication	<b>41-68</b>	<b>37-64</b>
<b>CHILD AGE (AGES 6-11)</b>	(N=4)	(N=4)
Somatization	<b>47-61</b>	<b>39-59</b>
Activities of Daily Living	<b>54-60</b>	<b>35-65</b>
Hyperactivity	<b>37-61</b>	<b>40-64</b>
Withdrawal	<b>35-45</b>	<b>41-75</b>
Social Skills	<b>60-66</b>	<b>38-58</b>
Functional Communication	<b>62-62</b>	<b>46-66</b>
<b>ADOLESCENT AGE (AGES 12-18)</b>	(N=3)	(N=5)
Somatization	<b>43-76</b>	<b>41-69</b>
Activities of Daily Living	<b>51-53</b>	<b>47-59</b>
Hyperactivity	<b>46-62</b>	<b>37-53</b>
Withdrawal	<b>36-57</b>	<b>34-57</b>
Social Skills	<b>40-52</b>	<b>44-70</b>
Functional Communication	<b>49-64</b>	<b>51-69</b>

\*Average T-score range for BASC-2= 41-59

## CHILD DEVELOPMENT

As appropriate, children were also administered the Denver II, a developmental screening test designed for use by clinicians, teachers, or early childhood professionals to monitor the development of infants and preschool-aged children. The Denver II consists of 125 tasks across four developmental domains: Personal-Social (e.g., getting along with others), Fine Motor-Adaptive (e.g., coordination and manipulation), Language, and Gross Motor (e.g., sitting, walking, or jumping). If tasks are passed, performance may be scored as “normal” or “advanced” for a child’s age; if failed, scores may indicate “caution” or “delay.” “Caution” indicates that 75-90% of children at that age (from the standardization sample) passed the task, whereas “delay” indicates that 90% passed.

Between March 2018 and March 2020, 40 children were administered the Denver II. Of those children, one was untestable (i.e., refused to complete too many tasks); of the remaining 39, 84.6% scored within the normal range, while the remaining 15.4% were “suspect” (i.e., two or more cautions and/or one or more delays). All children who test as “suspect” are given a later opportunity to retest (to ensure that transient factors, e.g., mood, fatigue, hunger, did not adversely skew test results) before being referred to appropriate interventions.

Although “advanced” scores do not count towards a child’s overall scores, several children of Chrysalis House clients scored in the “advanced” category for all four domains. Specifically, 12.9% were advanced in Personal-Social, 18.0% were advanced in Fine Motor-Adaptive, 5.1% were advanced in Language, and 5.2% were advanced in Gross Motor. A small proportion of children evidenced cautions (2.6-7.7%) or delays (0.0-5.1%) in various domains, but in general, the large majority of clients’ infants and preschool-aged children were developmentally on-track.

**TABLE 8. CHILD SCORES ON DENVER II DEVELOPMENTAL ASSESSMENT BY DOMAIN (N=39)**

PERSONAL-SOCIAL	
Advanced	12.9%
Actual cautions	2.6%
Actual delays	0.0%
FINE MOTOR-ADAPTIVE	
Advanced	18.0%
Actual cautions	7.7%
Actual delays	5.1%
LANGUAGE	
Advanced	5.1%
Actual cautions	0.0%
Actual delays	5.1%
GROSS MOTOR	
Advanced	5.2%
Actual cautions	5.0%
Actual delays	5.1%

## SERVICE UTILIZATION AMONG CLIENTS’ CHILDREN

Beginning in July 2018, the Children’s Coordinators at Chrysalis House completed Children’s Discharge Tools for all children of clients who had the opportunity to receive services. At the end of the current grant year, 126 children, belonging to

44 clients, had discharge tools completed. Of these children, 42.9% resided on-site in residential treatment

with their mothers. Of children who lived off-site, 65.3% visited their mothers in treatment at least monthly. The majority of children received individual nurturing (71.4%), mother-child parenting/bonding classes (93.6%), and mother/family/child counseling or classes (97.6%) on-site at Chrysalis House.

More than 93% of clients’ children benefited from parenting classes or counseling.

42.9% of children resided on-site with their mothers.

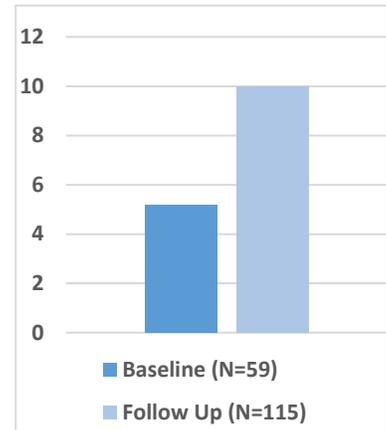
## GOAL 5: IMPROVE THE MENTAL AND PHYSICAL HEALTH OF THE WOMEN AND CHILDREN; PREVENT MENTAL, EMOTIONAL, AND BEHAVIORAL DISORDERS AMONG THE CHILDREN

### WOMEN'S MENTAL HEALTH

Figure 2 shows the increase in the number of women who were prescribed medication for mental health problems during the 6-month period between treatment intake and follow-up: at baseline, participants reported being prescribed medication for mental health problems an average of 5.2 days, whereas that average increased to 10.0 days at follow-up. This is an indication that participants' mental health problems are being comprehensively addressed during treatment.

Table 9 supports this, showing that the average number of days out of the past 30 that women reported experiencing mental health problems decreased between baseline and 6-month follow-up across all measures. For instance, participants reported experiencing symptoms related to depression, anxiety, and cognitive difficulties (e.g., trouble understanding, concentrating, and remembering) for significantly more days at baseline compared to follow-up. The average number of days that anxiety symptoms were experienced decreased from 18.6 days at baseline to 10.2 days at follow-up. Additionally, the days that depressive symptoms

**FIGURE 2. CHANGE IN DAYS PRESCRIBED PSYCHIATRIC MEDICATION**



**TABLE 9. AVERAGE NUMBER OF DAYS OF REPORTED MENTAL HEALTH PROBLEMS AT BASELINE AND AT 6-MONTH FOLLOW-UP**

	Baseline (N=59)	Follow-up (N=115)
Anxiety	18.6	10.2
Depression	13.7	4.3
Cognitive Difficulties	12.6	4.2
Trouble Controlling Violent Behavior	1.3	0.0
Hallucinations	0.8	0.1

were experienced by women decreased from an average of 13.7 days at baseline to an average of 4.3 days at follow-up. The average number of days that women experienced cognitive difficulties also decreased from 12.6 days at baseline to 4.2 days at follow-up. On average, fewer women also reported being bothered by mental health/emotional problems at follow-up (79.0%) than at baseline (95.8%).

### CHILDREN'S MENTAL HEALTH

The BASC-2 was also used to assess outcomes for grant Goal 5. Table 10 displays results of BASC-2 subscales for domains related to children's mental health and behavioral functioning. Women were asked to respond to statements about their children in the areas of anxiety, depression, attention problems, aggression, adaptability (to new situations), and atypicality (e.g., seems unaware of others; babbles to self). For all scales except adaptability, higher scores indicate greater risk. At baseline, standardized scores indicate that participants' children are "at risk," "at high risk," or "at very high risk" for most of these domains. Anxiety, atypicality, and depression were among the ranges of standardized T-scores that diverged most from general population scores.

At 6-month follow-up, score ranges indicate improvements for many domains. For preschool age children (2-5), score ranges decreased for all domains except attention problems. Although all subscale ranges still fell outside of the

range of average T-scores (41-59), the narrowing of score ranges represents a significant improvement. Children ages 6-11, however, demonstrated broader ranges and higher scores across many domains, though decreases in atypicality and aggression were noted. Finally, adolescents showed improvements across all domains from baseline to follow-up, with the exception of aggression, which increased slightly.

**TABLE 10. STANDARDIZED NORMATIVE T-SCORE RANGES FOR BASC-2 MENTAL HEALTH SUBSCALES AT BASELINE AND 6-MONTH FOLLOW-UP\***

	Baseline	Follow-Up
<b>PRESCHOOL AGE (AGES 2-5)</b>	(N=6)	(N=7)
Anxiety	<b>38-66</b>	<b>48-76</b>
Depression	<b>46-52</b>	<b>43-74</b>
Attention Problems	<b>36-63</b>	<b>35-69</b>
Aggression	<b>38-51</b>	<b>34-64</b>
Adaptability	<b>34-61</b>	<b>34-58</b>
Atypicality	<b>39-63</b>	<b>39-76</b>
<b>CHILD AGE (AGES 6-11)</b>	(N=4)	(N=4)
Anxiety	<b>32-61</b>	<b>45-66</b>
Depression	<b>36-51</b>	<b>42-64</b>
Attention Problems	<b>34-49</b>	<b>36-69</b>
Aggression	<b>38-54</b>	<b>41-54</b>
Adaptability	<b>54-71</b>	<b>28-58</b>
Atypicality	<b>38-44</b>	<b>38-58</b>
<b>ADOLESCENT (AGES 12-18)</b>	(N=3)	(N=5)
Anxiety	<b>43-59</b>	<b>43-55</b>
Depression	<b>42-60</b>	<b>38-56</b>
Attention Problems	<b>45-55</b>	<b>38-50</b>
Aggression	<b>39-59</b>	<b>41-61</b>
Adaptability	<b>45-63</b>	<b>47-69</b>
Atypicality	<b>47-58</b>	<b>45-50</b>

\*Average T-score range for BASC-2= 41-59

atypicality and aggression were noted. Finally, adolescents showed improvements across all domains from baseline to follow-up, with the exception of aggression, which increased slightly.

Improved ranges among preschool-age and adolescent children are promising, but results for children age 6-11 should be interpreted with caution, given the limited sample size at follow-up (N=4). Furthermore, regarding all results, it should be noted that the BASC-2 is not always a direct pretest/post-test measure. For instance, a participant may have regular contact with their 6-to-11-year-old child before entering treatment, yet not have regular contact during treatment, and thus not complete a BASC-2 for that child at follow-up. Indeed, it should be noted that children in older age groups are not living with women on-site, and thus may not receive the same types of targeted services as younger children. Nonetheless, it is important to consider potential effects of treatment on participants' children across all age groups, with the hopes that women's transition to recovery and new skills in parenting and life will have a positive effect on their children's functioning.

## GOAL 6: IMPROVE PARENTING SKILLS, FAMILY FUNCTIONING, ECONOMIC STABILITY, AND QUALITY OF LIFE

Table 11 shows the average scores from baseline to follow-up of three scales that capture parenting skills, family functioning, and quality of life. They are the Parenting Stress Index, the Family Functioning Style Scale, and the Quality of Life measure. The Parenting Stress Index was completed by all participants who had regular contact with at least one child in the past six months, whereas the Family Functioning Style Scale and Quality of Life Scale were completed by all participants. Three participants at baseline provided incomplete data for the Quality of Life Scale and were excluded from analysis; 19 participants at follow-up completed only the GPRA instrument due to time or access constraints and were not administered any measures below.

**TABLE 11. SCALE SCORES FOR PARENTING STRESS, FAMILY FUNCTIONING, & QUALITY OF LIFE AT BASELINE AND AT FOLLOW-UP**

	Baseline	Follow-Up
<b>Parenting Stress Index Scale</b> (average score) (scale range 36-180)	<b>81.0</b> (n=16)	<b>77.4</b> (n=69)
<b>Family Functioning Style Scale</b> (average score) (scale range 26-130)	<b>82.5</b> (n=57)	<b>93.9</b> (n=88)
<b>Quality of Life Scale</b> (average score) (scale range 8-48)	<b>23.1</b> (n=55)	<b>38.1</b> (n=88)

By follow-up,  
women's perceived  
quality of life had  
increased by 64.9%.

Average scores on the Parenting Stress Index Scale decreased from baseline (81.0) to follow-up (77.4), indicating an improvement in experiences of parenting-related stress. Average scores in the area of family functioning increased by 11.4 points, while average quality of life score saw the largest increase (15.0 points, or 64.9%). Each of these scores is an indication that outcomes improved among PPW participants from baseline to 6-month follow-up.

In Table 12, Parent-Child Relationship Inventory (PCRI) subscale scores indicating self-reported parenting skill proficiency are presented. According to the PCRI, from baseline to follow-up, there was little change (less than a one-point difference) in scores for areas of satisfaction with parenting, communication, autonomy, role orientation, and social desirability (a validity measure). However, participant scores improved in areas of parental support (a 1.69-point increase), involvement (a 2.38-point increase), and limit-setting (a 1.29-point increase). Although these shifts are small, they nonetheless reflect changes in a positive direction, likely due to participation in psychoeducational groups, individual and group therapy, and other services participants received during treatment where parenting and related topics were discussed. Overall, these trends suggest that services offered through Chrysalis House are helping clients feel more capable, connected, and empowered as mothers.

**TABLE 12. AVERAGE SUBSCALE SCORES FROM THE PCRI AT BASELINE AND AT FOLLOW-UP\***

	Baseline (N=15)	Follow-Up (N=66)
Parental support	<b>22.71</b>	<b>24.39</b>
Satisfaction with parenting	<b>32.88</b>	<b>33.30</b>
Involvement	<b>43.24</b>	<b>45.62</b>
Communication	<b>27.47</b>	<b>27.74</b>
Limit setting	<b>31.88</b>	<b>33.17</b>
Autonomy	<b>21.33</b>	<b>22.61</b>
Role Orientation	<b>23.63</b>	<b>25.69</b>
Social Desirability	<b>13.12</b>	<b>13.37</b>

\*Note: Includes only those women who had regular contact (weekly or more) with at least one child in the past six months.

In May, new measures were added to the local evaluation to explore level of involvement among baby's fathers both during and following pregnancy, as reported by participants. As presented in Table 13, about one-third (37.3%; n=22)

of participants were asked these questions during this grant year. Participants indicated that their baby's fathers were often involved during and following pregnancy. For example, at both baseline and follow-up, more than half of participants reported that their baby's father gave them money or bought things for the baby during their pregnancy (59.1% and 60.0%, respectively). Participant satisfaction regarding their baby's relationship with their father also increased between baseline and follow-up.

	Baseline (N=22)	Follow-Up (N=11)
<i>During pregnancy:</i>		
Baby's father gave money or bought things for the baby	<b>59.1%</b>	<b>60.0%</b>
Baby's father helped in other ways	<b>63.6%</b>	<b>45.5%</b>
Baby's father attended prenatal appointments	<b>36.4%</b>	<b>45.5%</b>
<i>Of those who had given birth:</i>	(n = 9)	(n = 10)
How satisfied with baby's relationship with father ( 0=not satisfied to 9=very satisfied)	<b>4.14</b>	<b>5.18</b>

Table 14 shows employment rates from baseline to follow-up, which is an indicator of economic stability. From baseline to follow-up, there was an increase of 3.7 percentage points in reported full-time employment and a 6.3 percentage point increase in part-time or seasonal employment among PPW participants. Furthermore, there was a significant decrease in reported non-legal income at the point of follow-up (from \$683 at baseline to \$7 at follow-up) and participants also demonstrated less reliance on income from family or friends (from \$165 at baseline to \$79 at follow-up). These shifts indicate growth towards financial independence and stability.

	Baseline (N=59)	Follow-Up (N=115)
Unemployed	<b>84.7%</b>	<b>74.7%</b>
Part-time or seasonal	<b>6.8%</b>	<b>13.1%</b>
Full-time	<b>8.5%</b>	<b>12.2%</b>

As part of the enhanced family services offered by the PPW grant, Chrysalis House offered “Family Day” events during the third grant year to engage the families of clients in their recovery through educational and recreational activities. The events occurred on both Saturdays and Sundays at all Chrysalis House residential locations, and all clients and individuals who they considered part of their “family” are invited to attend<sup>3</sup>. Some examples of activities include:

- Family portraits of clients at Christmas time, offered by Help-Portrait (a non-profit photography group) and hosted by Southland Christian Church
- “Recovery Singers” event
- Education on how to talk to children about parental addiction
- Education on managing the holiday’s sober
- UK College of Pharmacy Health Fair
- Education on talking to kids about race
- Using Jenga game as therapeutic activity on parenting
- Letter writing as therapeutic activity on gratitude
- Education on “mindful eating” and bringing awareness to the effect PTSD has on bodily sensations
- “Step on the Line” activity to increase empathy, respect, understanding and connection between clients
- Creating “Vision Boards” and “Pasion Roadmap” for 2020
- Creating portrait murals for Black History Month
- Utilizing photographs to create collages that defy common stereotypes for “addicts”

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<sup>3</sup> Family Day activities were suspended from March 1, 2020 to May 23, 2020 due to COVID-19.

## GOAL 7: DECREASE INVOLVEMENT IN AND EXPOSURE TO CRIME; VIOLENCE; NEGLECT; AND PHYSICAL, EMOTIONAL, AND SEXUAL ABUSE FOR ALL FAMILY MEMBERS

Table 15 displays a comparison of women’s criminal justice involvement at baseline and follow-up. Participants reported a substantial decrease in exposure to crime between baseline and 6-month follow-up. Approximately 28.8% of participants reported being arrested during the past 30 days at baseline, but only 5.2% reported that they had been arrested during the last 30 days at follow-up, a decrease of 81.9%. The average number of crimes participants reported committing in the past 30 days declined markedly, from nearly 60 at baseline to only 4.5 at follow-up. Lastly, the percentage of women reporting illegal income decreased from 37.3% at baseline to 0.9% at follow-up. These are all indications that participants’ involvement in and exposure to crime decreased throughout their participation in the PPW program.

**TABLE 15. CRIMINAL JUSTICE INVOLVEMENT DURING THE LAST 30 DAYS AT BASELINE AND AT FOLLOW-UP**

	Baseline (N=59)	Follow-Up (N=115)
Arrested past 30 days	<b>28.8%</b>	<b>5.2%</b>
Crimes committed (avg.)	<b>59.3</b>	<b>4.5</b>
Illegal income	<b>37.3%</b>	<b>0.9%</b>

The CJ-CEST (Criminal Justice-Client Evaluation of Self and Treatment) questionnaire was used to collect information from participants in 11 areas pertaining to psychological and behavioral functioning. From baseline to follow-up, decreases in average scores related to problem recognition (-13.3), desire for help (-7.2), treatment readiness (-2.1), and pressures for treatment (-5.3) are likely due to women having addressed problems during the course of treatment, no longer feeling the same need or pressure experienced when first entering Chrysalis House, and being more confident in their recovery. Participants also reported decreases in areas of depression (-5.5), anxiety (-5.3), and hostility (-3.1), suggesting that mental health problems were successfully addressed in treatment. Increases in self-esteem (+4.3) and decision making (+5.9) support this finding, indicating that women felt better about themselves and their choices at follow-up. Finally, scores for childhood problems and risk taking stayed relatively the same (less than one-point difference), suggesting that these are more stable constructs. Overall, participants reported more positive than negative changes from baseline to follow-up on the CJ-CEST.

**TABLE 16. CJ-CEST SUBSCALE AVERAGE SCORES AT BASELINE AND 6-MONTH FOLLOW UP**

	Baseline (N=59)	Follow-Up (N=88)
Problem recognition	<b>40.4</b>	<b>27.1</b>
Desire for help	<b>42.4</b>	<b>35.2</b>
Treatment readiness	<b>41.8</b>	<b>39.7</b>
Pressures for treatment	<b>32.3</b>	<b>27.0</b>
Self-esteem	<b>30.2</b>	<b>34.5</b>
Depression	<b>30.6</b>	<b>25.1</b>
Anxiety	<b>33.6</b>	<b>28.3</b>
Decision making	<b>32.5</b>	<b>38.4</b>
Childhood problems	<b>32.2</b>	<b>33.1</b>
Hostility	<b>25.4</b>	<b>22.3</b>
Risk taking	<b>31.4</b>	<b>31.9</b>

## PROCESS EVALUATION

A process evaluation has been described as a method of assessment that can provide descriptive information about program services and factors that lead to desirable and undesirable outcomes towards a program's stated goals (Krisberg, 1980; Scarpitti, Inciardi, & Pottieger, 1993). The purpose of the process evaluation within this PPW evaluation is to assess project implementation and maintenance using qualitative interviews with project administrators, staff, and clients. The process evaluation focuses on how program services were implemented, perspectives on program successes, and proposed program recommendations. The process evaluation also addresses the extent to which the program matches the proposed grant aims, modifications or deviations from the original plan, factors that led to modifications or changes, and impact of changes on the program.

## METHOD

Process evaluation data were collected from August through September 2020. Two survey instruments were developed for the process evaluation—one for administrators and staff and one for clients—allowing for data collection to capture these unique perspectives. Interviews were completed with administrators and staff members at Chrysalis House (N=10) and with women who had received services from Chrysalis House (N=9). Overall, the content of the interview questions for administrators and staff focused on program successes, accomplishments, and changes and transitioned to program maintenance, while participants were asked about the provision of services and their overall perceptions of the program and the family-focused services. Interviews were scheduled at the convenience of the respondents and lasted approximately thirty to forty-five minutes.

All clients who had enrolled in treatment at Chrysalis House and had consented to study participation were eligible to be randomly selected for the process evaluation interviews. Each respondent was reminded that their participation was voluntary and confidential. Staff members and administrators interviewed included individuals working specifically on this CSAT-funded PPW project from the areas of service coordination and provision for children and adults, community outreach, staff supervision, and case management.

All respondents were interviewed over the phone and reminded that their participation was voluntary and confidential. The interviews were transcribed and then examined to identify common themes within each respondent category. Administrator/staff themes and participant themes were developed based on consistent discussion of constructs across interview respondents. Primary themes were identified when quotations were consistently noted across multiple questions and interview respondents. Secondary themes were identified when quotations were noted across multiple interview respondents but may not have resonated across multiple interview questions.

## ADMINISTRATOR & STAFF THEMES

***According to staff and administrators, grant funds during the third year of implementation allowed Chrysalis House to expand and enhance the services it provided over the grant year.***

Staff at Chrysalis House described providing “holistic” or “wraparound” treatment services for pregnant and postpartum women and their families in a residential setting. This includes substance abuse and mental health treatment, as well as case management, employment, and housing services. Grant funding during the third year of implementation facilitated several improvements to service delivery. First, additional staff were hired in multiple positions (e.g., case managers, therapists, peer support, and nurses), which provided a greater breadth of expertise and contributed to a holistic approach to treatment. Second, educational programming has expanded, allowing staff to “give more materials with classes and provide outside resources for parenting.” Finally, Chrysalis House added an outpatient office and increased the number of beds available, permitting them to serve more clients at once than in the previous grant year.

***Staff continued to prioritize family-centered services as they shifted away from a client-specific approach.***

A priority during the third grant year was to enhance interaction with clients’ families to “create a more family-centered program.” Specific attention was devoted to including fathers in program services, like family counseling, couples therapy, group counseling, parenting classes, and discharge planning. Staff often cited family participation days, which occur on the weekends, as a “great place for positive interaction.” One staff member referred to these events as “a great opportunity for us to be able to help with those positive relationships and healing.” The addition of a child therapist to the staff has also “helped tremendously” with the transition to family-centered services. For instance, the child therapist performed “assessments for the children, family therapy sessions, make[d] referrals in the community, and educational activities.” Though staff recognized that the program is not “exactly where we want to be” at this point, they noted that measurable progress was made towards becoming more focused on family-specific services and staff were “hopeful to see more change in the future.”

***Staff look forward to the next grant year and described specific plans to improve treatment services delivered to clients and their families.***

Several plans designed to enhance service delivery were introduced by staff and administrators. For example, Chrysalis House aims to improve the evidence-based care they provide by obtaining level of care certification from the American Society of Addiction Medicine for residential addiction treatment during the next grant year. Additionally, staff plan to continue promoting family-centered services by implementing Parent-Child Interaction Therapy and augmenting their family education program. Lastly, staff were working to allow children to reside at one of their sites that previously did not allow them.

## CLIENT THEMES

***An internal desire for positive change was cited as a primary motivation for engaging in treatment services at Chrysalis House.***

Women frequently recalled a desire for personal improvement as a driving factor in their decision to participate in treatment programming at Chrysalis House. The specific type of change varied somewhat, but typically involved personal improvement (e.g., enhanced personal health and sobriety), better-quality family relations (e.g., legal custody of children), and increased stability and structure in one's life. As one client stated, "I couldn't get clean on my own and I needed help to create a stable life for my children and myself." Similarly, failure to acknowledge a need for change was identified as a reason that clients did not access treatment services sooner. It was also suggested as a causal factor in the decision for some women to not remain in treatment. For example, clients claimed that being "forced" to go into treatment was not sufficient. Instead, "it's all up to the person. You have to want it."

***Clients described the comprehensive services offered to them and their families. Among these, nurturing and prenatal care classes were universally acclaimed.***

Chrysalis House offered services for clients' partners, children, and other family members, like counseling, therapy, and case management. Clients particularly appreciated the parenting classes and referrals they received to community resources, such as the Health Access Nurturing Development Services program that provides services for clients' children and the Women and Infant Children program. They also highlighted many benefits of participation in the program, including improved knowledge and parenting skills that, as one participant put it, "influence how I parent in a loving way." The benefits also included access to childrearing supplies: "They made sure [my son] had everything he needed. I wouldn't have been able to provide those materials myself, so it was very beneficial." Consequently, women reported feelings of increased "confidence to be a good mother" and an ability to be present in their child's life. Another client mentioned, "The thing that helped me most that I still use today is just all the knowledge that I got from all the parenting and recovery classes."

***Generally, clients rated the services provided by Chrysalis House favorably. Staff were praised for their caring nature and commitment to help.***

Overall, the program was described as "good," "great," and "awesome," and there was general consensus that little room for improvement existed. "I wouldn't change anything" was a common refrain when assessing the services clients received. Some women stated that they "love it here" and one claimed, "I even miss it there now that I'm gone." Clients also often recalled instances in which staff displayed a notable dedication to service. For example, one staff member provided a gas card so that a client could visit her family that lived three hours away and who were unable to travel to Chrysalis House themselves. Another recalled an instance in which a staff member wrote a letter to the court on her behalf to request expungement in order to improve their employment chances. As one client summarized, "they really do the best they can. I'm sober because of them!"

## CONCLUSIONS AND RECOMMENDATIONS

This Year 03 report indicates that Chrysalis House has been very successful with the implementation of this federally funded CSAT grant targeted to enhance services for women, children, and families despite challenges presented by COVID-19. The process evaluation and preliminary outcome evaluation results indicate that Chrysalis House is on-target for meeting the seven proposed goals during the three-year project. Based on feedback from process evaluation interviews, the following recommendations are forwarded for consideration during Year 04:

1. Continue to prioritize family-centered services. Process evaluation interviews highlighted the role of family services in improving family functioning by (re)building positive relationships between mothers, children, fathers, and other family members. By continuing to involve family members before and during the treatment process, Chrysalis House can better support women's successful recovery.
2. Continue to support and enhance resources for infants and children of Chrysalis House clients. As identified in process evaluation interviews, the work of the Child Therapist on staff, availability of parenting education, resource provision, and child custody support have all been valuable to addressing the needs of client's children living both on- and off-site, while simultaneously increasing feelings of confidence among mothers.
3. Continue to build upon existing relationships with community providers and establish new connections. Process evaluation interviews with both staff and clients noted that community providers enable Chrysalis House to offer a comprehensive and holistic approach to treatment for both mothers and their families.
4. Continue to engage in targeted outreach efforts to identify and engage potential clients. Outreach at the Fayette County syringe exchange program, improved waitlist contact efforts, and enhanced pretreatment services have continued to make an important difference towards familiarizing women with Chrysalis House services and community. These strategies give women a chance to feel invested and engaged with the program prior to treatment entry.