

ARIZONA REGIONAL PARTNERSHIP GRANT
Parent to Parent Recovery Program

Final Evaluation Report

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TABLE OF CONTENTS

Acknowledgements.....	i
Table of Contents.....	1
Executive Summary.....	2
Introduction	4
Methods.....	13
Results	18
Summary and Discussion	36
Appendix A.....	40
Appendix A References.....	48

EXECUTIVE SUMMARY

The Parent to Parent (P2P) Recovery Program was established in 2008 as an enhancement to the pre-existing Arizona Families F.I.R.S.T. (AFF) program. Similar to the AFF program, the P2P program addresses adverse conditions related to substance abuse among CPS-involved families whose child maltreatment allegations were determined to be associated with parental use of substances. Both programs provide a similar array of comprehensive interventions to reduce or eliminate abuse of and dependence on substances; however, unlike the AFF program, which is targeted toward families throughout Arizona who display general substance use patterns, the P2P program is targeted towards families in Maricopa County that contain parents of substance exposed newborns¹ and parents who self report abuse of methamphetamine. A further defining critical element that distinguishes the P2P program from the AFF program is the use of peer recovery coaches to facilitate engagement of parents into substance abuse treatment.

The evaluation of the P2P program focuses on whether the addition of a peer recovery coach increases client engagement and retention in substance abuse treatment. More specifically, the evaluation focuses on four primary quantitative domains:

- Outreach
- Assessment and services initiation
- Service engagement
- Outcomes

These evaluation domains were addressed by using administration data from TERROS and ADES/DCYF for referrals occurring between October 1, 2007 and September 30, 2010. These quantitative data were supplemented by qualitative data obtained from focus groups and interviews with P2P peer recovery coaches, alumni of the P2P program, and service providers who work with the peer recovery coaches; qualitative information was gathered to gain a better understanding of peer recovery coaches with regard to roles and responsibilities, effectiveness, and areas of potential improvement.

Since multiple statistically significant differences were observed between referrals to the P2P program and referrals to the AFF program for demographic information, substance use patterns, patterns of maltreatment, and patterns of out-of-home placements, propensity score matching was used to identify a subgroup of referrals to the AFF program that most closely approximated the characteristics observed among the referrals to the P2P program. The P2P and matched comparison AFF sample averaged an age of 28 years, were predominately Caucasian/white, female, never married, and were previous users of methamphetamine; the majority of index children² were substance exposed newborns with a median age of 1 day.

¹ The ADES/DCYF Children's Services Manual defines a substance exposed newborn as an infant under the age of thirty days who has been prenatally exposed to alcohol or drugs, as determined by a health professional. Division of Children, Youth and Families, ADES. *Children's Services Manual*. Retrieved June 22, 2011, from <https://extranet.azdes.gov/dcyfpolicy//ServiceManual.htm>

² An index child is the youngest child victim relative to the AFF referral or P2P assignment date.

Using the P2P sample and matched comparison AFF sample, key findings for the aforementioned quantitative research domains are as follows:

Outreach

- Comparable rates (~83%) of outreach attempts were observed among individuals in the P2P group and matched comparison AFF group.
- The average number of outreach attempts per individual was slightly less for the P2P group ($M = 1.9$) than for the matched comparison AFF group ($M = 2.2$).
- The proportion of participants who were successfully outreached in the P2P group (71%) was not significantly different to that observed in the matched comparison group (66%); successful outreaches occurred, on average, approximately 3 days more rapidly among individuals in the P2P group.

Assessment and Services Initiation

- Although rates of assessment were comparable across groups, assessments occurred, on average, 4 days faster among individuals in the P2P group.
- Individuals in the P2P group had significantly greater rates of treatment engagement; treatment initiation also occurred, on average, 4 days quicker for individuals in the P2P group than for those in the matched comparison AFF group.

Service Engagement

- Matched comparison AFF clients (38%) completed their treatment plans at a higher rate than P2P participants (27%);
- P2P clients in general remained in treatment for a significantly longer period of time than clients in the matched comparison AFF group.

Outcomes

- Comparable patterns of maltreatment allegations were observed among perpetrators in the P2P group and the matched comparison AFF group. In both groups, the majority (98%) of alleged perpetrators at pre-referral had a maltreatment allegation of neglect. Among these, approximately $\frac{3}{4}$ had no subsequent maltreatment report in which they were the alleged perpetrator.
- Among index children who were placed out-of-home, about $\frac{1}{2}$ achieved permanency. Among those who achieved permanency, P2P children (93.2%) were reunified at a significantly higher rate than matched comparison AFF children (81.8%).

INTRODUCTION

This report summarizes the methods, findings, and conclusions of a program evaluation conducted of a Federally-funded program that targeted substance abuse treatment services toward methamphetamine abusing parents of substance exposed newborns in one large, southwestern metropolitan community. This section will provide a description of the program context and setting, and review relevant literature and previous research related to the issues of methamphetamine abuse, substance exposed newborns, and the utilization of peer recovery coaches to promote treatment engagement and participation.

Program Context

The Parent to Parent (P2P) Recovery Program was established in 2008 as a result of a three year grant awarded to the Arizona Department of Economic Security, Division of Children, Youth & Families (ADES/DCYF) from the Substance Abuse and Mental Health Services Administration (SAMHSA). As stated in the original proposal for funding, the objective of the P2P program was

“...to increase the engagement and retention of methamphetamine-using parents in services through a system designed to sustain and nurture the family. The system will offer a more comprehensive intervention conducted by a well-informed and integrated service delivery team. This team approach will utilize Recovery Coaches to enhance the motivation of parents to receive substance abuse treatment and use family, social and community supports...[which] should ultimately lead to an increase in family stability and functioning, a decrease in the number of children removed from home and a decrease in the recurrence of child maltreatment.”

The three year P2P program was conceptualized as an enhancement to the pre-existing Arizona Families F.I.R.S.T. (AFF) program. Arizona Families F.I.R.S.T. (Families in Recovery Succeeding Together; AFF) was established by the 2000 legislative session to address adverse conditions related to substance abuse among child welfare-involved families in which allegations of child maltreatment were determined to be associated with parental substance abuse; the AFF program provides an array of interventions to these families to reduce or eliminate abuse of and dependence to alcohol and other drugs.

AFF services are delivered through a network of nine (9) community based treatment agencies offering a range of therapeutic and supportive services under contract with the Arizona Department of Economic Security, Division of Children, Youth and Families (ADES/DCYF) and in collaboration with the Regional Behavioral Health Authority (RBHA) network under contract with the Department of Health Services, Division of Behavioral Health Services (DBHS). Key elements of the AFF program include an emphasis on: face-to-face outreach and engagement at the time of program referral; supportive services, such as transportation and housing; and aftercare services to manage relapse occurrences.

The P2P program emerged out of a regional initiative in Maricopa County, in which the city of Phoenix is located, entitled Substance Exposed Newborns Safe Environment (SENSE). This regional initiative, which sought to prioritize the needs of substance exposed newborns (SEN) and to link the substance abusing parents of these newborns to effective treatment, established a regional partnership comprised of various and often disparate programs and agencies. The grant application to SAMHSA from ADES/DCYF was developed in consultation with and in response to the program design imperatives of the regional partnership of agencies that comprised the SENSE program.

The P2P program was defined by two critical elements. First, the adult target population for the P2P program was parents of substance exposed newborns who self reported abuse of methamphetamine. Second, peer recovery coaches, defined as parents in recovery from substance abuse who had achieved reunification and permanency following CPS maltreatment allegations, were utilized to facilitate more rapid and efficient engagement of SEN parents into substance abuse treatment.

In the P2P program, peer recovery coaches are introduced to families early in the child welfare process at the Team Decision Making (TDM) meeting when in-home services are recommended, and following an assessment of safety and risk; they are assigned to a client for approximately 60 days. Generally, once the client has been successfully engaged in substance abuse treatment, the peer recovery coaches would discontinue their interaction with the clients. No other enhancements or modifications to the existing array of substance abuse counseling and supportive services typically provided under the auspices of the AFF program were proposed or evaluated in the P2P program. The ADES/DCYF hypothesized that families served through the P2P program would receive a more integrated intervention (as compared to parents served in the standard AFF program) in an effort to, as previously noted, *“...enhance the motivation of parents to receive substance abuse treatment and use family, social and community supports...”*

The P2P program was provided through the existing AFF treatment provider for Maricopa County - TERROS, Inc., a large, multi-clinical outpatient behavioral health treatment provider. TERROS provides substance abuse treatment services under contract for the AFF program, and provides an array of other community based prevention, treatment, and crisis services for substance abuse, HIV/AIDS, and mental illness. The first referral to the P2P program occurred in October 2007, with implementation being in April 2008; the last referral occurred in September 2010. Over the course of this period of time, a total of 681 clients were referred to the P2P program. During this same period of time, TERROS processed an additional 6,820 referrals to its standard AFF treatment program. As will be described in the subsequent methods section, client referrals to the AFF program were matched to the characteristics of the P2P referrals to create a matched comparison sample, using propensity scoring. Before describing the evaluation questions and methods, we will briefly review the current literature related to methamphetamine abuse, substance exposed newborns, and the utilization of peer recovery coaches.

Relevant Literature

Methamphetamine Use

The past decade has witnessed a well publicized and significant increase in methamphetamine abuse in the United States. According to information from the latest National Survey on Drug Use and Health, the number of individuals reporting use of methamphetamine during the previous 30 days increased from 314,000 in 2008 to 502,000 in 2009, while the number of individuals reporting use of methamphetamine for the first time in the previous year increased from 95,000 in 2008 to 154,000 in 2009.³ Rates of methamphetamine abuse in the United States have consistently been highest in the West⁴; Arizona has one of the higher estimates of past year methamphetamine use⁵, which in turn has had a pervasive and costly impact on communities and citizens. Referrals of methamphetamine abusing offenders from the criminal justice system constitute the largest proportion of treatment⁶, increasing from 38% of treatment referrals in 1997 to 56% in 2007⁷. The annual cost of methamphetamine use in the United States was estimated to be \$23.4 billion in 2005, including costs associated with criminal justice and social welfare services, health care, loss of productivity, premature mortality, and child imperilment.⁸ The effects of methamphetamine use are thus widespread and impact several agencies, including the child welfare system.

The implications of parental methamphetamine use on children and parenting are extensive and multifaceted. Methamphetamine use is prevalent among females, particularly among those in the reproductive age (methamphetamine use is highest among adults aged 18-25⁹). Women represent the majority of individuals who enter treatment programs for methamphetamine use,¹⁰ and in most states female methamphetamine users represent the largest group mandated to treatment through the child welfare system.¹¹ For example, one study found that almost two-thirds (65.6%) of women in substance use treatment with CPS involvement in a southwestern county reported methamphetamine as their primary drug of

³ Substance Abuse and Mental Health Services Administration. (2010). *Results from the 2009 National Survey on Drug Use and Health: Volume I. Summary of National Findings* (Office Studies of Applied, NSDUH Series H-38A, HHS Publication No. SMA 10-4586Findings). Rockville, MD.

⁴ Johnston, L.D., O'Malley, P.M., Bachman, J.G., & Schulenberg, J.E. (2010). *Monitoring the Future national survey results on drug use, 1975-2009. Volume II: College students and adults ages 19-50* (NIJ Publication No. 10-7585). Bethesda, MD: National Institute on Drug Abuse.

⁵ Substance Abuse and Mental Health Services Administration. (2006). State estimates of past year methamphetamine use. In *The NSDUH report*. Rockville, MD.

⁶ Substance Abuse and Mental Health Services Administration, Office of Applied Studies (2009). *The TEDS Report: Substance Abuse Treatment Admissions Referred by the Criminal Justice System*. Rockville, MD.

⁷ Substance Abuse and Mental Health Services Administration, Office of Applied Studies (2009). *The TEDS Report: Trends in Methamphetamine Admissions to Treatment: 1997-2007*. Rockville, MD.

⁸ Nicosia, N., Pacula, R.L., Kilmer, B., Lundberg, R., & Chiesa, J. (2009). *The Economic Cost of Methamphetamine Use in the United States, 2005*. Santa Monica, CA: Drug Policy Research Center, RAND Corporation.

⁹ Substance Abuse and Mental Health Services Administration. (2006). State estimates of past year methamphetamine use. In *The NSDUH report*. Rockville, MD.

¹⁰ Substance Abuse and Mental Health Services Administration, Office of Applied Studies (2009). *Treatment Episode Data Set (TEDS). Highlights – 2007. National Admissions to Substance Abuse Treatment Services*, DASIS Series: S-45, DHHS Publication No. (SMA) 09-4360, Rockville, MD.

¹¹ Grella, C.E., Hser, Y., & Huang, Y. (2006). Mothers in substance abuse treatment: Differences in characteristics based on involvement in child welfare services. *Child Abuse & Neglect*, 30, 55-73.

choice.¹² Parental methamphetamine use in the child welfare system has been associated with family reunification difficulties, which in turn frequently results in out-of-home child placements.¹³ Of further concern is the rate of pregnant women who use methamphetamine¹⁴, given that many women in the child welfare system first become identified through a report of a substance exposed newborn (SEN). Given the numerous harmful effects associated with methamphetamine use, including aggression, insomnia, depression, psychosis, and physical health problems, parental methamphetamine use directly interferes with family functioning and increase the likelihood that child maltreatment will occur.¹⁵

Substance Exposed Newborns

More than 4,500 newborns in Arizona are exposed to prenatal drug abuse each year¹⁶, while national estimates suggest that 5% of pregnant women in the United States use illicit drugs¹⁷ and 5.2% use methamphetamine.¹⁸ One in 4 (24%) pregnant women admitted to treatment in 2006 indicated methamphetamine as their primary substance of abuse, compared to 8% in 1994.¹⁹ Actual rates of substance exposed newborns (SENs) are likely to be significantly higher, however, due to underreporting from fear of consequences, and as a result of limited hospital testing.²⁰ Due in part to limited hospital testing, the majority of SENs (75-90%) are believed to go home undetected.²¹

Pre and postnatal exposure to alcohol and illicit substances presents numerous negative consequences for newborns, including physical, emotional, and developmental problems.²² Methamphetamine in particular has been associated with fetal growth deficits²³ (including

¹² Sun, A., Shillington, A.M., Hohman, M., & Jones, L. (2001). Caregiver AOD use, case substantiation, and AOD treatment: studies based on two southwestern counties. *Child Welfare*, 80(2), 151-177.

¹³ Kyle, A.D., & Hansell, B. (2005). *The meth epidemic in America: Two surveys of U.S. counties: The criminal effect of meth on communities – the impact of meth on children*. Washington, DC: National Association of Counties.

¹⁴ Terplan, M., Smith, E.J., Kozloski, M.J., & Pollack, H.A. (2009). Methamphetamine use among pregnant women. *Obstetrics & Gynecology*, 113(6), 1285-1291.

¹⁵ Connell-Carrick, K. (2007). Methamphetamine and the changing face of child welfare: practice principles for child welfare workers. *Child Welfare*, 86(3), 125-141.

¹⁶ Guidelines for identifying substance-exposed newborns. *The Governor's Action Plan on Child Protective Services Reform Substance-Exposed Newborn Committee*. Retrieved February 18, 2011 from <http://azgovernor.gov/CPS/documents/SenGuidelines.pdf>

¹⁷ Substance Abuse and Mental Health Services Administration. (2009). *Results from the 2008 National Survey on Drug Use and Health: National Findings* (Office of Applied Studies, NSDUH Series H-36, HHS Publication No. SMA 09-4434). Rockwell, MD.

¹⁸ Arria, A.M., et al. (2006). Methamphetamine and other substance use during pregnancy: Preliminary estimates from the Infant Development, Environment, and Lifestyle (IDEAL) study. *Maternal and Child Health Journal*, 10(3), 293-302.

¹⁹ Terplan, M., Smith, E.J., Kozloski, M.J., & Pollack, H.A. (2009). Methamphetamine use among pregnant women. *Obstetrics & Gynecology*, 113(6), 1285-1291.

²⁰ Anthony, E.K., Austin, M.J., & Cormier, D.R. (2010). Early detection of prenatal substance exposure and the role of child welfare. *Journal of Children and Youth Services Review*, 32, 6-12.

²¹ Young, N.K. (2006). *Substance-exposed infants: policy and practice*. Retrieved March 1, 2011 from <http://www.ncsacw.samhsa.gov/files/508/SubstanceInfants.htm>.

²² Young, N.K., Gardner, S., Otero, C., Dennis, K., Chang, R., Earle, K., & Amatetti, S. (2009). *Substance-Exposed Infants: State Responses to the Problem*. HHS Pub. No. (SMA) 09-4369. Rockville, MD: Substance Abuse and Mental Health Services Administration.

²³ Smith, L., Yonekura, L.M., Wallace, T., Berman, N., Kuo, J., & Berkowitz, C. (2003). Effects of prenatal methamphetamine exposure on fetal growth and drug withdrawal symptoms in infants born at term. *Journal of Developmental & Behavioral Pediatrics*, 24(1), 17-23.

being born small for gestational age²⁴), increased physiological stress²⁵, and decreased arousal.²⁶ Malformations and abnormalities have also been associated with methamphetamine-exposed newborns, such as cardiac defects, reduced head size, and cleft lip.²⁷

There is limited research on the long-term effects of prenatal methamphetamine exposure; the most comprehensive data on long-term effects of amphetamine are reported by Billing et al., who followed a cohort of amphetamine-exposed children in Sweden up through age fourteen. Billing et al. found that at age one, children with a greater extent of prenatal amphetamine exposure experienced more emotional disturbances than children with limited exposure²⁸. By age eight, a statistically significant correlation between extent of exposure and behavioral problems (including aggression) was found among the children (i.e. more exposure resulted in worse outcomes).²⁹ At age fourteen, children in the amphetamine-exposed group, compared to their classmates, had statistically poorer educational outcomes (in mathematics, language, and sports), and less than one-quarter of the cohort had lived with their biological mother the entire duration since birth.³⁰

Similar to previous reports, a study in Phoenix that compared the typical obstetric population to women who used methamphetamine while pregnant, found that pregnant methamphetamine users were at greater risk of experiencing birth complications (including preterm delivery and cesarean delivery) and neonatal mortality.³¹ This study also found that pregnant women who used methamphetamine had higher rates than the typical population for domestic violence, adoption, foster care placements, and CPS involvement. Indeed, such findings are reflective of other more expansive research, indicating that prenatal drug use in general is associated with a higher potential of CPS involvement and child maltreatment.^{32,33}

It is estimated that in 2004 there were 89,816 prenatally exposed infants found to be victims of abuse or neglect, and that close to one-third (32.9%) of all child welfare reports involved

²⁴ Nguyen et al. (2010). Intrauterine growth of infants exposed to prenatal methamphetamine: Results from the Infant Development, Environment, and Lifestyle study. *Journal of Pediatrics*, 157(2), 337-339.

²⁵ Smith et al. (2008). Prenatal methamphetamine use and neonatal neurobehavioral outcome. *Neurotoxicology and Teratology*, 30(1), 20-28.

²⁶ LaGasse et al. (2011). Prenatal methamphetamine exposure and neonatal neurobehavioral outcome in the USA and New Zealand. *Neurotoxicology and Teratology*, 33, 166-175.

²⁷ Plessinger, M.A. (1998). Prenatal exposure to amphetamines. Risks and adverse outcomes in pregnancy. *Obstetrics and Gynecology Clinics of North America*, 25(1), 119-138.

²⁸ Billing, L., Eriksson, M., Larsson, G., & Zetterstrom, R. (1980). Amphetamine addiction and pregnancy. One year follow-up of the children. Psychosocial and pediatric aspects. *Acta Paediatrica Scandinavica*, 69(5), 675-680.

²⁹ Billing, L., Eriksson, M., Jonsson, B., Steneroth, G., & Zetterstrom, R. (1994). The influence of environmental factors on behavioral problems in 8-year old children exposed to amphetamine during fetal life. *Child Abuse & Neglect*, 18, 3-9.

³⁰ Cernerud, L., Eriksson, M., Jonsson, B., Steneroth, G., & Zetterstrom, R. (1996). Amphetamine addiction during pregnancy: 14-year follow-up of growth and school performance. *Acta Paediatrica*, 85(2), 204-208.

³¹ Good, M.M., Solt, I., Acuna, J.G., Rotmensch, S., & Kim, M.J. (2010). Methamphetamine use during pregnancy: Maternal and neonatal implications. *Obstetrics & Gynecology*, 116(2), 330-334.

³² Jaudes, P.K., & Ekwo, E. (1995). Association of drug abuse and child abuse. *Child Abuse and Neglect*, 19(9), 1065-1075.

³³ Williams-Peterson, M.G., Myers, B.J., Degen, H.M., Knisely, J.S., Elswick, R.K., & Schnoll, S.S. (1994). Drug-using and nonusing women: Potential for child abuse, child-rearing attitudes, social support, and affection for expected baby. *International Journal of the Addictions*, 29(12), 1631-1643.

substance exposed newborns.³⁴ Given that prenatal substance exposure may put an infant at harm, and may act as a predictor of future abuse or neglect, substance-using pregnant women are at an increased risk of becoming involved (and re-involved) with the child welfare system: a study in Illinois found that parents in the child welfare system with an SEN were more likely than parents in the child welfare system without an SEN to receive a subsequent maltreatment allegation.³⁵ It is therefore vital that effective services are provided to this population as early as possible, especially in light of research indicating that women are more motivated to enter substance abuse treatment while pregnant and during the postpartum period.³⁶

The treatment process for substance-abusing pregnant and postpartum women is complex; as such, traditional treatment models that focus on substance abuse as an acute condition are less effective, and result in poorer outcomes, than comprehensive and family-centered treatment models that are designed specifically for this population.³⁷ Despite research indicating this, few treatment centers offer programs for pregnant or postpartum women; the 2009 National Survey of Substance Abuse Treatment Services (N-SSATS) found that only 13% of treatment facilities have programs or groups for pregnant or postpartum women.³⁸ This is of great concern, especially since research has documented the effectiveness of such programs with regard to improving the well being of both mothers and children. For example, a study in Rhode Island on prenatal substance users with child welfare involvement found that provision of comprehensive services (including recovery support services, peer counseling, and other integrated services) was associated with favorable child welfare outcomes, including permanent placements, case closures, and reunification with the biological mother³⁹.

It is evident that gestational exposure to maternal substance abuse places newborns at extreme risk for a multitude of physiological and neurological challenges. Further, children born to substance abusing parents in general, and methamphetamine abuse in particular, face significant risks for abuse and neglect. In spite of these findings, availability of family-centered treatment for pregnant and post partum women remain in short supply. The emergent philosophy of Recovery Oriented Systems of Care (ROSC), which emphasize person centered, recovery oriented services that are frequently delivered through peer recovery coaches or individuals in recovery themselves, has been promoted as a promising practice for meeting the needs of individuals and families engaged in substance abuse treatment.

³⁴ Young, N.K., Boles, S.M., & Otero, C. (2007). Parental substance use disorders and child maltreatment: overlap, gaps, and opportunities. *Child Maltreatment*, 12, 137-149.

³⁵ Smith, B.D., & Testa, M.F. (2002). The risk of subsequent maltreatment allegations in families with substance-exposed infants. *Child Abuse & Neglect*, 26, 97-114.

³⁶ Young, N.K., Nakashian, M., Yeh, S., & Amatetti, S. (2006). *Screening and Assessment for Family Engagement, Retention, and Recovery (SAFERR)*. DHHS Pub. No. 0000. Rockville, MD: Substance Abuse and Mental Health Services Administration. Retrieved March 15, 2011 from <http://www.ncsacw.samhsa.gov/files/SAFERR.pdf>

³⁷ Hohman, M.M., Shillington, A.M., Baxter, H.G. (2003). A comparison of pregnant women presenting for alcohol and other drug treatment by CPS status. *Child Abuse & Neglect*, 27, 303-317.

³⁸ Substance Abuse and Mental Health Services Administration, Office of Applied Studies. (2010). *National Survey of Substance Abuse Treatment Services (N-SSATS): 2009. Data on Substance Abuse Treatment Facilities*, DASIS Series: S-54, HHS Publication No. (SMA) 10-4579, Rockville, MD.

³⁹ McCann, K.J., Twomey, J.E., Caldwell, D., Soave, R., Fontaine, L.A., & Lester, B.M. (2010). Services used by perinatal substance-users with child welfare involvement: a descriptive study. *Harm Reduction Journal*, 7(19), 1-7.

ROSC Elements*

- Person centered
- Family and other ally involvement
- Individualized and comprehensive services across the lifespan
- Systems anchored in the community
- Continuity of care
- Strength-based
- Culturally responsive
- Responsiveness to personal belief systems
- Commitment to peer recovery support services
- Inclusion of the voices and experiences of recovering individuals and their families
- Integrated services
- Ongoing monitoring and outreach
- Outcomes driven
- Research based

* Adapted from Center for Substance Abuse Treatment (2007)

Recovery Oriented Systems of Care

The past five years have witnessed the emergence of Recovery Oriented Systems of Care (ROSC) as a major shift in the orientation toward the manner in which substance abuse treatment services are organized, funded, and delivered. ROSC conceptualizes substance abuse as a chronic and relapsing condition⁴⁰, requiring multiple services over an extended period of time in what has been described as a continuing care model. Within this orientation, recovery is conceptualized as “a process of change through which an individual achieves abstinence and improved health, wellness and quality of life.”⁴¹

Family and client involvement is regarded as an essential element of ROSC, allowing individuals in recovery to share their experiences, in an effort to help and support other individuals in their own recovery.⁴² The use of peer support services is receiving more and more recognition as a potential means of overcoming barriers associated with disengagement and attrition – both of which predict unsuccessful treatment outcomes.⁴³ The use of peer recovery coaches to

promote treatment engagement and retention is especially crucial for child welfare involved parents, who have markedly low treatment completion rates.⁴⁴

Mead, Hilton, & Curtis (2001)⁴⁵ define peer support as

a system of giving and receiving help founded on key principles of respect, shared responsibility, and mutual agreement of what is helpful. Peer support is not based on psychiatric models and diagnostic criteria. It is about understanding another’s situation empathically through the shared experience of emotional and psychological pain. When people identify with others who they feel are “like” them, they feel a connection. This

⁴⁰ Flaherty, M.T. (2009). Why recovery-oriented care systems are more than a passing fad. *Alcohol & Drug Abuse Weekly*, 21(27), 5-6.

⁴¹ Center for Substance Abuse Treatment. (2007). *National Summit on Recovery: Conference Report*. DHHS Publication No. (SMA) 07-4276. Rockville, MD: Substance Abuse and Mental Health Services Administration.

⁴² Halvorson, A., Skinner, J., & Whitter, M. (2009). *Provider Approaches to Recovery-Oriented Systems of Care: Four Case Studies*. HHS Publication No. (SMA) 09-4437. Rockville, MD: Center for Substance Abuse Treatment, Substance Abuse and Mental Health Services Administration.

⁴³ McKay, J.R., & Weiss, R.V. (2001). A review of temporal effects and outcome predictors in substance abuse treatment studies with long-term follow ups: Preliminary results and methodological issues. *Evaluation Review*, 25, 113-161.

⁴⁴ Gregoire, K.A., & Schultz, D.J. (2001). Substance-abusing child welfare parents: Treatment and child placement outcomes. *Child Welfare*, 80, 433-452.

⁴⁵ Mead, S., Hilton, D., & Curtis, L. (2001). Peer support: A theoretical perspective. *Psychiatric Rehabilitation*, 25 (2). 134-141.

connection, or affiliation, is a deep, holistic understanding based on mutual experience where people are able to “be” with each other without the constraints of traditional (expert/patient) relationships. (p.135)

Peer support can be delivered in numerous ways, such as self-help groups, internet support groups, or by peer recovery coaches.⁴⁶ In contrast to self-help groups and internet support groups, which may lack individual and face to face contact, peer recovery coaches (who are current or past recipients of treatment services) provide services and assistance directly to individuals who share a similar behavioral health condition.⁴⁷ As the conceptualization of ROSC continues to be adopted within treatment systems, the utilization of peer recovery coaches as one component of an ROSC orientation has grown as well, with the number of substance abuse treatment facilities that offer peer recovery services increasing every year from 2006 to 2009.⁴⁸

Despite the growing use of peer recovery services, there is currently very little research on the effectiveness of peer recovery coaches, or the elements of peer delivered services that distinguish them from professional provider delivered services. One of the few studies on the use of peer recovery coaches found that among a sample of substance abusing caregivers in the Illinois child welfare system, those who received a peer recovery coach, in addition to traditional services, were significantly less likely to experience a recurrent allegation of prenatal substance exposure than were caregivers who received traditional services without the addition of a peer recovery coach.⁴⁹ Another study, which also examined substance abusing caregivers in the Illinois child welfare system, found that peer recovery coaches increased access to treatment services.⁵⁰ As such, while the emergence of the ROSC conceptualization has significantly altered the orientation and delivery of substance abuse treatment services to include the use of peer recovery coaches, there remains a paucity of empirical evidence to support their utilization to enhance treatment processes and outcomes.

Summary

Recent increases in the prevalence of methamphetamine use have been accompanied by an increased rate of methamphetamine-using pregnant women. Parental methamphetamine use and prenatal substance exposure in general are associated with an increased risk of child maltreatment and CPS involvement. Complicating issues, poor treatment outcomes and family reunification difficulties have been documented among these parents once involved with CPS. Recovery Oriented Systems of Care, including the use of peer recovery coaches to improve

⁴⁶ Solomon, P. (2004). Peer support/peer provided services underlying processes, benefits, and critical ingredients. *Psychiatric Rehabilitation*, 27(4), 392-401.

⁴⁷ Arizona Department of Health Services. (2007). *Peer Workers/Recovery Support Specialists within Behavioral Health Agencies*. Clinical and Recovery Practice Protocol.

⁴⁸ Center for Behavioral Health Statistics and Quality (2011). *Data spotlights: Nearly half of substance abuse treatment facilities offer mentoring and other peer support services*. Substance Abuse and Mental Health Services Administration. Rockville, MD.

⁴⁹ Ryan, J.P., Choi, S., Hong, J.S., Hernandez, P., & Larrison, C.R. (2008). Recovery coaches and substance exposed births: An experiment in child welfare. *Child Abuse & Neglect*, 32, 1072-1079.

⁵⁰ Ryan, J.P., Marsh, J.C., Testa, M.F., & Louderman, R. (2006). Integrating substance abuse treatment and child welfare services: Findings from the Illinois Alcohol and Other Drug Abuse waiver demonstration. *Social Work Research*, 30(2), 95-107.

treatment engagement and retention, have been proposed as an effective alternative to traditional treatment models for this population. Although research in this area is limited, one study found that substance-abusing caregivers in the child welfare system who were assigned a peer recovery coach were less likely than caregivers not assigned a peer recovery coach to be associated with a subsequent substantiated maltreatment allegation involving substance exposure at birth. However, there is currently no research on the effectiveness of peer recovery coaches in increasing rates of retention and engagement, and in reducing maltreatment recurrence rates in general among child welfare involved parents with a report of methamphetamine use or a substance exposed newborn. This evaluation fills this gap by addressing the following questions:

- *Outreach*: Do clients referred to the P2P program experience outreach services more rapidly and at a higher rate than comparable clients referred to the standard AFF program?
- *Assessment and Services Initiation*: Do clients referred to the P2P program engage in assessment sessions and treatment services at a higher rate and more rapidly than comparable clients referred to the standard AFF program?
- *Service Engagement*: Compared to comparable clients in the standard AFF program, do P2P clients remain in treatment for a period of time that is longer (or shorter), and do reasons for treatment termination vary significantly between the two groups?
- *Outcomes*: Do P2P clients display patterns of maltreatment recurrence that are different from comparable clients in the standard AFF program, and do rates of permanency differ between the two groups?
- *Perspectives on Peer Recovery Coaches*: What are the beliefs of program staff, P2P alumni, and peer recovery coaches on the roles/responsibilities, effectiveness, and areas of potential improvement for peer recovery coaches?

METHODS

This section presents information on the methods and procedures used in this evaluation. Specifically, details are provided on the sample, data sources and data collection procedures, research design, measures, and analytic plan.

Sample

The sample for this report includes all individuals referred to the AFF treatment program operated in Maricopa County and provided by TERROS, Inc., between October 1, 2007 and September 30, 2010. This non-probability, purposive sample is comprised of 6,820 families who were referred to the AFF program, in addition to 686 families who were referred to the P2P program, based on criteria outlined in the introduction. The majority of referrals across groups were Caucasian, non-Hispanic, and female, ranging in age from 16 to 70 years.

Data Sources and Data Collection Procedures

Administrative Data

The primary sources of information used in this evaluation are from administrative data obtained from TERROS and ADES/DCYF. A data reporting format, which was implemented as part of the statewide evaluation of the Arizona Families F.I.R.S.T., is the primary base of information provided by TERROS. This reporting structure and format was established by CABHP in consultation with ADES/DCYF and the contracted AFF providers, including TERROS. The data reporting format and requirements were updated on July 1, 2010. While some contracted AFF providers enter their information online, TERROS extracts data from their management information system (MIS) and uploads to a secured site maintained by CABHP. These data include client descriptive information (e.g. gender, education level, and employment status), substance use patterns, and treatment status/outcomes, which are inclusive of information provided by TERROS for referrals occurring between October 1, 2007 and September 30, 2010.

Using personal identifying information provided by TERROS, CABHP receives corresponding information from the ADES Child Protective Services CHILDS Case Management Information System related to child welfare status and outcomes. The two primary data sets provided by ADES/DCYF relate to the patterns of maltreatment allegations, and out-of-home placements and reunification status of the children comprising the family unit from which adult clients were referred to AFF/P2P. Records from these data sets were analyzed for any reports or changes in status through December 31, 2010. No other primary quantitative data were collected or utilized in this evaluation.

Qualitative Data

A secondary source of information used in this evaluation came from focus groups and semi-structured interviews with P2P peer recovery coaches, alumni of the P2P program, and service providers (CPS case workers and substance abuse counselors) who work with the peer recovery coaches. The purpose of collecting qualitative information was to gain a better understanding of peer recovery coaches, with regard to roles/responsibilities, effectiveness, and areas of potential improvement.

Structured interviews were conducted with four P2P peer recovery coaches in April 2010. One participant had been in the role of a peer recovery coach for five months and was still in training with minimal client contact; one participant had been a peer recovery coach for seven months; and two of the peer recovery coaches who agreed to take part had been promoted to other positions within TERROS. Recruitment of the peer recovery coaches was conducted by the P2P Recovery Coach Coordinator. Three interviews were conducted at the TERROS office, and one interview was conducted at CABHP. A focus group was conducted at the TERROS office with six service providers in May 2010. This focus group included individuals who served as a CPS Team Decision Meeting facilitator, CPS Investigations Worker, and substance abuse counselor, in addition to three CPS Supervisors and/or Managers. All of these individuals had direct and ongoing contact with the peer recovery specialists. Two focus groups, with a total of six P2P alumni, were conducted in August 2010. Participants, ranging in age from 25-49 years, comprised three females and three males; all participants were recruited by P2P peer recovery coaches. All of the interviews and focus groups were audio-taped, transcribed, and reviewed and synthesized with field notes to identify common themes.

Design

The preliminary design of this evaluation was a quasi-experimental comparison group design. Individuals were non-randomly referred to the standard AFF program or the P2P enhancement of the same AFF program, both of which were operated by TERROS. Since the target population for the P2P program was methamphetamine abusing parents with substance exposed newborns, we anticipated that this group of families would not be equivalent to the families referred to the standard AFF program. As we present in the results section, the families referred to the P2P program during the study period were statistically significantly distinct from the families referred to the standard AFF program during the same time period on a number of key variables.

Given that participants were not randomly assigned to the P2P and standard AFF program, sample differences could influence spurious relationships between the treatment (P2P versus standard AFF) and outcomes of interest. Sample differences were adjusted among groups using propensity score matching. Although “propensity score” was coined by Rosenbaum and

Rubin's seminal paper⁵¹, the generalization of the propensity score approach is first attributed to Heckman's work.^{52,53} Propensity scores, which can be computed with logistic regression, are the predicted probability of group membership based on observed predictors. The first objective was to identify or select observed predictors that we could use to create the propensity scores, which in turn were used to identify a matched comparison sample of families referred to the standard AFF program that most closely approximated the P2P referral sample on the set of observed predictors.

During the study period, 6,820 individuals were referred to the standard AFF program and constituted a comparison sample. Among these individuals, we attempted to identify those who most closely approximated the individuals referred to the P2P program. For matching purposes, we included variables associated with the target population, including the presence of a substance exposed newborn, parental self-reported use of methamphetamine, and age of index child. To control for potential history and/or temporal effects, time of referral (in years and semi-annual periods) was incorporated into the matching process. In order to minimize the effect of spurious relationships between the treatment (P2P versus standard AFF) and outcome domains of interest, we sought variables that may be related to the dependent variables in the P2P study. The research literature was consulted to find other relevant variables. Although there are four quantitative evaluation domains in this study (outreach, assessment and services initiation, service engagement, and outcomes), the literature that we found focused on predictors of maltreatment recurrence and engagement in substance abuse treatment (see Appendix A for variables identified in the literature that were used in the matching process).

Two approaches were considered in incorporating variables into the propensity matching process. The first approach matches only on complete cases across variables, while the second approach matches on incomplete cases. The implication of using the first approach, which is similar to list-wise deletion, is that the sample size will remain constant across all variables; this would result in a relatively small sample size. The second approach, which is analogous to using pair-wise deletion, would result in the sample size varying across sets of variables, potentially resulting in less precision. However, this approach results in a larger sample size, as compared to the first approach. Taking this into consideration, we decided to implement the second approach, which allowed us to incorporate missing data into the matching process for particular variables. Consequently, binary indicators of complete (versus incomplete) data for substance use, income, education, marital status, CPS report, and index child age were included in the matching process.

Among those referred to standard AFF program, 681 were matched to the P2P referral sample on the aforementioned variables. The frequency or measures of central tendency (mean or medians) for the incorporated variables were the same across the P2P and matched

⁵¹ Rosenbaum, P.R., & Rubin, D.B. (1983). The central role of the propensity score in observational studies for causal effects. *Biometrika*, 70, 41-55.

⁵² Heckman, J.J. (1979). Selection bias as a specification error. *Econometrika*, 47, 153-161.

⁵³ Heckman, J.J. (1978). Dummy endogenous variables in a simultaneous equations system. *Econometrika*, 46, 931-960.

comparison AFF samples. Although all 681 cases in both groups were associated with CPS reports, approximately 70% (481 cases of matched and 466 of the P2P sample) had an identifiable record of a CPS report. This was queried using a similar strategy used in AFF Annual Reports; the social security numbers were used to identify clients in the maltreatment reports. Subsequently, we used an enhanced linking strategy to find missing maltreatment records, which involved using CHILDS person IDs, in addition to SSNs. Using this new strategy, the proportion of missing records was increased up to 82.23% ($n = 560$) for the matched AFF sample and 83.85% ($n = 571$) for the P2P sample.

A re-examination of the frequencies or measures of central tendency on the ADES/DCYF variables (index child was an SEN, age of index child, out-of-home placement of index child, number of children in CPS report, number of children placed out-of-home, completeness of CPS reports) which were used for matching, revealed, for the most part, that they were the same across the P2P and matched comparison AFF samples. The only statistical difference that was found was the mean age of the index children; the mean age for the matched AFF sample was 12 months, whereas, the mean age for the P2P sample was 6.81 months. Although the median children's age, which was 1 day, was the same across the two samples, we incorporated children's age as a control (covariate) when examining group differences on four domains: outreach, assessment and services initiation, service engagement, and outcomes.

Measures and Analytic Plan

The following research domains were addressed with the sample of individuals referred to the P2P program and the matched comparison sample of individuals referred to the AFF program.

Outreach

To examine if P2P clients experienced outreach services more rapidly and at a higher rate than non-P2P clients, we performed a between-group comparison on the number of referrals with outreach attempts, the average number of outreach attempts per referral, and the average number of days from referral to first successful outreach.

Assessment and Services Initiation

A between-group comparison for the number and percentage of referrals with assessments was made to examine whether P2P clients engaged in assessment sessions at a higher rate than non-P2P clients. Similarly, to assess if P2P clients engaged in assessment sessions more rapidly, a between-group comparison was made on the average number of days from referral to assessment. For each group, we also calculated the number and percentage of referrals that engaged in at least one unit of service and the number of days from referral to first service; a between-group comparison was then made to assess if individuals in the P2P group engaged in treatment at a higher rate and more rapidly than individuals in the AFF group. These analyses

were conducted twice: once excluding assessment and drug services from the unit of services, and again limiting services to counseling (individual, group, or family).

Service Engagement

We calculated and compared the number and percentage of P2P referrals and AFF referrals with a closed record, and reasons associated with the closure report. This in turn allowed us to evaluate if reasons for program termination differed between individuals referred to P2P and individuals referred to AFF. To assess if the length of program participation varied between P2P clients and AFF clients, we conducted a between-group comparison on the duration of time from first post-assessment treatment service date to the last post-assessment service date prior to closure; this was conducted for each closure reason (e.g. client completed treatment plan, client discontinued participation, client refused services, all other reasons for closure).

Outcomes

To assess if patterns of maltreatment recurrence varied between the P2P and non-P2P group, we conducted a between-group analysis on type of maltreatment allegation (i.e. sexual abuse, physical abuse, and neglect) for pre-referral and post-referral report findings. A pre-referral allegation was operationalized as the most recent maltreatment report that occurred on or prior to referral to AFF or P2P, whereas a post-referral allegation was operationalized as a maltreatment report that occurred most proximally subsequent to the AFF referral date. For the analyses of maltreatment recurrence, we only included referred clients who were reported to be the perpetrator in both pre- and post-referral allegations. To examine if differences in rates of permanency existed for index children in the P2P group and non-P2P group who were placed out-of-home, we calculated and compared the number and percentage of children in each group that achieved permanency, and reasons for discharge, such as reunification, adoption, etc.

RESULTS

Overview

The results section summarizes participant characteristics and addresses the four evaluation questions/domains that were presented at the conclusion of the introduction: outreach, assessment and services initiation, service engagement, and outcomes. The results section also summarizes qualitative perspectives gathered from focus groups and semi-structured interviews with P2P peer recovery coaches, alumni of the P2P program, and service providers (CPS case workers and substance abuse counselors) who work with the peer recovery coaches. Comparative analyses between the P2P sample and the AFF sample will be inclusive of all individuals referred to AFF services during the study period (10/1/2007 – 09/30/2010) when addressing participant characteristics *only*; all subsequent comparative analyses will be restricted to the P2P sample and the matched comparison AFF sample, constructed as described in the matching procedures in the methodology section.

Participant Characteristics

Between October 1, 2007 and September 30, 2010, a total of 686 individuals were referred to the P2P program, while concomitantly 6,820 individuals were referred to the contracted AFF service provider which also offered the P2P program. Figure 1 displays the number of referrals processed by the contracted AFF service provider for each month of the study period. Due to the significant differences in the number of referrals, the right vertical axis is scaled for the P2P referrals (displayed by the broken line) while the left vertical axis is scaled for the AFF referrals (displayed by the solid line). As these data reflect, referrals to the P2P program remained relatively low through January 2008, and then stabilized in the range of 20-30 referrals per month until July 2010. During this same period of time, referrals to the AFF program averaged slightly more than 250 per month throughout 2008, followed by a significant drop off in referrals through 2009, consistent with general declinations of services due to the budgetary crisis; this was followed by a slow but steady increase in referrals.

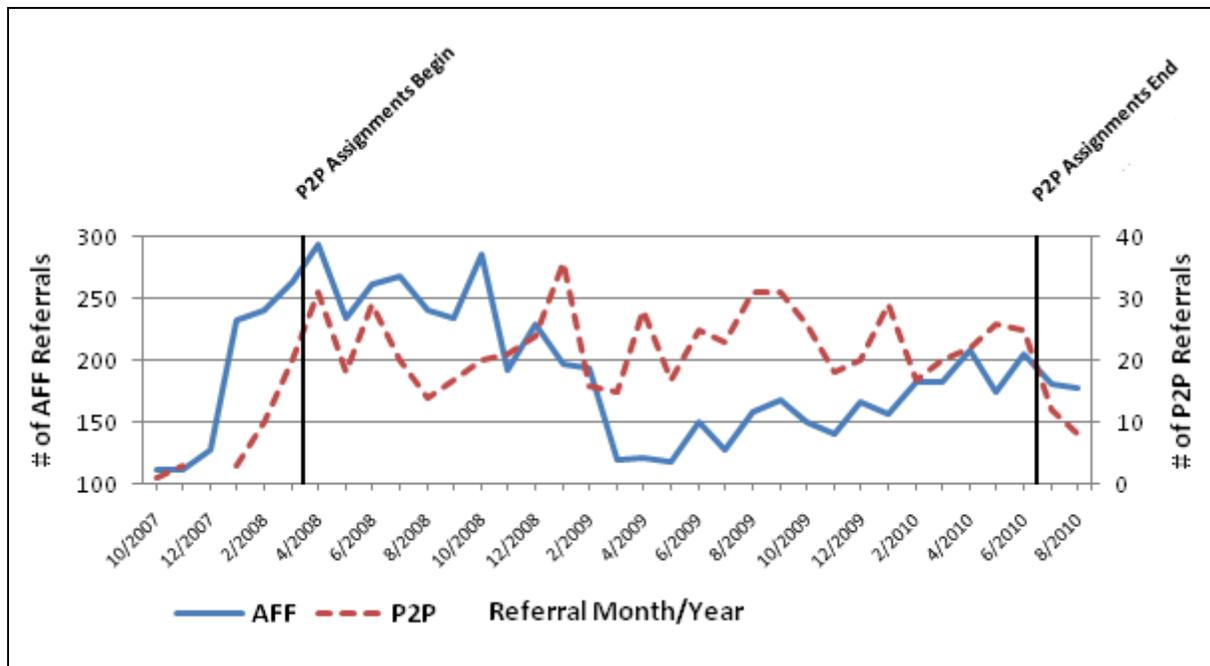


Figure 1: Monthly Referrals to P2P and to AFF

		P2P <i>N</i> = 686 ^a	
		#	%
Index Child is a Substance Exposed Newborn	No	155	27.15
	Yes	416	72.85
	Missing CPS Report	110	
Substance Use: Methamphetamine	Yes	367	66.73
	No	183	33.27
	Missing	136	
Index Child Age at Date of Report (in months)	<i>n</i>	552	
	<i>M</i>	6.81	
	<i>SD</i>	22.04	
	<i>Mdn</i>	.03	

As evidenced in Table 1, nearly ¾ (72.85%) of the cases referred to the P2P program were documented as substance exposed newborn (SEN) cases within the ADES CHILDS data system. Methamphetamine abuse was documented at program intake as a self-reported substance of abuse in 66.73% of these cases. The average age among the 552 index children for whom chronological age data were available was 6.81 months (*SD* = 22). It is important to note that the median age for the index children was 0.03 months, which is equivalent to one day. Based upon this information, it appears that the P2P program was successful in serving a

preponderance of families experiencing methamphetamine use disorders and parenting a substance exposed newborn.

Observed differences between the characteristics of clients referred to the P2P program and the AFF program during the same period of time are critical as they may confound any true program process or treatment outcome differences that might be observed between the two samples. This in turn can lead to invalid conclusions related to the relative impact of the supplemental effects of the peer recovery coach component of the P2P program.

The information in the accompanying table indicates that in comparison to all referrals to the AFF program, referrals to the P2P program were significantly more likely to be female, Hispanic, Caucasian/White, never married, and more likely to be unemployed.

As summarized in Table 3, individuals referred to the P2P program self-reported at intake significantly higher rates of general methamphetamine use (66.73% v. 44.08%), primary use of methamphetamine (38% v. 21.75%), and general use of cocaine (17.09% v. 12.53%) but lower rates of alcohol abuse (54% v 64.41%).

Table 2: Differences Between P2P referrals and AFF Referrals		AFF Group			
		AFF N = 6820		P2P N = 686 ^a	
		#	%	#	%
Gender**	Female	4589	67.29	546	79.94
	Male	2231	32.71	137	20.06
Ethnicity**	Hispanic/Latino	1647	24.15	217	31.77
	Not Hispanic or Latino	5173	75.85	466	68.23
Race ¹	American Indian/Alaskan ^{ns}	325	4.77	32	4.69
	Asian ^{ns}	9	0.13	1	0.15
	Black/African American ^{ns}	677	9.93	62	9.08
	Caucasian/White**	4863	71.30	550	80.53
	Native Hawaiian/Pacific Islander ^{ns}	17	0.25	2	0.29
	Race (Unknown)**	1279	18.75	45	6.59
Marital Status	Married**	596	20.94	67	13.65
	Divorced/Separated/Widowed**	454	15.95	56	11.4
	Never Married/Single**	1796	63.11	368	74.95
	Missing	3974		195	
Monthly Income**	Has Monthly Income	497	11.74	63	10.19
Education Level	Less than High School**	1704	47.28	302	55.93
	High School Graduate or GED ^{ns}	916	25.42	125	23.15
	Some College or Vocational/Technical School**	816	22.64	95	17.59
	College (AA/BA) or Graduate Degree ^{ns}	168	4.66	18	3.33
Employment Status	Employed Full Time**	738	22.66	54	9.44
	Employed Part Time**	324	9.95	35	6.12
	Unemployed/Disabled/Cannot Work ^{ns}	187	5.74	27	4.72
	Unemployed/Seeking Employment**	1928	59.2	449	78.5
	Unemployed/Not Seeking Employment ^{ns}	80	2.46	7	1.22
Client Age (years)**		M=30.95 (SD=8.24) Mdn=29.51		M=28.57 (SD=6.58) Mdn=27.36	

^a No AFF data were reported for three P2P cases

¹ Race is not mutually exclusive

* $p < .05$; ** $p < .01$; ^{ns} not significant

Table 3: Patterns of General and Primary Substance Use		AFF Group			
		AFF N = 6820		P2P N = 686 ^a	
		#	%	#	%
Substance Use ¹	Alcohol**	1851	64.41	297	54
	Methamphetamine**	1267	44.08	367	66.73
	Marijuana ^{ns}	1495	52.02	266	48.36
	Cocaine/crack**	360	12.53	94	17.09
	Heroin/Opioids*	86	2.99	28	5.09
	Hallucinogens ^{ns}	64	2.23	12	2.18
	Benzodiazepines ^{ns}	74	2.57	12	2.18
	Other Drugs ^{ns}	365	12.7	73	13.27
	Missing	3946		136	
Primary Substance Use	Alcohol**	516	17.95	50	9.09
	Methamphetamine**	625	21.75	209	38.00
	Marijuana ^{ns}	598	20.81	112	20.36
	Cocaine/Crack**	104	3.62	35	6.36
	Heroin/Opioids ^{ns}	41	1.43	12	2.18
	Hallucinogens ^{ns}	8	0.28	2	0.36
	Benzodiazepines ^{ns}	13	0.45	2	0.36
	Other Drugs ^{ns}	80	2.78	18	3.27
	Missing	3946		136	

^a No AFF data were reported for three P2P cases

¹ Substance use is not mutually exclusive

* $p < .05$; ** $p < .01$; ^{ns} not significant

Table 4: Patterns of Maltreatment		AFF Group			
		AFF N = 4435		P2P N = 571	
		#	%	#	%
Allegation Type ¹	Sexual Abuse**	97	2.19	3	0.53
	Physical Abuse**	459	10.35	15	2.63
	Neglect**	4140	93.35	559	97.9
Substantiation Status ²	Substantiated*	630	14.21	107	18.74
	Unsubstantiated ^{ns}	3301	74.43	419	73.38

Note: The most proximal maltreatment report occurring on or prior to AFF referral was used

¹ Allegation types are not mutually exclusive

² Substantiation status is mutually exclusive; a maltreatment allegation is considered substantiated if at least one allegation within the report is substantiated; a maltreatment allegation is considered unsubstantiated if at least one allegation within the report is unsubstantiated, and if no allegations within the report are substantiated

* $p < .05$; ** $p < .01$; ^{ns} not significant

difference was not statistically significant.

As reflected in Table 4, neglect was the most common maltreatment allegation found among both P2P referrals and AFF referrals (97.9% and 93.35%, respectively). Similarly, the majority of maltreatment allegations filed against the individuals were unsubstantiated (73.38% of P2P referrals and 74.43% of non-P2P referrals).

Turning attention to patterns of out-of-home placements, approximately 5% more index children in the P2P group were placed out-of-home (38.1%) than those in the matched comparison AFF group (33.6%). As demonstrated in Table 5, placements into a foster family home with a non-relative accounted for approximately 48% of all out-of-home placements among index children across both groups. Among placements into a foster family home with a relative, a higher proportion were reported for index children in the P2P group (50.78%) than for those in the AFF group (44.38%); however, the

Table 5: Patterns of Out-of-Home Placements	AFF Group			
	AFF ^a		P2P	
Out-of-Home Placement	#	%	#	%
Foster Family Home-Non-Relative ^{ns}	580	47.93	91	47.15
Foster Family Home-Relative	537	44.38	98	50.78
Institution ^{ns}	41	3.39	2	1.04
Group Home ^{ns}	19	1.57	0	0
Runaway ^{ns}	10	.83	0	0
Trial Home Visit ^{ns}	11	.91	1	.52
Pre-Adoptive Home ^{ns}	9	.74	1	.52
Supervised Independent Living ^{ns}	3	.25	0	0
Total	1210	100	193	100

^a If there were the same index children in both groups, counts of these index children were suppressed in the AFF group

^{ns} not significant at the .05 level

In summary, comparative analyses on the characteristics of the individuals referred to the P2P program and to the AFF program during the study period revealed multiple and statistically significant differences between the samples.

In light of these differences, and to establish a post-hoc matched comparison sample, propensity score matching was used to identify a cohort of cases among the referrals to the AFF program that most closely approximated the characteristics observed among the 681⁵⁴ individuals referred to the P2P program during the study period. For additional information regarding the propensity scoring methods, refer to the methods section of this report. ***All subsequent analyses reported in the following sections are limited to the sample of individuals referred to the P2P program and the post-hoc matched comparison sample of AFF referrals.***

Outreach

Three evaluation questions related to the provision of outreach and engagement services were posed:

1. Do individuals who are referred to the P2P program experience outreach services at a higher rate than individuals referred to the AFF program?
2. Do individuals who are referred to the P2P program experience outreach services more rapidly following program referral than individuals referred to the AFF program?
3. Do individuals who are referred to the P2P program experience more outreach contacts than individuals referred to the AFF program?

⁵⁴ Five P2P cases out of the initial 686 do not have a referral data; as such, they were excluded from subsequent analyses.

Table 6: Patterns of Outreach	AFF Group			
	Matched AFF		P2P	
	N = 681		N = 681	
	#	%	#	%
Number of Referrals	681	100	681	100
Number of Referrals with No Reported Outreach ^{ns}	111	16.30	115	16.89
Number of Referrals with Outreach Attempt ^{ns}	570	83.70	566	83.11
Number of Referrals with <i>Successful</i> ¹ Outreach ^{ns}	450	66.07	482	71.07
Number of Outreach Attempts per Referral**	M=2.22 (SD=1.43) Mdn=2		M=1.9 (SD=1.31) Mdn=1	
Number of Days from Referral to First <i>Successful</i> Outreach**	M=4.86 (SD=22.9) Mdn=1		M=1.69 (SD=4.69) Mdn=0	

¹ Successful outreach is defined as direct contact between referral and outreach worker; successful outreach is a subset of all outreach attempts.

* $p < .05$; ** $p < .01$; ^{ns} not significant

As reflected in Table 6, the relative rates of outreach attempts were comparable between individuals referred to the P2P program and individuals referred to the AFF program. Slightly and statistically insignificantly more individuals referred to the P2P program (71.07%) were successfully outreached, relative to their matched AFF counterparts (66.07%). Individuals in the P2P group experienced less outreach attempts than individuals in the matched comparison AFF group (AFF = 2.22; P2P = 1.9); however, those individuals referred to the P2P program were successfully outreached statistically significantly more rapidly ($M = 1.69$ days following referral) than their counterparts referred to the AFF program ($M = 4.86$ days following referral). As such, we conclude that individuals referred to the P2P program did *not* experience outreach services at a rate higher than that observed among a matched comparison sample of individuals referred to the AFF program. We do conclude however, that successful outreach services were experienced more rapidly for those individuals referred to the P2P program.

Assessment and Services Initiation

Two evaluation questions related to the conduct of assessment and the initiation of program services were posed:

1. Do individuals referred to the P2P program engage in assessment sessions at a higher rate and more rapidly than their AFF referral counterparts?
2. Do individuals referred to the P2P program become clients and accept treatment services at a higher rate and more rapidly than their AFF referral counterparts?

Table 7: Patterns of Assessment and Service Initiation	AFF Group			
	Matched AFF		P2P	
	N = 681		N = 681	
	#	%	#	%
Number of Referrals that Were Assessed ^{ns}	554	81.35	575	84.43
Number of Days from Referral to Assessment**	M=27.71 (SD=25.19) Mdn=21		M=23.59 (SD=25.03) Mdn=17	
Number of Referrals that Engaged in at Least One Unit of Services, (excluding assessment and drug testing services)**	612	89.9	660	96.9
Number of Days from Referral to First Service (excluding assessment and drug testing services)**	M=26.41(SD=25.84) Mdn=20		M=22.63 (SD=28.54) Mdn=15.5	
Number of Referrals that Engaged in at Least One Unit of Individual, Group, or Family Counseling ^{ns}	562	82.5	578	84.9
Number of Days from Referral to 1 st Unit of Individual, Group, or Family Counseling**	M=27.76 (SD=26.93) Mdn=21		M=24.91 (SD=29.59) Mdn=17	

* $p < .05$; ** $p < .01$; ^{ns} not significant

The data in Table 7 reveal that most individuals referred to either the AFF or the P2P program engaged in a clinical assessment, with a slight and statistically insignificantly higher rate of assessments observed among the P2P referrals. Both groups of referrals were assessed, on average, 3-4 weeks after their referral had been received by the AFF contracted treatment provider; individuals referred to the P2P program engaged in an assessment approximately 4 days faster than their AFF program referral counterparts. Nearly all individuals (96.9%) referred to the P2P program engaged in some form of service, eclipsing the rate of service engagement observed among the AFF program referrals (89.9%). Using a more restrictive definition of service initiation, limited to initiation of individual, group, or family counseling, revealed that 84.9% and 82.5% of P2P and AFF referrals, respectively, engaged in these services. While the rates of counseling service engagement were comparable across samples, those individuals served in the P2P program initiated these counseling services more rapidly ($M = 24.91$ days) than individuals served in the AFF program ($M = 27.76$ days).

Based upon these data, it is evident that regardless of the program to which individuals were referred, the overwhelming majority of all referred individuals engaged in an assessment and supportive and/or treatment services. While individuals referred to the P2P program were generally observed to experience these events at a higher rate and more quickly, relative to their referral dates, these differences tended to be statistically insignificant. As such, we conclude that individuals referred to the P2P program did not engage in assessment at a higher rate than their matched AFF counterparts. However, these data provide supportive evidence that assessment or treatment initiation occurred more quickly as a result of P2P peer recovery coach assistance.

Service Engagement

Evaluation questions related to the receipt of services included the following:

1. Do clients referred to P2P remain in treatment for a longer (or shorter) period of time?
2. Do the reasons for program termination differ between individuals referred to P2P and individuals referred to AFF?

Information used to address these questions drew upon services data reported to ADES/DCYF by the AFF contracted provider agency. Services data from the ADHS/DBHS, which are utilized in the annual AFF report, are not included in these analyses. A supplemental report will be issued in 2012, following receipt and analysis of SFY 2011 services data from ADHS/DBHS in support of the completion of the 2011 AFF Annual Report.

Table 8: Patterns of Program Completion	AFF Group			
	Matched AFF		P2P	
	N = 522 ¹		N = 578 ¹	
	#	%	#	%
Completed Treatment Plan**	199	38.12	154	26.64
Discontinued Participation ^{ns}	276	52.87	329	56.92
Refused Services ^{ns}	4	.77	8	1.38
All Other Reasons for Closure**	43	8.24	87	15.05
Total	522	100	578	100
Closure Date in Record, but No Closure Reason Provided	5		3	
Open Record with no Closure	87		79	

¹ Only includes clients with records of service encounters (not including substance abuse assessment or drug screen/urinalysis) and a closure report

* $p < .05$; ** $p < .01$; ^{ns} not significant

Among all individuals referred to the P2P program ($N = 681$), 578 (84.9%) had a record of one or more service encounter and a useable closure report providing both the date and reason for program closure. Among the matched sample of AFF referrals, 76.7% possessed both a record of service encounter and a viable closure report. As summarized in Table 8, a

significantly greater proportion of AFF clients were reported to have completed their treatment program (38.12%), while an insignificantly greater proportion of P2P clients were reported to have discontinued or dropped out of their treatment program (56.92%); a significantly higher rate of P2P clients were closed for all other reasons (AFF = 8.24%, P2P = 15.05%).

Assessing the duration of program participation among the study samples was approached by determining the length of time from the date of the first post-assessment service to the date of the last post-assessment service (prior to closure date). For these analyses, we purposely excluded assessment service codes to isolate the therapeutic and supportive services that participants were provided. We restricted our analysis only to those cases that (a) had a record of one or more post-assessment service encounters; (b) had a closure report that included a closure reason; and, (c) the duration from first service to last service (or closure report) was greater than 0. As a result of this restrictive data query, some data from previous analyses

were not incorporated in the subsequent analyses (as is evident when comparing data in Table 8 to data in Table 9).

Table 9: Patterns of Program Completion and Length of Treatment		AFF Group	
		Matched AFF	P2P
All Closed Referrals**	<i>n</i> ¹	494	570
	<i>M</i>	126.37	153.51
	<i>SD</i>	92.81	125.07
	<i>Mdn</i>	105.5	120
Client Completed Treatment Plan**	<i>n</i>	187	152
	<i>M</i>	140.67	182.93
	<i>SD</i>	104.61	141.60
	<i>Mdn</i>	118	151
Client Discontinued Participation**	<i>n</i>	268	329
	<i>M</i>	120.38	157.85
	<i>SD</i>	84.03	119.98
	<i>Mdn</i>	104	123
Client Refused Services ^{ns}	<i>n</i>	4	8
	<i>M</i>	195.75	227.75
	<i>SD</i>	67.75	119.68
	<i>Mdn</i>	200.5	187.5
All Other Reasons for Closure ^{ns}	<i>n</i>	30	78
	<i>M</i>	82.63	70.42
	<i>SD</i>	73.89	64.95
	<i>Mdn</i>	55	51

Note: Descriptive statistics were not calculated when the first and last service dates were the same

¹ LOT was calculated regardless of missing a closure reason; closure reasons were missing for 5 AFF records and 3 P2P records

* $p < .05$; ** $p < .01$; ^{ns} not significant

While P2P clients were observed to experience lowered rates of treatment completion, these clients were also observed to experience significantly longer periods of treatment. As summarized in Table 9, the average length of treatment for all closed referrals was significantly greater for P2P clients ($M = 154$ days) than for AFF clients ($M = 126$ days). Among those clients recorded as having completed their treatment program, the average length of treatment among P2P clients was 183 days, in contrast to 141 days among AFF clients.

As such, based upon these data we conclude that P2P clients experienced a significantly lower rate of program completion and a corresponding higher rate of program drop out and discontinuation, as compared to their AFF matched counterparts. Nonetheless, regardless of the type of program completion, P2P clients in general were observed to remain in treatment for a significantly longer period of time. Relative to their matched AFF counterparts, P2P clients who successfully completed their treatment plan participated in services on average approximately 40 days longer than AFF clients who successfully completed their treatment plan.

Outcomes

Evaluation questions related to outcomes included the following:

1. Do clients referred to P2P display patterns of maltreatment recurrence that are different from their AFF counterparts?
2. Do rates of permanency differ between individuals referred to P2P and individuals referred to AFF?

Maltreatment Analysis

Maltreatment allegation data are available for review through the ADES CHILDS system, allowing for analysis of maltreatment allegations at the level of a child and at the level of a family unit. Analysis of clients who were the alleged perpetrators afforded the ability to identify the precipitating allegation at the time a client was referred to the P2P program and to determine any new (recurrent) allegations of maltreatment that were filed involving the same perpetrator, regardless of the child victim.

Comparable maltreatment recurrence rates were observed between participants in the P2P group (22.8%) and those in the matched comparison AFF group (20.2%) for individuals with identifiable pre-referral maltreatment reports. Among individuals with a pre-referral maltreatment report, the vast majority of participants in the P2P group (79%) and the matched comparison AFF group (76.4%) were identified as the perpetrator (see Table 10). Regardless of perpetrator membership, the rate of maltreatment recurrence for the P2P group was slightly but insignificantly greater than that observed for the matched comparison AFF group.

Pre-Referral Maltreatment Allegation				Post-Referral Maltreatment Allegation	
	AFF Group	Total*		Perpetrator~	
Perpetrator	Matched AFF	428	76.4%	100	23.4%
	P2P	451	79%	115	25.5%
Non-Perpetrator	Matched AFF	132	23.6%	13	9.9%
	P2P	120	21%	15	12.5%
Total	Matched AFF	560	100%	113	20.2%
	P2P	571	100%	130	22.8%
No Report	Matched AFF	121		25	20.7%
	P2P	110		30	27.3%

* Percents sum up to total number of pre-referral reports

~ Percents based on individuals with a pre-referral report

Table 11 summarizes maltreatment allegation recurrence among alleged perpetrators. It is important to note that these maltreatment allegation types are not mutually exclusive. The vast majority of perpetrators in pre-referral maltreatment reports had an allegation of neglect; these rates were comparable for both groups (AFF = 97.9%; P2P = 98.45%). Comparably high rates of pre-referral allegations of neglect were found across groups because AFF participants were matched to the P2P group on parental methamphetamine use and having a child who was a substance exposed newborn. For other types of maltreatment allegations (physical abuse,

sexual abuse, and other), the rates are negligible and comparable for both groups; as such, emphasis will be placed on allegations involving neglect.

Among alleged perpetrators with pre-referral neglect allegations, approximately three-quarters had no subsequent report in which they were an alleged perpetrator (AFF = 76.8%; P2P = 74.3%), and approximately one-fifth had an allegation recurrence of neglect (AFF = 19.3%; P2P = 23.9%); recurrence rates of other types of abuse were negligible. All of the recurrence rates were not significantly different between the P2P group and the matched comparison AFF group.

Pre-Referral Maltreatment Allegation ¹		Post-Referral Maltreatment Allegation ³													
		Totals ²		Neglect		Physical Abuse		Sexual Abuse		Other		Totals ⁴		No Report	
		#	%*	#	%~	#	%~	#	%~	#	%~	#	%~	#	%~
Neglect	AFF	419	97.90	81	19.3	21	5.0	5	1.2	1	0.2	97	23.2	322	76.8
	P2P	444	98.45	106	23.9	10	2.3	1	0.2	0	0.0	114	25.7	330	74.3
Physical Abuse	AFF	14	3.27	4	28.6	2	14.3	0	0.0	1	7.1	5	35.7	9	64.3
	P2P	13	2.88	7	53.8	1	7.7	0	0.0	0	0.0	7	53.8	6	46.2
Sexual Abuse	AFF	0	0.0	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA
	P2P	1	0.22	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Other	AFF	0	0.0	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA
	P2P	1	0.22	0	0.0	1	100	0	0.0	0	0.0	1	100	0	0.0
Total ⁵	AFF	428		83	19.4	22	5.1	5	1.2	1	0.2	100	23.4	328	76.6
	P2P	451		106	23.5	11	2.4	1	0.2	0	0.0	115	25.5	336	74.5

Note: For all counts (#), the unit of analysis is clients who were perpetrators in a maltreatment report;

Both pre- and post-referral allegation types are not mutually exclusive;

¹ This is reflective of an allegation within a maltreatment report that occurred before or on the same date of AFF referral;

² Totals for 'pre-referral allegation' represents the number of clients with that allegation type before the referral;

³ This is reflective of an allegation within a maltreatment report that occurred *after* the date of AFF referral; also the counts and percentages represent the number of clients out of Totals² with that post-referral allegation

⁴ This represents the number of clients out of Totals² with at least one post-referral allegation

⁵ This represents the total number of clients with at least one pre-referral allegation

*Percents are calculated vertically (i.e., the percent of an allegation type among the clients with a pre-referral maltreatment report);

Also note that the sum of percentages will not sum up to 100% because the allegation types are not mutually exclusive.

~ Percents are calculated horizontally; percent of pre-referral allegation w/ a post-referral allegation.

Permanency Analysis

Another outcome examined was type of permanency achieved for children placed out-of-home. Although placement out-of-home is not an outcome, we will first discuss the percent of children who were placed out-of-home before proceeding to permanency outcomes. According to Table 12, slightly and significantly more children in the P2P group (38.1%) than those in the matched comparison AFF group (32.6%) were placed out-of-home; programmatically this percent difference is small. Regardless of group assignment, approximately 50% of the children placed out-of-home achieved permanency.

Index children in the P2P group were reunified with a parent or caregiver at a significantly higher rate than those children in the matched comparison AFF group. Reunification occurred, on average, a little over a month quicker for index children in the matched comparison AFF group (*Mdn* = 85 days) than for those in the P2P group (*Mdn* = 118.5 days); however, the difference was not statistically significant. For other forms of permanency, frequencies and rates for both groups were negligible and comparable. No deaths of children were reported for either group.

Table 12: Permanency Achieved by Index Children	AFF Group			
	Matched AFF ^a		P2P	
	#	%	#	%
Total Number of Index Children	519		507	
Number of Children Remaining In Home*	350	67.44	314	61.93
Number of Children Placed Out-of-Home*	169	32.56	193	38.07
Still in Care ^{ns}	81	47.93	90	46.63
Achieved Permanency ^{ns}	88	52.07	103	53.37
Reunification*	72	81.82	96	93.2
Transfer to Another Agency ^{ns}	4	4.55	3	2.91
Adoption ^{ns}	4	4.55	2	1.94
Relatives ^{ns}	4	4.55	1	.97
Guardianship ^{ns}	4	4.55	1	.97

^a If there were the same index children in both groups, counts of these index children were suppressed in the AFF group

* $p < .05$; ^{ns} not significant

Based on these data, we conclude that patterns of maltreatment allegations among alleged perpetrators did not significantly differ between the P2P group and the matched comparison AFF group. Moreover, although the rates of achieving permanency were not different between the P2P and matched comparison AFF groups, there was a significantly higher rate of reunification observed for P2P index children.

Perspectives on Peer Recovery Coaches

Qualitative information was obtained from P2P peer recovery coaches, alumni of the P2P program, and service providers who collaborate with the peer recovery coaches; the purpose of collecting qualitative information was to gain a better understanding of peer recovery coaches, with regard to roles and responsibilities, effectiveness, and areas of potential improvement.

Roles and Responsibilities of P2P Peer Recovery Coaches

All participants agreed that the primary role of peer recovery coaches (PRCs) is to help engage and retain clients in treatment. Three themes emerged from the focus groups and interviews that are related to

“Retention – keeping [clients] engaged in services that first couple of months is the key in us building a relationship with them. It’s the recovery coach’s job to make that first connection.” – CPS Supervisor.

“They step right into the role that you need them to be. If you need them to be resourceful, they are. If you need them to say, ‘hey, call me if you need me’, they do. If you need them to be hands-off, they are.” – Former P2P Client

“They’re a softer introduction into what you’re about to embark on. They explain a little more about what’s going to happen. You’re a little more prepared for what’s coming at you. You’ve already been hit in the face with a sledgehammer, but what’s coming after that is what they have introduced you to.” – Former P2P Client

“Before recovery coaches, I think there was less understanding; now I think there is a bit more understanding.” – CPS Supervisor

“If the recovery coach has developed a solid, informal relationship with the parent, that parent is more likely to be honest with the team, especially when the recovery coach is sitting at the table.” – Treatment Worker

ways in which PRCs potentially impact client engagement and retention: resourcefulness; collaboration with CPS and treatment providers; and rapport building with clients and acting as an advocate.

Resourcefulness. Participants agreed that PRCs provide various resources and information to help clients navigate through CPS and the treatment system. Providers reported that PRCs assist in coordinating services and make the case plan requirements more manageable and achievable for parents. Providers also stated that PRCs help prepare clients for what is to come. These sentiments were also voiced by the recovery coaches and the alumni. For example, PRCs reported that they talk to clients about what to expect in group and individual treatment sessions, and the issues that clients may encounter while in treatment. Similarly, P2P alumni stated that PRCs were helpful right from the beginning in providing background information on how the CPS and treatment systems work. Alumni further agreed that the role of PRCs also extended beyond navigating the pathway to recovery and treatment, and included helping the clients to navigate the courts and other systems.

Collaboration. Service providers described the role of PRCs as being a distinct component of the larger intervention that focuses specifically on supporting the parent. Recovery coaches stated that they are consistently collaborating with CPS and service providers, and that attending trainings with other workers has helped all trainees to gain a better understanding of the roles of each team member. Service providers agreed that recovery coaches offer a different perspective about addiction and recovery, and that their personal experience and depth of knowledge as a parent who has been through the system makes them an important component of treatment; not only to parents but also to the providers who work with parents. Service providers also stated that PRCs, who are actively involved in CPS Team Decision Making (TDM) meetings, are viewed as collaborators in the coordination and delivery of services. The role of the PRC in the TDM was described as “encouraging, building rapport, and helping parents to engage in needed services.” One recovery coach stated that the role of the PRC in working with CPS is to act as a bridge between the client and CPS, particularly when the parent and the CPS worker were not “making a connection” with one another. A service provider emphasized the importance of collaboration between the PRC and CPS by stating that “It’s another opportunity – if I didn’t connect with the parent, maybe the recovery coach will.”

Rapport and Advocacy. The ability of PRCs to create rapport with clients was regarded as an effective tool in promoting engagement and retention. Service providers agreed that PRCs are essentially role models and mentors to parents, and their mission is to make a connection with the parent to help make them more receptive to information and support. PRCs stated that an integral part of their relationship with clients was listening to their concerns and conveying, through personal experiences, that CPS and the Family Team want to work with the clients to correct the situation and help them succeed. Such openness and candor (e.g. admitting to their past problems and sharing personal stories about becoming clean and sober) was viewed by service providers as a critical component of developing relationships with parents, and was considered a highly effective engagement tool. Similarly, P2P alumni agreed that it was comforting to be able to talk to someone with similar experiences. One alumnus stated, “It was nice to know that [the PRC] had been through the same thing, and that she had made it through.” Recovery coaches voiced similar sentiments, stating

“Their [PRC] skill is their experience.” – CPS Supervisor

“I’m there to help guide parents and encourage them to get into treatment. I help guide them along the way so they can advocate for themselves. I’m like a teacher or a mentor. My job is to guide them, not carry them.” – Peer Recovery Coach

“It’s more of a people-to-people relationship. You can tell them when you’re struggling, or what is [sic] some help that they can suggest. I remember calling her crying.” – Former P2P Client

“You don’t have to hide what you are. It’s like having a weight lifted off your shoulders. If I’m sitting around and start talking about my past, there are no eyes looking at me funny...There are not a lot of people that you can say that to, and have them not throw stones at you.” – Former P2P Client

that much of their focus centered on giving hope to clients, advocating for clients, and then teaching clients how to advocate for themselves; essentially the PRCs believed that it was their job to speak for the parents until they could speak for themselves. Service providers also observed this, stating that once parents were engaged in services, the focus of PRCs shifted to teaching parents to take the lead in their treatment and recovery.

Effectiveness of P2P Peer Recovery Coaches

Various roles of the PRCs were regarded by participants as being effective throughout the treatment process. For example, providers agreed that initially PRCs are effective agents in helping parents to recognize their need for services, and later they are effective in teaching parents how to access treatment services, how to advocate for themselves, and how to develop a recovery-centered lifestyle. The effectiveness of PRCs was believed to be due in large part to their personal experiences, which allowed them to form a bond with parents and gain a fuller understanding of parents' feelings and thoughts. Although all participants stated that PRCs are effective in some respect, P2P alumni stated that they were not the primary factor that motivated them to engage in services; however, P2P alumni nevertheless stated that PRCs were effective in providing resources and supports, which in turn made the treatment process easier.

Initial Effectiveness. Providers agreed that peer recovery coaches are effective in “breaking the

“I’ve had clients tell me, ‘If you hadn’t have been there [at the assessment], I would have got up and walked out.’” – Peer Recovery Coach

“The recovery coach reminds us that recovery should not be a barrier to success.” – Treatment Provider

“Sometimes people get a little jaded because of the level of denial by the people who use. It’s easy to sever a child from these parents; it’s harder to go the full nine yards with them. The recovery coach represents success and reminds us all of the fact that people can change.” – CPS Supervisor

ice” at the initial service meetings by sharing with parents their experiences in recovery and their CPS involvement. Similarly, providers felt parents were more likely to participate in and share information with the team when a peer recovery coach was present. PRCs also agreed that the common experience shared by peer recovery coaches and their clients is an effective starting point for developing a helping relationship. Providers further stated that having PRCs involved with parents helped service providers to monitor and move cases forward, which was regarded as especially important in the beginning stages of treatment: “We can’t spend as much time with parents as we did, say eighteen months ago. The [recovery] coaches can spend more time in face to face contact with the parents, at least initially. One thing that really helps me is, after the recovery coach makes a home visit, they call me or they email me to let me know what’s going on with the clients. Then when I see the client in group, I can discuss the concerns of the recovery coach with them.”

Effectiveness in Helping Providers. Providers agreed that PRCs offer a different perspective about addiction and recovery, and their personal experience and depth of knowledge as a parent who has been through the system makes them an important component of treatment, not only to parents but also to the providers involved with parents. Providers also agreed that the work of the PRC has helped to bridge gaps between CPS and other community service providers by opening up and encouraging dialogue in meetings and among provider staff. Peer recovery coaches voiced similar beliefs, stating that PRCs are effective in helping substance abuse counselors to better understand the parent’s position and the “nuances of working with persons who have addictions.” Likewise, PRCs also acknowledged that service providers sought them out to get information for recovery resources and other community services that clients need.

Overall Effectiveness. Overall, peer recovery coaches believed they were very effective in engaging and retaining clients in treatment services (on a scale of 1% to 100%, an average rating of 85% was reported by PRCs). PRCs stated that some of the more effective methods that help promote client engagement and retention include daily communication, and developing good rapport and a trusting relationship with clients. Despite this, all P2P alumni stated that the fear of having a child taken away, or potentially losing parental rights, trumped all other motivating factors; participants stated that no services that are provided, or that can be provided (including social services and peer recovery coaches) are as powerful as being separated from your child. However, most alumni agreed that peer recovery coaches provide support and encouragement to help keep the clients on track; one alumnus stated that although she did not rely heavily on her recovery coach, and that she remained in treatment based solely on the motivation of getting her child back, it was comforting to know that she could call her peer recovery coach if she needed to. Another participant also described that although her primary motivation was getting her children back, the peer recovery coach provided reassurance in times of fear: “There’s this cloud hanging over your head until you’re done. And it is a huge fear; it rules your life. For me, she [the PRC] can tell me it is ok, it’s going to be ok. It’s just huge.”

“I think parents who have a recovery coach seem more hopeful and confident. The parent has someone they can relate to – a role model; someone who provides hope.” – CPS Worker

“The recovery coach was a boost to get in there, but it had to do with me and my child and getting sober. So, I would have been there no matter what.” – Former P2P Client

“In order to keep my children, I had to do it. But, the thing was, I knew that anytime I called, they [the PRCs] were there. If I needed them, they were there. It’s like the raincoat: you know it’s in the closet. You don’t need it here, but if we do, it’s there.” – Former P2P Client

“I think if I would have had somebody who had been there, I could have asked them the questions or got the motivation to go where I needed to go. It would have made a huge difference.” – Peer Recovery Coach

“The recovery coaches are the best thing they [TERROS] have.” – Former P2P Client

Areas of Potential Improvement for P2P Peer Recovery Coaches

Three primary suggestions for improvement of the PRC role were raised by participants: increasing the amount of time PRCs spend with clients; making more resources available to PRCs, including more collaborative training; and establishing clear boundaries between PRCs and clients.

Time. Participants agreed that peer recovery coaches could be improved if they were available for more than 60 days, and if there were more PRCs available. One alumnus stated that, “TERROS should hire more recovery coaches, instead of over booking them so that they don’t have time to go to every one of their clients.” Another alumnus voiced similar sentiments by stating, “They would give so much more of themselves if they weren’t spread so thin.” Some of the providers also felt certain that parents may have benefitted more if PRCs were able to work with clients longer; however, providers acknowledged the time-limited nature of the recovery coach services, and that the focus of the PRC is to engage clients. Peer recovery coaches believed they could have a greater impact if they could specifically spend more time in face to face contact with clients; however, they also voiced frustrations about spending too much time with clients who weren’t ready for treatment. P2P alumni also reported that the termination of PRC services was too abrupt, and that there was no transition period. Some alumni even stated that they were unaware of the fact that the PRC would only be assigned for 60 days, and that had they known this ahead of time, transition would have been easier: one alumnus stated, “As soon as I got into the schedule, they called and said the 60 days is up. About the time she [the PRC] pulled out, and other parts of my services were ending, she was an intricate part.”

Resources and Collaborative Training. Although PRCs receive some training with other team members, service providers recommended that PRCs and collaborating partners need to train together as a unit more often, to help integrate the recovery coaches with other staff in the agency. In particular, providers agreed that training needed to focus on communication skills, and ways to increase open communication. PRCs agreed that more collaborative training would also provide clarification about the roles and responsibilities of each team member, and reduce stereotypes about PRCs. For example, one PRC stated that although her input is valued by a majority of the professionals with whom she works, stigma still exists among some professionals: “It’s important that people view us as a valuable part of the work and not view us as ‘just a former client.’ There are some professionals out there who are not ready to work with us.” PRCs also agreed that access to more services and resources (e.g. the ability to transport clients), and constantly updating community resource lists would also enhance their effectiveness with clients.

"These are my clients, not my friends." – Peer Recovery Coach

"It's very hard, because she [the PRC] has guidelines that she has to abide by. And I'm like, 'no, we're friends now', and she's like, 'we are friends, but...'" – Former P2P Client

"It was frustrating to me to not be able to confront or challenge clients. I had to focus on encouraging and supporting them, even when they were lying." – Peer Recovery Coach

Setting Boundaries. All participants agreed that PRCs have a special ability to create rapport with parents; however, the open and friendly relationship between the PRCs and the clients was also stated as creating boundary issues. PRCs stated that some of their biggest personal challenges are related to setting boundaries with their clients. Service providers also recognized the potential difficulties in setting boundaries with clients, given the nature of the relationship: "Boundaries can be an issue. The recovery coach's role is to encourage parents, and show them how to get started. They are not there to be their friend." P2P alumni recognized these boundary issues as well; having a friendly relationship with the PRC, and thinking of them as more of a friend, was regarded as being difficult at times for clients, who had to realize that their relationship was first and foremost a professional one. Another boundary issue stated by PRCs involved not being able to confront clients when they are being dishonest.

Although clinical supervision was stated by PRCs as being an important factor that helped define their roles and set appropriate boundaries with parents, issues were stated to still exist.

SUMMARY AND DISCUSSION

Parental methamphetamine use and prenatal substance exposure presents a critical issue for the child welfare system; families experiencing such adverse conditions are at an increased risk of child maltreatment and CPS involvement. Complicating issues, markedly low rates of treatment retention and compliance (both of which are vital to achieving family reunification⁵⁵) have been documented among these parents once involved with CPS. Although the use of peer recovery coaches has been proposed as an effective approach to improve access to treatment for this population⁵⁶, there is currently limited research that evaluates these claims with regard to treatment engagement and retention. This evaluation fills this gap by assessing whether the provision of a peer recovery coach to methamphetamine-using parents and parents of substance exposed newborns increases engagement and retention in services, increases rates of reunification, and decreases recurrence of child maltreatment.

This section summarizes key findings of the Parent to Parent (P2P) Recovery Program. Information gathered from a variety of sources, including administrative data from ADES/DCYF and TERROS, focus groups, and semi-structured interviews provides different perspectives to address the performance of the P2P program in relation to each of the evaluation domains.

Conclusions

Findings from this evaluation indicate that peer recovery coaches had an impact on client engagement and retention. The provision of a peer recovery coach increased rates of successful outreaches and reduced the duration of time from referral to successful outreach and clinical assessment. Moreover, the rate of service engagement and duration to service initiation significantly improved with the use of a peer recovery coach. These observations are supported by previous research findings that peer recovery coaches are effective in increasing access to treatment services for substance abusing caregivers in the child welfare system.⁵⁷

According to qualitative information gathered from P2P alumni, peer recovery coaches, and service providers, service engagement was enhanced by recovery coaches providing background information that assisted clients in navigating through the CPS and treatment systems. Moreover, service providers believed that peer recovery coaches were instrumental in the initial stages of treatment, and that clients were more likely to participate and share information when their peer recovery coach was present.

Another finding from this evaluation indicates that clients who were assigned a peer recovery coach were engaged in treatment for a longer period of time than clients who were not

⁵⁵ Smith, B.D. (2003). How parental drug use and drug treatment compliance relate to family reunification. *Child Welfare*, 82(3), 335-365.

⁵⁶ Ryan, J.P., Marsh, J.C., Testa, M.F., & Louderman, R. (2006). Integrating substance abuse treatment and child welfare services: Findings from the Illinois Alcohol and Other Drug Abuse waiver demonstration. *Social Work Research*, 30(2), 95-107.

⁵⁷ Ryan, J.P., Marsh, J.C., Testa, M.F., & Louderman, R. (2006). Integrating substance abuse treatment and child welfare services: Findings from the Illinois Alcohol and Other Drug Abuse waiver demonstration. *Social Work Research*, 30(2), 95-107.

assigned a peer recovery coach. According to the interviewed P2P alumni, support and encouragement provided by the peer recovery coach were important factors that helped clients stay on track. Peer recovery coaches believed that developing rapport and maintaining frequent communication with clients contributed to client engagement and retention.

Although peer recovery coaches significantly increased length of treatment, the findings of this evaluation indicate that clients with peer recovery coaches did not have higher treatment completion rates than those without peer recovery coaches. These findings are somewhat paradoxical, in that one would expect longer periods of treatment to be associated with higher rates of treatment completion. The percent of discontinued participation and refusal of services were slightly but insignificantly higher for clients in the P2P group; however, the percent of 'other reasons for closure' were significantly higher for P2P clients (15%) than for the matched comparison AFF clients (8%). Since these other reasons are unknown, further investigation is warranted. Based on these findings, we conclude that peer recovery coaches increase treatment engagement and length of treatment, but these increases are not indicative of greater treatment completion rates.

In addition to the effectiveness of peer recovery coaches increasing treatment engagement and retention, a secondary finding emerged related to outcomes. Similar rates of post-referral maltreatment allegations were observed across groups, indicating that the use of peer recovery coaches does not decrease the risk of maltreatment recurrence. Ryan and colleagues (2008)⁵⁸ found the use of peer recovery coaches in the child welfare system to be associated with a decreased risk of a subsequent substance exposed newborn. It should be noted that the outcome measure and sample associated with Ryan et al.'s study were different to those associated with this evaluation; the outcome measure in Ryan et al.'s study was limited to substantiated reports of a substance exposed infant, and the sample was restricted to substance abusing caregivers in the Cook County (Illinois) child welfare system who had lost temporary custody of their children. Furthermore, the majority of participants in Ryan et al.'s study were African Americans, whereas most participants in this evaluation were Caucasians.

Outcome findings from this evaluation also indicate that peer recovery coaches increase the likelihood of achieving family reunification. This finding converges with the work of Ryan and colleagues (2006)⁵⁹, who found that substance abusing caregivers in the child welfare system are more likely to achieve family reunification when assigned a peer recovery coach.

⁵⁸ Ryan, J.P., Choi, S., Hong, J.S., Hernandez, P., & Larrison, C.R. (2008). Recovery coaches and substance exposed births: An experiment in child welfare. *Child Abuse & Neglect*, 32, 1072-1079.

⁵⁹ Ryan, J.P., Marsh, J.C., Testa, M.F., & Louderman, R. (2006). Integrating substance abuse treatment and child welfare services: Findings from the Illinois Alcohol and Other Drug Abuse waiver demonstration. *Social Work Research*, 30(2), 95-107.

Limitations

Ideally, randomly assigning individuals into the P2P or AFF group would have assisted in reducing the likelihood of spurious relationships. Since individuals in this evaluation were not randomized, we attempted to overcome biases by using propensity score matching to identify a subgroup of AFF referrals that most closely approximated the characteristics observed among those referred to the P2P program. Given that we did not have data on all potential variables, there is a possibility that there may have been other confounding variables that we did not match on.

Another limitation is that the samples in the evaluation were from one specific provider, and were not random samples from all potential clients; therefore, the findings may not be representative of other agencies, and may not be generalizable to all methamphetamine-using parents or parents of substance exposed newborns. Furthermore, the majority of analyses were conducted based on administrative data sets that contained missing data. For example, we were able to identify CPS reports for 70% of all referrals, despite our efforts to locate all missing reports. Restricting our analyses to available data may potentially result in an inability to make accurate inferences to the population.

Finally, fidelity of the peer recovery services was not assessed in this evaluation; as such, it is uncertain if all individuals in the P2P group received similar peer recovery services. Given that some aspects of peer recovery services may be more beneficial than others, further investigation is warranted. Indeed, peer recovery coaches and service providers recommended that recovery coaches and other agency personnel should be trained together more often to assist in integrating the recovery coaches with other agency staff. Likewise, some peer recovery coaches suggested that more collaborative training would provide clarification about the roles and responsibilities of each team member.

Despite these limitations, findings from this evaluation nonetheless provide important implications for the use of peer recovery coaches for CPS-involved families with substance exposed newborns and methamphetamine using parents.

Implications and Future Issues

Given the paucity of research on the effectiveness of peer recovery coaches for substance abusing caregivers in the child welfare system, large randomized controlled trials are greatly needed. While this evaluation is one step in filling the gap, more high quality research is also needed before definitive conclusions can be made about the effectiveness of peer recovery coaches in increasing treatment engagement and retention, and decreasing the likelihood of maltreatment recurrence. Nonetheless, there appears to be some benefit of utilizing peer recovery coaches in the studied population (i.e. child welfare-involved parents of substance exposed newborns and methamphetamine using parents), especially with regard to treatment access and reunification.

Although some P2P clients expressed that their peer recovery coach provided support and encouragement, which in turn kept them on track, all clients stated reunification with their child was the primary motivating factor why they remained in treatment. In the future, it may be worthwhile to include assessments of parental motivation as an outcome measure. While our evaluation used treatment initiation and treatment duration as proxy variables for motivation, these variables do not precisely depict motivation. Given that this evaluation was an *ex post facto* design, utilization of other indicators of motivation was impractical, since there was not an exact way to foresee who would be in the matched group.

Finally, P2P alumni raised concerns that the case load of peer recovery coaches was too large. Similarly, peer recovery coaches believed they could have a greater impact if they spend more face-to-face time with the clients. It would be interesting to examine whether the dosage of peer recovery coaches was related to not only engagement, but also to program completion. Specifically, it may prove worthwhile to examine whether duration rates of peer recovery coaches predict rates of treatment completion; it is possible that participants who interact with a peer recovery coach for a longer duration are more likely to complete their treatment plan. In a similar vein, P2P alumni suggested that peer recovery coaches would be more beneficial if assigned for more than 60 days. Future research could focus on examining the effect of peer recovery coaches if they are assigned for longer periods of time.

Appendix A

		Significant Relationship		
Predictors cited in published articles ¹	Citation	Bivariate	Multivariate	Name of variables (or proxy variables) in AFF or ADES/DCYF data source
Mother race: Caucasian	(Fuller & Wells, 2003)	Yes	No	CAUCASIAN_WHITE
African American X single household [Interaction term]	(Fuller & Wells, 2003)	No	Yes	Interaction: BLACK_AFRICAN_AMERICAN X Single Status
Household structure [single parent]	(Fuller & Wells, 2003)	Yes	Yes	Proxy: MARITAL_CODE= Single
No income at intake	Rittner (2002) ²	Yes	Yes	GROSS_MONTHLY_INCOME
Rated “High Risk” for caretaker criminal behavior	(Fuller & Wells, 2003)	Yes	Yes	Proxy: CRIMINAL_CHARGES_PENDING
History of domestic violence	English et al (1999) ²	Yes	No	Proxy: DOMESTIC_VIOLENCE
Partner abuse construct	DePanfilis & Zuravin (1999a) ²	Yes	Yes	Proxy: DOMESTIC_VIOLENCE
Parental alcohol abuse	Swanston et al (2002) ²	Yes	No	Substance Use: Alcohol
Parental substance abuse	English et al (1999) ²	Yes	No	Assessment record of substance use
Safety assessment rating of caretaker drug and/or alcohol use?	(Fuller & Wells, 2003)	Yes	Yes	Assessment record of alcohol or drug use

¹The variables in the first column are not exhaustive: variables were included if corresponding data elements in TERROS or ADES/DCYD data were available

²Based on a published systematic literature review containing 16 articles (Hindley, Ramchandani & Jones, 2006)

Table 1. (continued)				
Predictors cited in published articles	Citation	Bivariate	Multivariate	Name of variables (or proxy variables) in AFF or ADES/DCYF data source
Child's age	English et al (1999) ² , Fryer and Miyoshi (1994) ² , Herrenkohl et al (1979) ²	Yes	No	CHILD_Age (for index child)
Child's age	Little et al (2002) ² (Only sig. for parents with mental health problems)	Yes	Yes	CHILD_Age (for index child)
Number of victims involved in incident	Wood (1997) ²	Yes	No	More than one child within pre-referral report
Substance Exposed Infant (SEI)	(Smith & Testa, 2002)	Yes	Yes	Substance Exposed Newborn (SEN)
SEI Group Status	(Smith & Testa, 2002)	not reported	Yes	SEN
Intact Family	(Smith & Testa, 2002)	not reported	Yes	Out-of-home placement for any children within a maltreatment report
Any child in family placed	DePanfilis & Zuravin (1999a) ²	Yes	Yes	Out-of-home placement for any children within a maltreatment report

² Based on a published systematic literature review containing 16 articles (Hindley, Ramchandani & Jones, 2006)

Table 2. Variables associated with engagement (in substance abuse treatment) that were identified in the literature and used in the matching process					
Predictors cited in published articles ¹	Citation	Significant Relationship		Outcome Variable	Name of variables (or proxy variables) in AFF or ADES/DCYF data source
		Bivariate	Multivariate		
Gender	(King & Canada, 2004)	Yes	Yes	Tx engaged Vs Dropout (before attending 5 sessions)	GENDER_CODE
Ethnicity (African-American vs non-Hispanic Whites)	(King & Canada, 2004)	Yes	Yes	Tx engaged Vs Dropout (before attending 5 sessions)	ETHN_CODE
Clients who were non-Hispanic white (discharged from outpatient treatment)	(SAMHSA, 2009)	Yes	No	Tx completion or transfer for further Tx	CAUCASIAN_WHITE
Clients who were non-Hispanic white (discharged from intensive outpatient treatment)	(SAMHSA, 2009)	Yes	No	Tx completion or transfer for further Tx	CAUCASIAN_WHITE
Race/Ethnicity (African American vs White)	(Brecht et al, 2005)	Yes	Yes	% completing Residential Tx	BLACK_AFRICAN_AMERICAN
Race/Ethnicity (African American Vs White)	(Brecht et al, 2005)	Yes	Yes	% completing Outpatient Tx	BLACK_AFRICAN_AMERICAN
Race/Ethnicity (Hispanic vs White)	(Brecht et al, 2005)	No	Yes	% completing Residential Tx	ETHN_CODE
Race/Ethnicity (Hispanic Vs White)	(Brecht et al, 2005)	No	Yes	% completing Outpatient Tx	ETHN_CODE
African-American women (vs non-Hispanic White women)	(Messer et al, 1996)	Yes	Yes	Women who accepted Tx vs declined Tx	(BLACK & ETHN_CODE)

¹The variables in the first column are not exhaustive: variables were included if corresponding data elements in TERROS or ADES/DCYF data were available

Table 2. (Continued)					
Predictors cited in published articles	Citation	Bivariate	Multivariate	Outcome Variable	Name of variables (or proxy variables) in AFF or ADES/DCYF data source
Education (years)	(King & Canada, 2004)	Yes	NS	Tx engaged Vs Dropout (before attending 5 sessions)	ED_LEVEL_CODE
Education (lower than high school Vs high School and higher)	(Brecht et al, 2005)	Yes	Yes	% completing Residential Tx	ED_LEVEL_CODE
Education (lower than high school Vs high school and higher)	(Brecht et al, 2005)	Yes	Yes	% completing Outpatient Tx	ED_LEVEL_CODE
Women who did not graduate from high school	(Messer et al, 1996)	Yes	No	Women who Accepted Tx vs Decline Tx	ED_LEVEL_CODE
Clients who were employed full-time or part-time at the time of admission:					
(discharged from short term residential treatment)	(SAMHSA, 2009)	Yes	No	Tx completion or transferred to further Tx	EMPL_STATUS_CODE
(discharged from long term residential treatment)	(SAMHSA, 2009)	Yes	No	Tx completion or transferred to further Tx	EMPL_STATUS_CODE
(discharged from outpatient treatment)	(SAMHSA, 2009)	Yes	No	Tx completion or transferred to further Tx	EMPL_STATUS_CODE
(discharged from intensive outpatient treatment)	(SAMHSA, 2009)	Yes	No	Tx completion or transferred to further Tx	EMPL_STATUS_CODE

Table 2. (Continued)					
Predictors cited in published articles	Citation	Bivariate	Multivariate	Outcome Variable	Name of variables (or proxy variables) in AFF or ADES/DCYF data source
Clients who were over age 40 at admission abuse (discharged from Short term residential treatment)	(SAMHSA, 2009)	Yes	No	Tx completion or transferred to further Tx	AFF_Age_At_Referral
Clients who were over age 40 at admission (discharged from Long term residential treatment)	(SAMHSA, 2009)	Yes	No	Tx completion or transferred to further Tx	AFF_Age_At_Referral
No of children the women had	Messer et al, 1996	Yes	No	Women who Accepted Tx vs Decline Tx	proxy: Number of Children in CPS Report
Legal Status (No Legal Status Vs Legal Supervision - represented by the categories of parole/probation, court diversion, incarceration, and no legal supervision status)	Brecht et al, 2005	Yes	Yes	% completing Residential Tx	proxy: Criminal_Charges
Legal Status	Brecht et al, 2005	Yes	Yes	% completing Outpatient Tx	proxy: Criminal_Charges

Table 2. (Continued)					
Predictors cited in published articles	Citation	Bivariate	Multivariate	Outcome Variable	Name of variables (or proxy variables) in AFF or ADES/DCYF data source
Women's Partner : uses alcohol (within prior year period)	Messer et al, 1996	Yes	No	Women who Accepted Tx vs Decline Tx	Alcohol
Reported alcohol as their primary substance of abuse:					
(discharged from Short term residential treatment)	(SAMHSA, 2009)	Yes	No	Tx completion or transferred to further Tx	P_Alcohol
(discharged from Long term residential treatment)	(SAMHSA, 2009)	Yes	No	Tx completion or transferred to further Tx	P_Alcohol
discharged from outpatient treatment)	(SAMHSA, 2009)	Yes	No	Tx completion or transferred to further Tx	P_Alcohol
(discharged from intensive outpatient treatment)	(SAMHSA, 2009)	Yes	No	Tx completion or transferred to further Tx	P_Alcohol

Table 2. (continued)					
Predictors cited in published articles	Citation	Bivariate	Multivariate	Outcome Variable	Name of variables (or proxy variables) in AFF or ADES/DCYF data source
Secondary drug Cocaine/crack	Brecht et al, 2005	Yes	Yes	% completing Residential Tx	Cocaine_crack
Primary drug of dependence : Cocaine	King & Canada, 2004	Yes	NS	Tx engaged Vs Dropout (before attending 5 sessions)	P_Cocaine_crack
Women taking Cocaine (1 year) before and during pregnancy	Messer et al, 1996	Yes	No	Women who Accepted Tx vs Decline Tx	Cocaine_crack
Secondary drug Heroin/other opiates	Brecht et al, 2005	Yes	Yes	% completing Residential Tx	Heroin_Opioids
Women taking Marijuana (1 year) before and during pregnancy	Messer et al, 1996	Yes	No	Women who Accepted Tx vs Decline Tx	Marijuana
Daily meth/amphetamine use (in 30 days before treatment)	Brecht et al, 2005	Yes	Yes	% completing Residential Tx	Methamphetamine
Daily meth/amphetamine use (in 30 days before treatment)	Brecht et al, 2005	No	Yes	% completing Outpatient Tx	Methamphetamine
Women who had Previous Substance abuse	Messer et al, 1996	Yes	No	Women who Accepted Tx vs Decline Tx	Was there an assessment record of substance use?
Women's Parents substance use problems	Messer et al, 1996	Yes	No	Women who Accepted Tx vs Decline Tx	Was there an assessment record of substance use?

Table 2. (continued)					
Predictors cited in published articles	Citation	Bivariate	Multivariate	Outcome Variable	Name of variables (or proxy variables) in AFF or ADES/DCYF data source
Clients who were referred to treatment by the criminal justice system:					
(discharged from :Short term residential treatment)	(SAMHSA, 2009)	Yes	No	Tx completion or transferred to further Tx	proxy: Criminal_Charges
(discharged from : Long term residential treatment)	(SAMHSA, 2009)	Yes	No	Tx completion or transferred to further Tx	proxy: Criminal_Charges
(discharged from: outpatient treatment)	(SAMHSA, 2009)	Yes	No	Tx completion or transferred to further Tx	proxy: Criminal_Charges
intensive outpatient treatment)	(SAMHSA, 2009)	Yes	No	Tx completion or transferred to further Tx	proxy: Criminal_Charges

Appendix A References

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