

Appendix G - Literature Review



Review of Family Care Models, Wilderness Challenge, and Community Group Homes

*Prepared for the Ministry of Children and Family Development
August 31, 2013*

**Etta Brodersen, Taryn Urquhart, Courtney Pankratz, & Jodi Viljoen
Department of Psychology, Simon Fraser University**

Introduction

This report reviewed the research on Family Care programs (e.g., Multidimensional Family Therapy), Wilderness Challenge Programs, and Community Group Home programs, in order to inform a review of Full Time Attendance Programs in BC. In particular, we focused on demonstrated evidence for the effectiveness of these types of programs. This report is not an evaluation of the programming available through the Ministry of Children and Family Development, but rather focuses on general and manualized treatment frameworks that experts have developed, implemented, and evaluated.

In the first section of this report, we describe each of the three types of programs, evidence for effectiveness, best practice recommendations, and common criticisms. In the second section we summarize our findings and provide overall recommendations.

Family Care Models

Family Care programs place youth in a small family unit with trained foster parents who implement effective and evidence-based approaches to manage a youth's behavior in a stable family environment. Family Care programs differ considerably in terms of the number of youth in the home, and the level of training and support provided to foster parents (and biological caregivers). For instance, some programs simply provide some additional training for foster parents, whereas others provide complex manualized treatment with multiple supports and resources (e.g., Multidimensional Treatment Foster Care). Furthermore, these programs range considerably in length from short-term (e.g., six to nine months) to permanent/long-term care (Chamberlain, 2003). That said, in general, Family Care programs fall into three main categories/versions:

1. **Treatment Foster Care:** Treatment foster care is the most commonly implemented version of Family Care. This model involves training foster parents in behavior management techniques and involvement of an integrated treatment team who collaborate on a youth's care. Additional interventions are implemented where needed in a youth's school, community, or biological family.
2. **Multidimensional Treatment Foster Care** (Chamberlain, 2003): Multidimensional Treatment Foster Care provides foster parents with more intensive training than Treatment Foster Care, regular supervision/support from the treatment team, and intensive therapy for both the youth and their family.
3. **Together Facing the Challenge** (Farmer, Burns, Wagner, Murray, & Southerland, 2010): This intervention provides higher levels of training and supervision to foster parents than regular Treatment Foster Care. However, it is more flexible and easy to implement than Multidimensional Treatment Foster Care because it is designed to enhance already existing Family Care model homes rather than as an entirely new approach.

Although evidence has been found to support Family Care approaches, the vast majority of research available on this model specifically examines Multidimensional Treatment Foster Care. As such it is not applicable to all Family Care approaches, especially as Multidimensional Treatment Foster Care is much more intensive than other Family Care approaches and is used only by a smaller proportion of programs that adopt a Family Care model.

Below, we describe Multidimensional Treatment Foster Care, and program effectiveness. Later, we describe another related approach called, Together Facing the Challenge which has also demonstrated promising results.

Multidimensional Treatment Foster Care

Description of Multidimensional Treatment Foster Care

Multidimensional Treatment Foster Care is an intensive, community treatment approach designed specifically for high risk, chronic, and serious juvenile offenders. This treatment method exposes youth to positive living experiences and modifies their aftercare environment to be more structured, predictable and supportive (Chamberlain, 2003). Treatment occurs at home and school with the goals of: providing a consistent and predictable environment, supervising the youth's actions and activities, providing fair and well-specified consequences for negative behaviours, and promoting positive peer relationships (Chamberlain, 2003).

Multidimensional Treatment Foster Care includes several key components and features that set it apart from "standard" foster care:

Training for foster parents: Foster parents participate in 12 to 14 hours of training and are taught behavior management techniques (e.g., setting clear rules and expectations, consistent discipline strategies, how to reward positive behaviour) and how to implement an individualized treatment.

Ongoing supervision and support for foster parents: Foster parents are provided with ongoing training and consultation throughout the duration of the program as well as access to 24 hour emergency support services (Dorsey et al., 2008). In contrast, in typical foster care approaches training ends prior to the first contact with a youth.

Provision of a "family" environment: Youth reside within a family environment where they are the only foster child within the home and they have stable foster parents and potentially foster siblings who act as positive peer influences. Thus, this approach avoids placing youth in residential facilities while still providing structure and support.

Comprehensive and coordinated therapy and care: Multidimensional Treatment Foster Care includes a team of professionals such as program supervisors (e.g., case managers who supervise the care team and coordinate services), trained foster parents, family therapists, individual therapists, and skills trainers who work together on agreed upon goals for a given youth.

□ ***Emphasis on re-uniting adolescents with their biological parents:*** Multidimensional Treatment Foster Care placements are commonly between six to nine months with a focus on integrating the youth back into their family environment. Biological parents and/or guardians are provided with family therapy, family visits throughout the youth's placement with the foster family, and parent training (e.g., appropriate discipline, supervision, and reinforcement practices). During treatment, youth participate in home visits with their biological parents so their biological parents can practice behaviour management skills with 24 hour supervision, backup and support available prior to reintegration.

Effectiveness of Multidimensional Treatment Foster Care

Multidimensional Treatment Foster Care has strong research support, with favorable findings reported in 61 independent studies and reviews (http://www.mtfc.com/journal_articles.html). Furthermore, it has been found to be effective even for adolescents with complex needs and a history of placement breakdowns. Key findings are summarized below; however, a list of key studies is provided in the Appendix A.

Multidimensional Treatment Foster Care is Associated with Reduced Rates of Offending and Incarceration

Youth completing Multidimensional Treatment Foster Care have significantly lower rates of incarceration, and reoffending (using both official records and adolescents' self-report) than youth in group homes, residential treatment, or incarceration (Barth, Greeson, Zlotnik, & Chintapalli, 2009; Chamberlain & Reid, 1998). In particular, Multidimensional Treatment Foster Care youth have half as many arrests as their group home peers and spend 60% fewer days incarcerated (Chamberlain & Reid, 1997; Chamberlain & Reid, 1998).

Multidimensional Treatment Foster Care is Associated with Other Positive Outcomes, such as Increased Treatment Completion

Youth in Multidimensional Treatment Foster Care (as compared to youth in group homes), have been found to have roughly half as many absence without leave incidents (Chamberlain & Reid, 1998), over double the rates of treatment completion (Chamberlain & Reid, 1998), and lower rates of placement breakdowns (Chamberlain, 2003; Chamberlain & Reid, 1998; Westermarck, Hansson, & Vinnerjung, 2008). Additionally, these youth have higher levels of successful reintegration into their biological family or permanent care home. Finally, it appears to reduce some key risk factors for offending; for instance, it appears decrease adolescents' associations with delinquent peers, ameliorate school attendance/performance, reduce substance use (alcohol, marijuana, and harder drug use), and protect against mental health disorders such as depression (Barth, Greeson, Zlotnik, & Chintapalli, 2009; Harold et al., 2013; Leve & Chamberlain, 2006; Smith, Chamberlain, & Eddy, 2010).

Multidimensional Treatment Foster Care's Positive Impacts are Maintained over Time and during Adolescent's Transition to Community Settings

Compared to youth in treatment group homes, who do not tend to maintain treatment progress once they return to the community, youth in Multidimensional Treatment Foster Care are more

likely to sustain treatment effects such as fewer arrests, days in incarceration, drug use, and better school attendance even after periods as long as 18 months to two years post treatment (Chamberlain, Leve, & DeGarmo, 2007; Eddy, Whaley, & Chamberlain, 2004; Harold et al., 2013; Leve & Chamberlain, 2006).

Multidimensional Treatment Foster Care has been Shown to be a Cost Effective Treatment

Multidimensional Treatment Foster Care was compared to thirteen similar programs utilized in youth justice, such as Functional Family Therapy, Multisystemic Therapy, Community Group Homes, etc (Aos, Phipps, Barnoski, & Lieb, 2001). Of these, Multidimensional Treatment Foster Care yielded the largest treatment effects compared to the other juvenile justice treatment programs. Additionally, in comparison to regular Group Homes, Multidimensional Treatment Foster Care produced a return on investment of \$10.88 (US dollars) for every dollar spent on programming (Washington State Institute for Public Policy, 2004).

Multidimensional Treatment Foster Care Has Been Adapted for Girls with Positive Results

Multidimensional Treatment Foster Care was originally created for male adolescent offenders involved in the juvenile justice system. However, given that female youth offenders have unique needs and considerations, a modified version of Multidimensional Treatment Foster Care was developed for female adolescents. Specifically, the female adaptation of this program has increased focus on: social/relational aggression, emotional regulation and appropriate methods to express feelings, skills in building age-appropriate peer relationships, strategies to reduce sexual risk-taking and avoid sexual coercion, and education on drug use and its consequences through motivational interviewing (Leve, Chamberlain, Smith and Harold, 2012).

This adapted version of Multidimensional Treatment Foster Care has found positive results for girls. Specifically, female youth in MTFC had lower levels of offending behaviour, decreased associations with delinquent peers, and fewer days in locked settings compared to female youth in group homes (Chamberlain, Leve, & DeGarmo, 2007; Leve, Chamberlain, & Reid, 2005; Leve & Chamberlain, 2007). In addition, females completing MTFC had improved school attendance and involvement, as well as lower levels of pregnancy after baseline over a two year follow up period (Chamberlain et al., 2007; Leve et al., 2005; Leve & Chamberlain, 2007), and lower levels of depression (Harold et al., 2013) compared to treatment as usual youth residing in a group home setting. Specifically, youth in group homes were 2.5 times more likely to get pregnant than female youth completing Multidimensional Treatment Foster Care.

Studies on Multidimensional Treatment Foster Care Have Generally Focused on Caucasian Youth

Multidimensional Treatment Foster Care originated in the northwestern region of the United States, specifically in Oregon. As such, most research has used communities in this region which is primarily Caucasian (Henggeler & Sheidow, 2012). While some research has examined this approach using mixed samples of ethnicities (e.g., African-American, Latin-American, Caucasian, etc.; Price et al., 2008; Chamberlain et al., 2008) little research exists examining the specific role of culture in this treatment. Although its developers hypothesize that this approach will be effective across ethnicity, research on more diverse samples of youth are clearly needed

(Leve, Chamberlain, & Reid, 2005). In addition, the studies that have been conducted to date do not focus specifically on adolescents who are Aboriginal.

For Multidimensional Treatment Foster Care Program to be Effective, it is Essential to Adhere to the Program Principles

Implementing any evidence-based program is a big task. **Programs such as Multidimensional Treatment Foster Care cannot be expected to work if an agency only adheres to some aspects of the program rather than the full program**, or does not provide their staff with adequate training and ongoing supervision. Thus, to help support agencies in implementing and adhering to Multidimensional Treatment Foster Care, its program developers offer training through TFC Consultants (see Appendix B). Program implementation occurs over a year period and involves a number of key steps: (1) the training team will visit the site and meet with stakeholders and agency members to develop an individualized implementation plan, (2) agency staff will attend a four to five day training workshop, (3) foster parents receive two days of training on site, (4) weekly consultation occurs between TFC Consultants and Program Supervisors which are used to generate reports to the program director regarding performance and adherence of staff, and (5) weekly meetings between foster parents and the treatment team are video recorded and reviewed to ensure adherence to Multidimensional Treatment Foster Care principles. This process is intensive and is designed to allow the site to be fully functional within one year of implementation. Additional in-person training is provided as needed.

Together Facing the Challenge

Together Facing the Challenge is a form of Family Care which provides foster parents with parent skill training (e.g., teach cooperation, communication skills, proper expectation setting skills, etc.) and ongoing support and supervision. This program was developed fairly recently (Farmer, Burns, Wagner, Murray, & Southerland, 2010; Murray, Southerland, Farmer, & Ballentine, 2010) and is offered in a train-the-trainer model wherein program supervisors receive comprehensive training and then train the program's foster parents.

Together Facing the Challenge was developed to guide and support agencies in developing new Family Care programs. However, importantly, it can also be used by agencies who wish to refresh or refocus their programming to more evidence-based techniques. In other words, it does not require an agency to develop an entire new set of programs; **it can be used to improve existing programs.**

It has been undergoing investigation to assess its effectiveness and is rated very highly (The California Evidence-Based Clearinghouse for Child Welfare, 2013) as a promising evidence-based approach (Murray et al., 2013) for youth with emotional and behavioural problems. At present, one rigorously controlled research study has been published using data comparing Together Facing the Challenge and Treatment Foster Care (which is a less intensive form of Family Care). Specifically, compared to Treatment Foster Care, youth completing Together Facing the Challenge were found to have lower levels of clinical symptoms and behavior problems, and higher levels of strengths up to one year following treatment (Farmer et al., 2010). This sample was composed of both male and female youth (55% and 45% respectively) of predominantly African American and Caucasian ethnicity.

Training for Together Facing the Challenge involves a number of phases (Farmer, Murray, & Southerland, 2009): (1) initial two-day training with program supervisors and six sessions with treatment foster parents that each last 2.5 hours, (2) monthly in person or phone visits to ensure adherence, (3) booster training sessions with foster parents at six and twelve months after initial training.

Treatment Foster Care

Of the Family Care Models, the Treatment Foster Care approach has the most variability and imprecision as the nature of these programs vary considerably across organizations. That said, various Treatment Foster Care programs typically share some common components (Curtis, Alexander, & Lunghofer, 2001; Hawkins, 1990), such as providing training and support to foster parents, having a coordinated care team of professionals, having a small number of youth residing within the home, and tailoring treatment to the needs of the child.

Research regarding the effectiveness of this form of programming is limited despite the popularity of this approach in practice. However, Treatment Foster Care appears to reduce violence and behavioural problems, improve placement stability and youth social skills, and improve psychological adjustment (Reddy & Pfeiffer, 1997) while still being cost effective (Chamberlain, 2000; Hudson, Nutter, & Galloway, 1994) compared to group home programs.

Core Ingredients of Effect Family Care Models

As described, Family Care programs differ considerably. However, research indicates that Family Care programs that are most *effective* provide:

1. Intensive and ongoing training to foster parents
2. Ongoing supervision and support to treatment team members
3. Specialized care for a *single* youth residing in a given placement (rather than multiple youth)
4. A family living environment within consistent caregivers

Treatment programs which adhere to these key ingredients typically have a variety of positive outcomes. For instance, Family Care programs that provide *intensive* training and supervision to foster parents have lower rates of placement breakdowns and changes in foster parents, lower rates of youth dropping out of treatment, and proper adherence of foster parents to the treatment framework (Dorsey et al., 2008). Placements that have one youth residing in a family environment (rather than multiple youth) have greater supervision and consistent discipline from the foster parents, lower rates of contact between the adolescent and antisocial peers, lower rates of offending, and higher reintegration success back into the community (Dishion, Spracklen, Andrews, and Patterson, 1996; Robst, Armstrong, & Dollard, 2011).

On the other hand, programs that do not adhere to these key ingredients are essentially regular foster care programs which do not produce as substantial a treatment effect and lack research support. ***In fact, foster care that DOES NOT include a treatment or family component is linked to increased rates of mental health issues and increased incarceration rates, with particularly negative outcomes for female youth*** (Jonson-Reid & Barth, 2000).

Criticisms of Family Care Models

Despite the generally positive findings on Family Care Models (particularly Multidimensional Treatment Foster Care and Together Facing the Challenge), several criticisms and concerns have been raised:

1. **Challenges in implementation:** Multidimensional Treatment Foster Care is fairly expensive to implement and it can be difficult finding qualified and committed practitioners (e.g., foster parents, supervisors, administrators; Kirton & Thomas, 2011; Chamberlain, 2003). Successful implementation of the program requires sufficient resources, well-trained staff, and a clear and organized plan for program development that is executed in a timely and well-coordinated fashion. That said, research has provided strong evidence to support the cost effectiveness of Multidimensional Treatment Foster Care over numerous other approaches (Aos, Phipps, Barnoski, & Lieb, 2001). In addition, program developers have made numerous efforts to help sites more easily implement this type of program. For instance, the developers of Multidimensional Treatment Foster Care have crafted an intensive training program in which TFC Consultants oversees and reviews the implementation process. Also, Together Facing the Challenges was recently developed as a means to help sites who wish to update their existing programs to align them with best practices; this approach does not require the development of “new program” per se.

2. **Lack of standardization of SOME Family Care Models:** Whereas some Family Care Models, particularly Multidimensional Treatment Foster Care, are manualized and consistently implemented across sites (Westermarck, Hansson, & Vinnerljung, 2007), other Family Care Models (i.e., Treatment Foster Care) are diverse and lack of standardization. Thus, it is difficult to draw comparisons and determine which treatment components are effective. Given the variability in programs, sites should be careful to select programs that incorporate the key ingredients linked to positive change, have evidence of effectiveness, and have shown positive effects over an extended period of time.

3. **Limitations in research:** Studies in this area have some limitations, such as small sample size and lack of random assignment to treatment groups (Lee et al., 2011). Additionally, most of the studies have been conducted by the individuals who developed MTFC rather than by independent investigators (Turner & Macdonald, 2011). Furthermore, given that MTFC has been examined primarily in the Northwestern US, it is unclear if this approach would be equally effective in diverse ethnic settings. These criticism notwithstanding, **this approach has the strongest research support of the approaches examined in this report, including evidence of cost-effectiveness.**

Wilderness Challenge Programs

Wilderness Challenge Programs were first introduced in the 1960s as an innovative wilderness-based intervention for adolescents experiencing behavioural problems (e.g., offending behavior, substance abuse, etc.). These programs typically involve youth connecting with their peers while they learn survival skills (e.g., building shelter, preparing food) and participate in physically

challenging activities in a wilderness setting (e.g., long hikes, canoeing, rafting, etc.). They are based on the concept of experiential education (Gass, 1993), or “learning by doing,” through which participants have to apply and develop skills in order to survive in the wilderness. Furthermore, some Wilderness Challenge Programs also include therapeutic interventions (e.g., group and individual therapy).

There are many different forms and labels of Wilderness Challenge Programs (e.g., Adventure Therapy, Wilderness Adventure Therapy, Outdoor Behavioural Healthcare, Adventure-Based Counseling, Outdoor Therapy, Wilderness Therapy, Therapeutic Adventure Programs, etc.). Generally, these labels are not particularly meaningful and overlap considerably. However, Wilderness Challenge Programs appear to fall into four broad conceptual categories:

- 1. *Adventure Therapy:*** This term is sometimes used as an umbrella term to capture all forms of Wilderness Challenge Programs. However, it can also be used to describe short term, adventure programs which are conducted in a pseudo-outdoors (e.g., indoor rock climbing gymnasiums or indoor ropes courses) or urban setting. These programs do not require living in a wilderness environment and typically have short time duration.
- 2. *Wilderness Therapy:*** This form of Wilderness Challenge Program is conducted in a wilderness setting and involves setting up a base camp and moving through the wilderness in expeditions (e.g., canoeing, rafting, hiking, skiing). It focuses largely on group interactions (e.g., communication, cooperation, leadership) and can be viewed as a modified group therapy conducted in a wilderness setting.
- 3. *Wilderness Adventure Therapy:*** Wilderness Adventure Therapy can be viewed as an amalgamation of both Adventure and Wilderness Therapy programs. Participants engage in brief adventures in a naturalistic setting (e.g., rock climbing a natural cliff); however, the program does not extend over night and the focus is on the activity rather than therapy.
- 4. *Therapeutic Wilderness Camping/Long-term Residential Camping:*** This type of program is similar to Wilderness Therapy; however, it can be differentiated by its use of an extended time format (youth typically participate in this program for 12-15 months) and a developed base camp which normally includes permanent buildings in an isolated area. Additionally, youth engage in more in depth survival activities (e.g., building a hut over time rather than pitching a tent each night).

Notably, **most Wilderness Adventure Programs have no therapeutic components** (Becker, 2010), however, a select few do include therapy. Typically this involves frequent group therapy with the other youth participants (daily or weekly) and/or individual therapy with a counselor periodically throughout the program. The therapist acts as a guide and shapes the clients’ experiences so that they are able to grow more confident in themselves and in their skills. The therapist also has increased opportunity to model adaptive behaviour and to connect with the clients on a personal and therapeutic level, thereby allowing for trust and rapport to develop (Williams, 2000).

Effectiveness of Wilderness Challenge Programs

Key findings are summarized below regarding the effectiveness of Wilderness Challenge Programs; however, a list of key studies is provided in the Appendix A.

Wilderness Challenge Programs Have Found Mixed Results on Its Impact on Offending

Advocates for Wilderness Challenge Programs voice the concern that research amalgamates data from both therapy and non-therapy oriented Wilderness programs which results in diluting the positive effects of this approach. For instance, Wilson and Lipsey (2000) conducted a meta-analysis that demonstrated that Wilderness Challenge Programs with intensive physical challenges **in combination with individual, group, and/or family therapy** result in decreases in reoffending behavior. Recent research on manualized, *therapeutic* Wilderness Challenge programs (e.g., Behavioural Management Through Adventure: Project Adventure) have found reduced offending in their participants in comparison to other therapeutic camping programs (Gillis, Gass, & Russell, 2008).

Despite this observation, a common theme in the literature is that most Wilderness Challenge Programs, even those with a therapeutic component and focus, do not significantly decrease reoffense rates for juvenile offenders (Cason & Gillis, 1994; Hattie, Marsh, Neill, & Richards, 1997; Walsh & Russell, 2010). Furthermore, the short term effects of this intervention disappear and result in reoffense rates similar to those of youth who were incarcerated or completed group home programming following treatment termination (Jones, Lowe, & Risler, 2004).

These Programs May Improve Self-Esteem but its Impact on Mental Health and Functioning Are Unclear

Mixed results have also been found on the extent to which Wilderness Challenge Programs help to address risk factors associated with offending. Some studies suggest that youth completing physically intensive Wilderness Challenge programs with a therapeutic component have slightly improved school adjustment and social skills compared to youth in non-treatment control groups (Cason & Gillis, 1994; Wilson & Lipsey, 2000). For instance, wilderness adventure programs have been found to contribute to increased levels of social support, increases in positive self-image, self-esteem, and social competence (Cook, 2008). On the other hand, the effects of Wilderness Challenge programs on improving behavioural problems, family functioning, depression, and anxiety are mixed and a common finding is that progress is not maintained over either the short or long term (Neill, 2002). Additionally, although studies report that Wilderness Challenge Program results in increases in adolescents' self-esteem (e.g., Cason & Gillia, 1994; Cook, 2008; Wilson & Lipsey, 2000), raising self-esteem does not necessarily lessen risk of reoffending, as self-esteem is not an established risk factor, and in fact, studies show that high self-esteem may increase risk for reoffending (Baumeister, Smart, & Boden, 1996).

Studies in Girls Have Also Reported Increased Self-Esteem, but Little Evidence of Reduced Reoffending

Most studies on Wilderness Challenge Programs have focused on male youth (Jones, Lowe, & Risler, 2004), and studies on female adolescents are lacking. However, adolescent females who

participated in one wilderness therapy program reported that the sense of accomplishment acquired through the act of hiking contributed to a subsequent increase in their feelings of competence (Caulkins, White, Russel, 2006). Moreover, another study found that girls who participated in a similar program experienced increased self-esteem, leadership skills, and stronger relationships with other adolescent girls (Whittington, 2006). However, there may be gender differences with regards to why youth enter these treatment programs. In particular, research has suggested that girls tend to enter treatment with more mental health difficulties, whereas boys are more likely to have substance abuse problems and difficulties with performance in school (Harper et al., 2007). This observation has implications for the importance of tailoring therapeutic interventions in relation to a youth's gender and presenting problems.

Youth Often Revert Back to Negative Behaviours after Community Reintegration

Even when studies do report positive findings, youth quickly revert back to their pre-treatment level of functioning following treatment (Lipsev & Wilson, 1998; Tarolla, Wagner, Rabinowitz, & Tubman, 2002). This finding has been attributed to a lack of aftercare services as many parents reported no knowledge regarding aftercare plans following treatment.

Research on its Effectiveness Across Ethnicity is Mixed and Lacking, but Some Positive Findings Have Been Reported on Project Venture

Few studies have investigated the relationship between ethnicity and wilderness therapy programs. Among those available, the results are often mixed. For example, a study investigating the effectiveness of an Australian wilderness therapy program for Japanese participants found no improvement on measures of self-concept, instead reporting that study participants actually had lower confidence and peer cooperation after completing the program (Neill, 1999).

One program in particular, Project Venture, has been specifically designed to address the needs of high risk Aboriginal and other youth from diverse ethnic groups. This program aims to reconnect Aboriginal youth with the natural world through the use of outdoor activities and has been found to have a positive impact on reducing substance abuse, depression, and aggressive behaviour, as well as increasing resiliency and school attendance in American Aboriginal youth populations (Ryan et al., 2008). See Appendix B for resources on this program.

Wilderness Challenge Programs Are More Effective When they Include a Therapy Component and Are High Intensity

In general, although studies on Wilderness Challenge Programs did not yield significant outcomes, several key treatment components that were linked to positive outcomes. Specifically, Wilderness Challenge Programs had more positive short-term and long-term outcomes if they were higher intensity (e.g., more strenuous physical challenges, longer than 20 days), had a therapeutic component (individual, group, or family therapy), involved a residential format, and were multi-dimensional (Hattie, Marsh, Neill, & Richards, 1997; Wilson & Lipsey, 2000). For instance, youth in wilderness programs that had therapeutic components had lower re-arrest rates than programs focusing solely on survival and life skills at 1, 2, and 3 year follow ups post-intervention (Gillis, Gass, & Russell, 2008).

Several Promising Wilderness Challenge Programs Have Been Developed

The vast majority of Wilderness Challenge Programs are not research-informed and do not adhere to regulations set forth by overarching organizations and/or adhere to manualized treatment approaches. As described, the results of these programs are generally mixed. However, several specific Wilderness Challenge Programs, described below, have gained some support, namely Wilderness Adventure Therapy (Crisp et al., 2000) and Behavioural Management Through Adventure: Project Adventure (Gillis, Gass, & Russell, 2008):

Wilderness Adventure Therapy (Crisp, O'Donnell, Kingston, Poot, & Thomas, 2000): This program was created in 1992 in Melbourne, Australia. It became a standalone treatment in 2000, and is run as both a prevention program for at-risk youth and as a treatment for youth with severe psychological and behavioural issues such as aggression and delinquency (Weston, Tinsley, & O'Dell, 1999; Crisp & Hinch, 2004). The program clusters youth together into groups with complementary therapeutic needs (i.e. there is overlap between their risk such as in the domains of substance use, mental health concerns, anger management issues, etc.) and slowly integrates youth into the program. Youth first participate in one day workshops with their therapy group which leads into a two day wilderness expedition and one day adventures (e.g., caving, rafting, skiing, rope courses). Following successful completion youth then participate in an extended wilderness expedition of 5-6 days in duration. Termination from treatment is gradual and includes two to three months of aftercare/follow up services. In addition to adolescents' involvement in the treatment, the program provides families and social supports with family, group, and individual counseling.

This program is well supported in the research literature, likely due to the comprehensive nature of the program and its inclusion of individual and family therapy (Crisp & Hinch, 2004). At least 10 studies and 4 research reports have examined Wilderness Adventure Therapy. These studies are predominantly conducted and written by either Dr. Simon Crisp or through the NEO Psychology organization. These studies have followed participants up to two years post treatment and have found decreases in mental health and problem behaviours (e.g., aggression and delinquency), improved coping, self-esteem, perception of family functioning, and trust (Crisp & Hinch, 2004).

Behaviour Management through Adventure: Project Adventure (Gillis, Gass, & Russell, 2008): Behaviour Management through Adventure is an outdoor therapy program, originally developed in Georgia during the early 1980's as a part of Project Adventure (Walsh & Aubry, 2007). The program combines group based adventure challenges with developmental and problem-solving exercises in order to increase prosocial thoughts and behaviours while decreasing dysfunctional behaviours and reoffending amongst at-risk youth. Youth live in groups of 12-20 peers for 60 to 120 days where they are incrementally involved in adventure challenges over the course of the program. They work on developing various skills (e.g., patience, listening, empathy, leadership, planning) and participate in peer self government (e.g., youth decide on rules for the group).

Studies on Behaviour Management through Adventure have been conducted with samples of adjudicated youth ranging from 8 to 18 years old who have committed a variety of offenses

ranging in severity from drug offenses to sexual and violent offenses (Gillis, Gass, & Russell, 2008). Overall, this research has suggested that Behaviour Management through Adventure has a positive effect in decreasing rearrest rates, symptoms of depression, and social introversion, and increasing time until rearrest (Gillis, Gass, & Russell, 2008; Project Adventure, n.d.).

Efforts to Standardize Wilderness Challenge Programs

One of the biggest challenges for Wilderness Challenge Programs is that the lack manualization and best practice guidelines. Thus, the Outdoor Behavioural Healthcare Industry Council (OBHIC) was created in 1997 to promote standards for best practices in wilderness programming for youth. Researchers involved in this organization conduct outcome research studies on Wilderness Challenge Programs and attempt to promote a set of evidence-based standards to streamline and manualize the treatment approaches in North America. Programs that join the OBHIC are subject to ongoing research regarding risk management and therapeutic outcomes. To join, programs must use licensed clinical staff, include a wilderness expedition portion to their program, be registered in their state/province, and adhere to OBHIC ethical standards and best practice recommendations. In particular, programs must conduct intake assessments for each youth that inform an individualized treatment plan which is implemented by a trained clinical team member.

Although OBHIC attempts to standardize Wilderness Challenge Programs, most programs are not registered with this group, even those with demonstrated treatment effects (e.g., Behaviour Management through Adventure). Of the nine programs that are registered, only one is offered in Canada (i.e., Ontario).

Criticisms of Wilderness Challenge Programs

Although Wilderness Challenge Programs vary, the following are some of the most commonly voiced criticisms of Wilderness Challenge Programs:

1. **Lack of Long-Term Impacts:** Removing adolescent from their typical environment can be counter-productive as treatment gains are often lost when the youth returns to their home environment (Bettmann & Jaspersen, 2009). Also, by removing the child from their typical environment, the child is also being removed from their social support network and parental figures – both of which have been found to be useful for long term therapeutic gains (Frensch & Cameron, 2002). As a result, program effects may be short term and limited to the treatment settings in which they occur (Brown, Borduin, & Henggeler, 2001). However, this is a common criticism for residential treatment programs in general and is not specific to Wilderness Challenge Programs.

2. **Challenges in Implementation:** Wilderness Challenge Programs often have a fairly large staff to youth ratio (typically around 6:1) which leads to the criticism that youth likely do not receive adequate care since staff are likely to focus on the more disruptive youth (Becker, 2010) rather than dividing their time/resources equally between the youth.

3. **Lack of Standardization:** The majority of wilderness programs are not registered with Outdoor Behavioural Healthcare Industry Council, nor are they part of an empirically

supported manualized treatment approach. As a result, these programs are often not held accountable for their programming and are not subject to evaluation for effectiveness. However, some programs that have been developed recently have been manualized (e.g., Behaviour Management through Adventure, Wilderness Adventure Therapy) and program developers' offer comprehensive training for new program sites.

4. ***Lack of Effectiveness:*** Adventure and wilderness therapy programs for adjudicated youth are often criticized for relying on poorly designed and non-controlled studies which have generated a lack of effectiveness evidence (Aos, Miller & Drake, 2006; Brown, Borduin, & Henggeler, 2001; Moote & Wodarksi, 1997; Wilson & Lipsey, 2000). **Although the large majority of Wilderness Challenge Programs lack research support, certain manualized programs have demonstrated promising findings,** but have yet to demonstrate effects across ethnicities and genders.

Community Group Homes

Description of Community Group Homes

Community Group Homes have been a common treatment approach for youth involved in the justice system since 1917 following the creation of "Boys Town" (Allen & Vacca, 2011) which is a well-structured behavioural treatment program where youth reside in a family-style group home setting with a married couple who act as Family Teachers (Larzelere et al., 2004).

Typically, the youth who receive this type of group care are individuals who have failed to thrive in less restrictive Family Care programs and present with a myriad of behavioural and psychological problems (Satcher, 1999). Although Community Group Home placements have existed for decades, very little empirical literature has been published on the effectiveness of this type of program. In fact, no consistent and agreed upon definition of Community Group Home care currently exists (Curtis, Alexander, and Lunghofer, 2001) and Group Home care is not currently viewed as an evidence-based treatment for youth (National Registry of Evidence-Based Programs and Practices, 2010).

Although steps are being taken to develop best practice standards for Community Group Home treatment in the United States (<http://www.cwla.org/programs/groupcare>), these standards are not yet common place. That said, several models of group home care (e.g., teaching family model, positive peer culture, etc.) have been rated as "promising" for youth in child welfare but do not have sufficient supported treatments for young offenders to be considered evidence-based (James, 2011).

Although group homes vary considerably, typically, the approach in any given group home will encompass some aspects of the following approaches:

1. ***Positive Peer Culture:*** This approach utilizes the influence of the peer group to promote change (Vorrath & Brendtro, 1985) by allowing residents to monitor and provide feedback to one another, set house rules, and participate in group decision making.

2. ***Behavioural Approach***: This group home approach uses behavioural techniques (e.g., rewarding and punishing various behaviours, token systems, etc.) to modify youths' antisocial behaviour. Typically, concrete goals are defined regarding a youth's specific behaviour patterns and steps are taken to set up an environment that will allow a youth to attain their desired outcome (Bates, English, & Kouidou-Giles, 2000).

3. ***Psychoeducational Approach***: Groups homes that use a Psychoeducational Approach attempt to teach residents trust, positive thinking patterns, how to monitor their symptoms, and how to seek/develop positive community interaction. Typically, the group home workers have additional training in special education and tend to focus on active community involvement in order to transfer treatment gains from the group home to external/additional environments (Bates, English, & Kouidou-Giles, 2000)

4. ***Teaching Family Model*** (Wolf et al., 1976): The Teaching Family Model is a manualized group home treatment approach which includes a standardized training for group home workers (James, 2011). In this model, youth live in a group home under the supervision of a married couple ("teaching parents") who provide care to 6-8 youth in a family setting. The teaching parents live with the youth full time and sometimes have support workers come in to do relief work. Furthermore, this program mobilizes community social supports prior to program termination and conducts follow up assessments to ensure that change is maintained. Unlike most other group homes, this approach has undergone research and evaluation, and, as described below, studies indicate positive results (Barth, Greeson, Zlotnik, and Chintapalli, 2009; James, 2011).

In addition, youth residing within Community Group Homes are commonly taught various life skills (e.g., chores, problem solving, social skills, budgeting, cooking, hygiene, self management, job hunting, etc.) to prepare them for transition back to their family home or to independent living. Also, some programs place the adolescent into various recreational activities, based on each youth's specific interests to provide structure, supervision, and assist in skill development (Breland-Noble, 2005; Morris et al, 2003).

Effectiveness of Program

Research on Community Group Homes has significant limitations, making it difficult to evaluate the impact of this type of approach. In particular, studies are often small, do not include an adequate control group and use limited strategies to measure change. Below we summarize study results, particularly the results of those studies that used a sound methodology and those that focus on justice-involved youth. However, please note that studies were limited.

Note: The following review examines group home programming holistically and whenever possible will specify differences between theoretical orientations when information exists.

Little Research has Examined the Impact of Community Group Homes on Reoffending

The majority of group home approaches lack research support and have not been individually evaluated as they commonly serve as the "treatment as usual" comparison group in residential treatment research. Despite this, boys in positive peer culture group home care have been shown

to have fewer arrests one year post-treatment compared to their pre-treatment behavior (Chamberlain & Moore, 1998; Scott & Lorenc, 2007). However, when compared to youth in Treatment Foster Care, group home youth had higher rates of absent without leaves, arrests, and days in secure custody settings, and lower rates of treatment completion (Chamberlain & Moore, 1998). Additionally, in comparison to youth in regular foster care, youth in group homes have 2.5 times as many official arrests during their placements (Ryan, Marshall, Herz, & Hernandez, 2008) which has been attributed to peer contagion effects (see below).

Youth in Group Homes have been found to have particularly high rates of threat related and violent offenses compared to their non-group home peers (Ryan, Marshall, Herz, & Hernandez, 2008). This has been attributed to the tendency of group home policy to require staff to file police reports for illegal misbehavior as a large portion of these offenses occurred in the group home (40% of offenses were found to occur in the group home compared to 1% while on home visits; Ryan, Marshall, Herz, & Hernandez, 2008). Regardless of the rationale, simply residing within a group home has been found to predict offending behavior (Myner, Santman, Cappelletty, & Perlmutter, 1998) in juvenile offenders.

Group Homes Result in Increased Contact with Antisocial Peers

Community group homes house multiple residents with similar emotional and behavioural issues. Thus, a significant challenge with group homes is that youth in group homes are typically exposed to other delinquent youth resulting in residents negatively influencing one another, otherwise known as peer contagion (Dishion, McCord, & Poulin, 1999). For instance, research indicates that youth in standard group homes have more contact with delinquent peers both within the home and in the community as compared to youth in Family Care (Chamberlain & Moore, 1998). In general, research shows that contact with antisocial peers increases likelihood of reoffending and delinquent acts, substance use, school problems, and aggression (Eddy & Chamberlain, 2000; Lee, 2008; Watt, Howells, & Delfabbro, 2004), although there is very limited research on this in group home settings (Lee & Thompson, 2009).

The potential negative impact of delinquent peer exposure in group home contexts can perhaps be managed to some extent through providing high levels of structure (Lee, Bright, Svoboda, Fakunmoju, & Barth, 2011). For instance, in a *structured* Family-Teaching Group Home model (e.g., Boys and Girls Town) the effects of negative peer influence appeared to be minimal with only 10% of youth demonstrating increases in problem behavior (Lee & Thompson, 2009; Huefner, Handwerk, Ringle, & Field, 2009).

Little Research has Examined Program Effectiveness for Girls or Adolescents from Ethnic Minority Groups

Studies on effectiveness of group homes typically focus on Caucasian male youth (Curtis, Alexander, & Lunghofer, 2001) rather than female adolescents or adolescents from cultural and ethnic minority groups (e.g., Aboriginal youth). As such, the findings regarding these populations are limited, vague, or unfounded.

Group Homes are More Effective When they are Small in Size, Short-Term, and Include Family Involvement

Group homes have been found to be the most successful when they provide a focus on integrating family members into treatment, restrict program length to roughly six months, and ensure a small number of youth reside within the home. In particular, programs that incorporate family members in therapy and involve supervised home visits are linked to successful reintegration with the family, increased goal attainment in therapy, and increased rates of treatment completion (Hair, 2005). In regard to length of treatment, treatment gains in peaks after six months of treatment (Shapiro et al., 1999) leading researchers to theorize that shorter stays in treatment are more beneficial than using group homes as a permanent placement option (Hair, 2005). Finally, restricting the number of youth in the home to four residents has been linked with better outcomes while residing within the home (e.g., lack of increase in program restrictiveness), especially when using the Teaching Family Model (Friman et al., 1996).

Group Homes Are More Effective When they Include a Focus on Aftercare

Aftercare services have been found to be crucial to the maintenance of change obtained during Community Group Home treatment (Curtis, Alexander, Lunghofer, 2001; Bates et al., 1999; Frensch & Cameron, 2002). The key features of aftercare that are important are to involve family both during treatment and to continue to provide supervision/guidance following reintegration, creating a comprehensive discharge strategy, returning the youth to a stable residence and having a network of community supports that the youth knows they can rely on. When programs do not provide a focus on aftercare, youth exiting the programs are at an increased risk for poor school performance, poor living conditions, low levels of social support, re-involvement in the criminal justice system and further out-of-home placements (Asarnow et al., 1996; Frensch et al., 2009; Trout, Jansz, Epstein, & Tyler, 2013).

A 12-month program known as On the Way Home (<http://www.boystown.org/research/current-projects>) is an aftercare program for youth which involves: (1) weekly contact with a case manager, (2) continued parent training, (3) assignment of a liaison between the youth, family, and school contexts (Trout, et al., 2013). Youth completing On the Way Home have higher rates of post-treatment placement stability, lower rates of truancy or dropout, and lower rates of returning to care or jail over a 12-month period (Trout, Tyler, Stewart, & Epstein, 2012).

The Teaching Family Model has Stronger Support than Standard Group Homes

In comparison to youth in typical group home settings, the Teaching Family Model (youth live in a group home under the supervision of a “teaching parents” who provide care to 6-8 youth in a family setting) have greater reductions of substance abuse, fewer official delinquent activities, better academic performance, and higher levels of prosocial behaviour (Braukmann et al., 1985). However, the effects were primarily apparent while the youth were in care and disappeared two years following treatment termination (Barth, Greeson, Zlotnik, and Chintapalli, 2009).

An example of a Family Teaching Model is **Girls and Boys Town** which is a highly structured behavioural treatment program. In this program, youth live in a family-style setting with a married couple who act as Family Teachers. Family Teachers supervise and train youth on

building positive relationships and other skills to replace antisocial behaviours with prosocial alternatives (Larzelere et al., 2004). They are warm, non-exploitive and demonstrate proper interpersonal boundaries through their actions and teaching. Six to eight youth often live together in one home and are encouraged to support each other in meeting treatment goals using prosocial peer monitoring. These homes apply a number of techniques such as using cognitive behavioural methods to modify behavior (e.g., token reward system for good and bad behavior) and help the youth develop problem solving skills and morals.

Several meta-analyses and literature reviews have shown the Teaching Family Model (TFM) to be the most effective group home model in reducing reoffending, improving school performance, and improving relationships with others (Larzelere et al., 2004; James, 2011).

Criticisms of Community Group Homes

Community Group Homes are commonly criticized for the following reasons:

1. **Negative Peer Influence:** A common concern regarding Community Group Homes is the negative influence of the residents on one another which has been linked to increased delinquency, substance use, poor school performance, etc. Although this concern is not limited to group home settings, this appears to be an important factor for sustained delinquency during group home treatment as compared to the other residential treatment approaches. However, groups that are family-based, structured, and small in size (i.e., the Teaching Family model), minimize the impact of exposure to antisocial peers.
2. **Instability in care givers/high staff turnover:** Community group homes are staffed by shift workers, who have high rates of staff turn-over (James, Roesch, & Zhang, 2012). Also, group homes often hire staff with inadequate training and qualifications to prepare them to work with high need youth residents. Common qualifications for group home workers across Canada are a one year certificate in child and youth care or two years of university education in ANY discipline, although some Group Homes are more restrictive in their hiring practices.
3. **Instability in placement:** Youth in group home settings often experience greater instability and changes in residence than adolescents in family settings (e.g., Multidimensional Treatment Foster Care). This instability interferes with the youths' feelings of security, impacts treatment, and is related to increased levels of delinquency.
4. **Low use of aftercare services:** A common problem with community group homes is a lack of aftercare services. This is important as youth's long term outcomes following residential care are strongly linked to their post-treatment environment (Bates, English, Kouidou-Giles, 2000). Formal and informal support is rarely provided to the youth and their families, however, this criticism is not specific to Community Group Homes.
5. **Lack of research support:** Research on Community Groups Homes is limited and has been criticized due to an absence of comparison groups, undefined treatment approaches, and no consistency in the assessment of treatment outcomes (Bates, English, & Kouidiou-Giles, 1997). In general, Community Group Homes have not met criteria for being considered an evidence-based treatment for youth with serious emotional and behavioural problems (James,

Roesch, & Zhang, 2012). Additionally, group home care has demonstrated similar outcomes in comparison to Wilderness Challenge programs and typically shows poorer outcomes when compared to Family Care Models (Lee et al., 2011). However, the Teaching Family Model seems to be more effective than other types of Community Groups homes, emphasizing the importance of a family-based approach.

Summary

This report reviewed the research on Family Care programs (e.g., Multidimensional Family Therapy), Wilderness Challenge Programs, and Community Group Home programs, in order to inform a review of Full Time Attendance Programs in BC. Notably, these programs vary considerably from one another and no studies were found that directly compared *all three* community treatment options. That said, an extensive body of research has developed that enables conclusions about the relative merits and limitations of these approaches. In particular, this report was based on a review of over 100 studies, including several studies comparing two of the three programs (e.g., Group Home Models against either Family Care Models OR Wilderness Challenge Programs).

In general, this review demonstrates the value of family approaches. For instance, of the three approaches examined, Family Care Models have been the most extensively researched. Family Care Models (particularly Multidimensional Treatment Foster Care) are associated with not only reduced reoffending but a broad range of positive outcomes (e.g., reduced substance use, increased school performance, reduced pregnancy). Furthermore, they have the greatest support for long-term sustainability of effects (Chamberlain, Leve, & DeGarmo, 2007; Eddy, Whaley, & Chamberlain, 2004; Harold et al., 2013), particularly as biological parents are involved throughout the treatment process in family therapy and structured home visits. In contrast, research support for Wilderness Challenge Programs and Community Group Homes are mixed, and any treatment gains often quickly dissipate within six to twelve months post-treatment. Finally, in comparison to the other approaches, Family Care Models (such as Multidimensional Treatment Foster Care) often provide a much more structured and standardized method for training staff and ensuring proper implementation (e.g., program manuals and guides). Key conclusions from this literature review are summarized below:

Multidimensional Treatment Foster Care has Strong Research Support

Multidimensional Treatment Foster Care is an intensive Family Care approach that involves one at-risk youth living in a family environment with highly trained foster parents. It has an abundance of research support for both short-term and long-term positive outcomes (e.g., reduced offending, decreased days spent incarcerated, increased positive peer contact, decreased substance use, decreased sexual risk taking, decreased rates of unplanned pregnancy, increased family reintegration).

Compared to youth in Community Group Homes, youth completing Multidimensional Treatment Foster Care have been found to have significantly lower rates of delinquency, unauthorized absences, and days spent in secure custody. The positive effects of Multidimensional Treatment Foster Care have been found to hold across time periods of *up to two years*. Furthermore, evidence supports the effectiveness of Multidimensional Treatment Foster Care for both girls and boys, and it is the only type of program (of those reviewed for this report) that includes a gender-adaptation. Although it requires substantial time and resources to implement, it has been found to be very cost effective compared to other programs offered in juvenile justice settings (e.g., group

homes). Furthermore, the program has a developed standardized training protocol to facilitate ease of implementation.

Several Other Family Care Models, Particularly Together Facing the Challenge, Have Yielded Promising Results

Although Multidimensional Treatment Foster Care has strong support, many of the other Family Care programs (e.g., Treatment Foster Care) suffer from a lack of standardized procedures. Thus, Together Facing the Challenge is designed to augment treatment effectiveness of these regular Family Care programs through modifying existing programs to be more evidence-based. Compared to Multidimensional Treatment Foster Care, the Together Facing the Challenge program is less intensive and easier to implement. Although it is relatively new and has not yet been subject to extensive research, youth completing Together Facing the Challenge have been found to achieve lower levels of clinical symptoms and behavior problems, and higher levels of strengths up to one year following treatment than youth in regular family group homes (i.e., Treatment Foster Care; Farmer et al., 2010).

Studies on Wilderness Challenge Programs Have Reported Mixed Findings

Unfortunately, the vast majority of Wilderness Challenge Programs are not researched or evaluated, resulting in uncertainty regarding their effectiveness (Tarolla et al., 2002). Some authors assert these types of programs may even be harmful to participants (Fischer, & Attah, 2001; Sheard, & Golby, 2006). That said, *some* manualized Wilderness Challenge Programs have been linked to reduced offending, improved family relations, improved problem solving skills, increased competence, self-esteem, and leadership skills. However, positive gains are often not maintained over time and they quickly disappear following community reintegration. Wilderness Challenge programs tend to be more successful if they involve a focus on therapy (individual, group, and/or family) and more physically intense wilderness activities, and if they have undergone rigorous accreditation and evaluation.

Limited Research has Examined Community Group Homes

In general, Community Group Homes do not have strong research support. Specifically, they have been found to be less effective than Family Care Models (e.g., Multidimensional Treatment Foster Care) but similar in effectiveness to Wilderness Challenge Programs. One of the challenges of Community Group Homes is that these programs often expose youth to other antisocial youth, which may result in negative peer influence. That said, the Family Teaching Model of Group Homes, appears to be preferable to other types of Community Group Homes. In this approach, youth live with “teaching parents” who provide care to 6-8 youth in a family setting. The Family Teaching Model of Group Home has been found to lead to slight decreases in offending behavior up to one year following treatment, decreases in substance use, improved school functioning, improved relationship skills and the development of prosocial behavior.

Recommendations

Many factors need to be considered when creating recommendations, including research findings but also other agency-specific considerations (e.g., available resources, general philosophy). Because we cannot speak directly to those agency-specific issues, the following recommendations are based solely on the research evidence, as well as consideration of the ease of program implementation:

1. ***Investigate the feasibility of a validated Family Care Model, such as Multidimensional Treatment Foster Care or Together Facing the Challenge:*** Of the approaches examined, Multidimensional Treatment Foster Care (and to some extent, similar family-based approaches such as Together Facing the Challenge) have the most research support, including evidence of cost-effectiveness. Thus, we recommend that MCFD carefully examine the option of implementing this type of approach. Please see Appendix B for links to additional information on these programs.

2. ***If Wilderness Challenge Programs are used, select approaches that have research support and include therapeutic components:*** Research on Wilderness Challenge Programs has yielded very mixed findings, and do not have strong research support overall. That said, some of these programs are better than others. If MCFD continues to use Wilderness Challenge Programs, then we recommend they carefully examine the feasibility of an approach such as the Wilderness Adventure Therapy employed by Dr. Simon Crisp in Australia, as this approach has gained some research support.

3. ***If Community Group Homes are used, implement approaches that adhere to the Teaching Family Model, have low numbers of residents per house, and include attention to therapy/aftercare:*** Research on Community Group Homes have yielded mixed findings and overall do yield strong outcomes compared to Family Care models. However, the Teaching Family Model appears to be preferable to other group home approaches. As such, we recommend that MCFD examine this approach as a treatment option should they decide to place a large emphasis on group homes.

4. ***Take steps to ensure proper staff training and continued adherence:*** A core difficulty in implementing any program is that it is difficult to maintain adherence to a manualized treatment approach over time. If programs (even well-validated programs) are not properly adhered to, their potential positive effects can be lost. Thus, if MCFD implements a leading approach such as Multidimensional Treatment Foster Care, they should make efforts to ensure adherence to the program such as by contacting the training center and participating in their training workshops, participating in ongoing supervision to examine treatment adherence, and partaking in ongoing refresher training throughout the duration of the program.

5. ***Place a significant emphasis on the development of detailed aftercare services:*** Preparing for aftercare is an extremely important component of therapy to increase the maintenance of positive change after exiting from treatment. Aftercare should incorporate both individual and group therapy to help youth generate strategies to accomplish their individual goals

following therapy termination (Russell, 2006). Regardless of which programming is employed by MCFD, there should be a focus on the provision of evidence-based aftercare services to maintain treatment gains following reintegration back into the community.

6. ***Conduct a program evaluation to investigate effectiveness and adherence:*** Regardless of which program(s) MCFD implements, we recommend that MCFD conduct a program evaluation and directly evaluate the results of the given approach on short term and long term outcomes. Specifically, this type of evaluation should examine impact on reoffending, risk and protective factors, success of community reintegration, and staff adherence to the approach.

References

- Allen, B. S., & Vacca, J. S. (2011). Bring back orphanages—An alternative to foster care?. *Children And Youth Services Review, 33*(7), 1067-1071.
- Aos, S., Miller, M., & Drake, E. (2006). Evidence-based public policy options to reduce future prison construction, criminal justice costs, and crime rates. Olympia, WA: Washington State Institute for Public Policy.
- Aos, S., Phipps, P., Barnoski, R., & Lieb, R. (2001). *The comparative costs and benefits of programs to reduce crime*. Olympia, WA: Washington State Institute for Public Policy.
- Asarnow, J. R., Aoki, W., & Elson, S. (1996). Children in residential treatment: A follow-up study. *Journal of Clinical Child Psychology, 25*(2), 209-214.
- Barth, R. P., Greeson, J. K. P., Zlotnik, S. R., & Chintapalli, L. K. (2009). Evidence-based practice for youth in supervised out-of-home care: A framework for development, definition, and evaluation. *Journal of Evidence-Based Social Work, 6*(2), 147–175.
- Bates, T., Buchanan, J., Corby, B. & Young, L. (1999). Drug use, parenting and child protection: Towards an effective interagency response. University of Central Lancashire, Liverpool.
- Bates, B. C., English, D. J., & Kouidou-Giles, S. (1997, February). Residential treatment and its alternatives: A review of the literature. In *Child and Youth Care Forum, 26*, 7-51. Kluwer Academic Publishers-Human Sciences Press.
- Baumeister, R. F., Smart, L., & Boden, J. M. (1996). Relation of threatened egotism to violence and aggression: the dark side of high self-esteem. *Psychological review, 103*(1), 5.
- Becker, S. P. (2010). Wilderness therapy: Ethical considerations for mental health professionals. *Child & Youth Care Forum, 39*, 47–61.
- Bettmann, J. E., & Jaspersen, R.A. (2009). Adolescents in Residential and Inpatient Treatment: A Review of the Outcome Literature. *Child & Youth Care Forum 38*(4): 161–83.
- Braukmann, C.J., Bedlington, M.M., Belden, B.D., Braukmann, B.P.D., Husted, J.J., Ramp, K.K. & Wolf, M.M. (1985). Effects of a community-based group-home treatment program on male juvenile offenders use and abuse of drugs and alcohol. *American Journal of Drug and Alcohol Abuse, 11*, 249-278.
- Breland-Noble, A. M., Farmer, E. M. Z., Dubs, M. S., Potter, B. A., & Burns, B. J. (2005). Mental Health and Other Service Use by Youth in Treatment Foster Care and Group Homes. *Journal of Child and Family Studies, 14*(2), 167-180.
- Brown, T.L., Borduin, C.M., & Henggeler, S.W. (2001). Treating juvenile offenders in community settings. In J.B. Ashford, B.D. Sales, & W.H. Reid (Eds.), *Treating adult and juvenile offenders with special needs* (pp. 445-464). Washington, DC: American Psychological Association.
- Cason, D., & Gillis, H. L. (1994). A meta-analysis of outdoor adventure programming with adolescents. *Journal of Experiential Education, 17*, 40-47.
- Caulkins, M. C., White, D. D. & Russell, K. C. (2006). The role of physical exercise in wilderness therapy for troubled adolescent women. *Journal of Experiential Education, 29*(1), 18-37.
- Chamberlain, P. (2000). *What works in treatment foster care*. In *What Works in Child Welfare*, Kluger, M., Alexander, G., & Curtis, P. (Eds.), 157-162. Washington, DC: Child Welfare League of America
- Chamberlain, P. (2003). *Treating Chronic Juvenile Offenders: Advances Made Through the*

- Oregon Multidimensional Treatment Foster Care Model. Washington, DC: American Psychological Association.
- Chamberlain, P., Leve, L. D., & DeGarmo, D. S. (2007). Multidimensional treatment foster care for girls in the juvenile justice system: 2-year follow-up of a randomized clinical trial. *Journal of Consulting and Clinical Psychology, 75*(1), 187.
- Chamberlain, P. & Moore, K. J. (1998). A clinical model for parenting juvenile offenders: A comparison of group care versus family care. *Clinical Psychology and Psychiatry, 3*(3), 375-386.
- Chamberlain, P., Price, J., Leve, L. D., Laurent, H., Landsverk, J. A., & Reid, J. B. (2008). Prevention of behavior problems for children in foster care: Outcomes and mediation effects. *Prevention Science, 9*(1), 17-27.
- Chamberlain, P., & Reid, J. B. (1997). Comparison of two community alternatives to incarceration for chronic juvenile offenders. *Journal of Consulting and Clinical Psychology, 6*, 624-633
- Chamberlain, P., & Reid, J. B. (1998). Comparison of two community alternatives to incarceration for chronic juvenile offenders. *Journal of Consulting and Clinical Psychology, 66*(4), 624-633
- Cook, P. (2008). Understanding the effects of Adolescent participation in health programmes. *The International Journal of Children's Rights, 16*(1), 121-139.
- Crisp, S.J.R. & Hinch, C. (2004). *Treatment Effectiveness of Wilderness Adventure Therapy: A Comprehensive Evaluation*, Neo Psychology Publications, Melbourne.
- Crisp, S.J.R., O'Donnell, M.J., Kingston, L., Poot, A. & Thomas, N. (2000). *Innovative Multi-modal Day-patient Treatment for Severely Disordered At Risk Adolescents*. In N.N. Singh, J.P. Leung, & A.N. Singh (Eds) *International Perspectives on Child & Adolescent Mental Health*, 2000, Elsevier Publications.
- Curtis, P. A., Alexander, G., & Lunghofer, L. A. (2001). A literature review comparing the outcomes of residential group care and therapeutic foster care. *Child and Adolescent Social Work, 18*(5), 377-392.
- Dishion, T. J., McCord, J., & Poulin, F. (1999). When interventions harm: Peer groups and problem behavior. *American psychologist, 54*(9), 755.
- Dishion, T. J., Spracklen, K. M., Andrews, D. W., & Patterson, G. R. (1996). Deviancy training in male adolescent friendships. *Behavior Therapy, 27*, 373-390.
- Dorsey, S., Farmer, E. Z., Barth, R. P., Greene, K. M., Reid, J., & Landsverk, J. (2008). Current status and evidence base of training for foster and treatment foster parents. *Children And Youth Services Review, 30*(12), 1403-1416.
- Eddy, J., & Chamberlain, P. (2000). Family management and deviant peer association as mediators of the impact of treatment condition on youth antisocial behavior. *Journal Of Consulting And Clinical Psychology, 68*(5), 857-863.
- Eddy, J. M., Whaley, R. B., & Chamberlain, P. (2004). The Prevention of Violent Behavior by Chronic and Serious Male Juvenile Offenders A 2-Year Follow-up of a Randomized Clinical Trial. *Journal of emotional and behavioral disorders, 12*(1), 2-8.
- Farmer, E. Z., Burns, B. J., Wagner, H., Murray, M., & Southerland, D. G. (2010). Enhancing 'usual practice' treatment foster care: Findings from a randomized trial on improving youths' outcomes. *Psychiatric Services, 61*(6), 555-561.
- Farmer, E. M., Murray, M., & Southerland, D. (2009). Together facing the challenge:

- Preliminary findings from a randomized clinical trial of therapeutic foster care. In *Symposium conducted at the meeting of the 22nd annual research conference. A system of care for children's mental health: expanding the research base, Tampa, FL.*
- Fischer, R. L., & Attah, E. B. (2001). City Kids in the Wilderness: A Pilot-Test of Outward Bound for Foster Care Group Home Youth. *Journal Of Experiential Education, 24*(2), 109-117.
- Frensch, K. M., & Cameron, G. (2002). Treatment of choice or a last resort? A review of residential mental health placements for children and youth. *Child and Youth Care Forum, 31*(5), 307-339.
- Frensch, K., Cameron, G., & Preyde, M. (2009, December). Community adaptation of youth accessing residential programs or a home-based alternative: School attendance and academic functioning. In *Child & Youth Care Forum, 38*, 287-303. Springer US.
- Friman, P., C. Toner, S. Soper, M. Sinclair, and M. Shanahan (1996). Maintaining placement for troubled and disruptive adolescents in voluntary residential care: The role of reduced youth to staff ratio. *Journal of Child and Family Studies, 5*, 337-347.
- Gass, M. (1993). *Adventure Therapy: Therapeutic applications of adventure programming.* Dubuque, IA: Kendall Hunt.
- Gillis, H., Gass, M., & Russell, K. (2008). The effectiveness of Project Adventure's behavior management programs for male offenders in residential treatment. *Residential Treatment for Children & Youth, 25*(3), 227-247.
- Hair, H. J. (2005) Outcomes for Children and Adolescents After Residential Treatment: A Review of Research from 1993 to 2003. *Journal of Child and Family Studies, 14*(4), 551-575
- Harold, G. T., Kerr, D. R., Ryzin, M., DeGarmo, D. S., Rhoades, K. A., & Leve, L.D. (2013). Depressive symptom trajectories among girls in the juvenile justice system: 24-month outcomes of an RCT of multidimensional treatment foster care. *Prevention Science,*
- Harper, N., Russell, K., Cooley, R., & Cupples, J. (2007). Catherine freer wilderness therapy expeditions: An exploratory case study of adolescent wilderness therapy, family functioning, and the maintenance of change. *Child & Youth Care Forum, 36*, 111-129.
- Hattie, J., Marsh, H., Neill, J., & Richards, G. (1997). Adventure education and outward bound: Out-of-class experiences that make a lasting difference. *Review of Educational Research, 67*(1), 43-87.
- Hawkins, R. P. (1990). The nature and potential of therapeutic foster care. In R.P. Hawkins & J. Breiling (Eds). *Therapeutic foster care: critical issues.* Washington, DC: Child Welfare League of America.
- Henggeler, S.W., & Sheidow, A.J. (2012). Emprirically supported family-based treatment for conduct disorder and delinquency in adolescents. *Journal of Marital & Family Therapy, 38*, 30-58
- Hudson, J., Nutter, R. W., & Galaway, B. (1994). Treatment foster care programs: A review of evaluation research and suggested directions. *Social Work Research, 18*(4), 198-210.
- Huefner, J. C., Handwerk, M. L., Ringle, J. L., & Field, C. E. (2009). Conduct disordered youth in group care: An examination of negative peer influence. *Journal of Child and Family Studies, 18*(6), 719-730.
- James, S. (2011). What works in group care? A structured review of treatment models for group homes and residential care. *Children and Youth Services Review, 33*(2), 308-321.
- James, S; Roesch, S; & Zhang, JJ. (2012). Characteristics and behavioral outcomes for youth in

- group care and family-based care: A propensity score matching approach using national data. *Journal of Emotional and Behavioral Disorders*, 20(3):144.
- Jones, C., Lowe, L., & Risler, E. (2004). The Effectiveness of Wilderness Adventure Therapy Programs for Young People Involved in the Juvenile Justice System. *Residential Treatment for Children and Youth*, 22(2), 53-67.
- Jonson-Reid, M., & Barth, R. P. (2000). From placement to prison: The path to adolescent incarceration from child welfare supervised foster or group care. *Children and Youth Services Review*, 22(7), 493-516.
- Kirton, D., & Thomas, C. (2011). A Suitable Case? Implementing Multidimensional Treatment Foster Care in an English Local Authority. *Adoption & Fostering*, 35(5), 5-17.
- Larzelere, R. E., Daly, D. L., Davis, J. L., Chmelka, M. B., & Handwerk, M. L. (2004). Outcome evaluation of Girls and Boys Town's Family Home Program. *Education and Treatment of Children*, 27, 130-149.
- Lee, B. R. (2008). Defining residential treatment. *Journal of Child and Family Studies*, 17(5), 689-692.
- Lee, B. R., Bright, C. L., Svoboda, D. V., Fakunmoju, S., & Barth, R. P. (2011). Outcomes of group care for youth: A review of comparative studies. *Research On Social Work Practice*, 21(2), 177-189.
- Lee, B. R., & Thompson, R. (2009). Examining externalizing behavior trajectories of youth in group homes: Is there evidence for peer contagion? *Journal of Abnormal Child Psychology*, 37, 31-44.
- Leve, L. D., & Chamberlain, P. (2005). *Girls in the juvenile justice system: Risk factors and clinical implications*. In D. Pepler, K. Madsen, C. Webster, & K. Levine (Eds.), *Development and treatment of girlhood aggression* (pp. 191-215). Mahwah, NJ: Lawrence Erlbaum.
- Leve, L.D., & Chamberlain, P. (2006). A randomized evaluation of Multidimensional Treatment Foster Care: Effects on school attendance and homework completion in juvenile justice girls. *Research on Social Work Practice*, 10, 1-7.
- Leve, L. D., & Chamberlain, P. (2007). A randomized evaluation of Multidimensional Treatment Foster Care: Effects on school attendance and homework completion in juvenile justice girls. *Research on Social Work Practice*, 17, 657-663.
- Leve, L. D., Chamberlain, P., & Reid, J. B. (2005). Intervention outcomes for girls referred from juvenile justice: Effects on delinquency. *Journal of Consulting and Clinical Psychology*, 73, 1181-1185.
- Leve, L. D., Chamberlain, P., Smith, D. K., & Harold, G. T. (2012). Multidimensional treatment foster care as an intervention for juvenile justice girls in out-of-home care. In *Delinquent Girls* (pp. 147-160). Springer New York.
- Lipsey, M. (2006). The effects of community-based group treatment for delinquency: A meta-analytic search for cross-study generalizations. In K. A. Dodge, T. J. Dishion, & J. E. Lansford (Eds.), *Deviant peer influences in programs for youth: Problems and solutions* (pp. 162-184). New York, NY: Guilford.
- Lipsey, M. W., & Wilson, D. B. (1998). *Effective interventions for serious juvenile offenders: A synthesis of research*. In R. Loeber & D. P. Farrington (Eds.), *Serious and violent juvenile offenders: Risk factors and successful interventions* (pp. 313-345). Thousand Oaks, CA: Sage.
- Moote, G. r., & Wodarski, J. S. (1997). The acquisition of life skills through adventure-based

- activities and programs: A review of the literature. *Adolescence*, 32(125), 143-167.
- Morris, L., Sallybanks, J., Willis, K., & Makkai, T. (2003). Sport, Physical Activity and Antisocial Behaviour in Youth. *Trends & Issues in crime and criminal justice*, 249. Retrieved from <http://www.aic.gov.au>.
- Murray, M. M., Southerland, D., Farmer, E. M., & Ballentine, K. (2010). Enhancing and adapting treatment foster care: Lessons learned in trying to change practice. *Journal Of Child And Family Studies*, 19(4), 393-403.
- Myner, J., Santman, J., Cappelletty, G. G., & Perlmutter, B. F. (1998). Variables related to recidivism among juvenile offenders. *International Journal of Offender Therapy and Comparative Criminology*, 42(1), 65-80.
- National Registry of Evidence-based Programs and Practices, (2010). Retrieved from <http://www.nrepp.samhsa.gov/listofprograms.asp?textsearch=Search+specific+word+orphrase&ShowHide=1&Sort=1&N5=5>
- Neill, J. T. (1999). The melting pot of outdoor education effects: Testing the flavours of program type, duration, and participant age. Paper presented to the 11th National Outdoor Education Conference, Perth, Australia, Jan. 11-15.
- Neill, J. T. (2002). Meta-Analytic Research on the Outcomes of Outdoor Education. Paper presented to the 6th Biennial Coalition for Education in the Outdoors Research Symposium, Bradford Woods, IN, 11-13 January, 2002
- Price, J. M., Chamberlain, P., Landsverk, J., Reid, J., Leve, L., & Laurent, H. (2008). Effects of a foster parent training intervention on placement changes of children in foster care. *Child Maltreatment*, 13, 64-75.
- Project Adventure. (n.d.). Behaviour Management through Adventure: Georgia Program Results. Retrieved from: <http://www.pa.org/wp-content/uploads/2011/09/Summary-of-Behavior-Management-through-Adventure-Outcomes-in-Covington-GA.pdf>
- Reddy, L. A., & Pfeiffer, S. I. (1997). Effectiveness of treatment foster care with children and adolescents: A review of outcome studies. *Journal of the American Academy of Child and Adolescent Psychiatry*, 36, 581-588.
- Robst, J., Armstrong, M. & Dollard, N. (2011). Comparing outcomes for youth served in treatment foster care and treatment group care. *Journal of Child and Family Studies*, 20, 696-705.
- Russell, K. C. (2006). Brat Camp, Boot Camp, or...? Exploring Wilderness Therapy Program Theory. *Journal of Adventure Education and Outdoor Learning*, 6(1), 51-68.
- Ryan, J. P., Marshall, J. M., Herz, D., and Hernandez, P. (2008). Juvenile delinquency in child welfare: Investigating group home effects. *Children and Youth Services Review*, 30, 1088-99.
- Satcher, D. (1999). Mental health: A report of the Surgeon General. Washington, DC: U.S. Government Printing Office.
- Scott, D. A., & Lorenc, L. (2007). A Multi-tiered evaluation of adolescent therapeutic group homes. *Child Youth Care Forum*, 36, 153-162.
- Shapiro, J. P., Welker, C. J., & Pierce, J. L. (1999). An Evaluation of Residential Treatment for Youth with Mental Health Delinquency-Related Problems, *Residential Treatment for Children & Youth*, 17(2), 33-48.
- Sheard, M., & Golby, J. (2006). The Efficacy of an Outdoor Adventure Education Curriculum on Selected Aspects of Positive Psychological Development. *Journal of Experiential Education*, 29(2), 187-209.

- Smith, D., Chamberlain, P., Eddy, M. (2001). Preliminary Support for Multidimensional Treatment Foster Care in Reducing Substance Use in Delinquent Boys. *Journal of Child & Adolescent Substance Abuse*, 19, 343-358.
- Tarolla, S. M., Wagner, E. F., Rabinowitz, J., & Tubman, J. G. (2002). Understanding and treating juvenile offenders: A review of current knowledge and future directions. *Aggression and Violent Behavior*, 7, 125-143.
- The California Evidence-Based Clearinghouse for Child Welfare, (2013). Together Facing the Challenge. Retrieved online August 2, 2013 from <http://www.cebc4cw.org/program/together-facing-the-challenge/>
- Trout, A. L., Jansz, C., Epstein, M. H., & Tyler, P. (2013). Evaluating Service Delivery of an Aftercare Model for School-Aged Youths Departing Residential Care. *Journal of Public Child Welfare*, 7(2), 142-153.
- Trout, A. L., Tyler, P. M., Stewart, M. C., & Epstein, M. H. (2012). On the Way Home: Program description and preliminary findings. *Children and Youth Services Review*, 34(6), 1115-1120.
- Turner, W., & Macdonald, G. (2011). Treatment foster care for improving outcomes in children and young people: A systematic review. *Research on Social Work Practice*. 21 (5), 501-527.
- Vorrath, H. H., & Brendtro L. K. (1985). Positive peer culture (2nd ed.). New York: Aldine.
- Walsh, J. & Aubry, P. (2007). Behavior management through adventure. *Reclaiming Children and Youth*, 61 (1) 36-39.
- Walsh, M. A., & Russell, K. C. (2010). An exploratory study of a wilderness adventure program for young offenders. *Ecopsychology*, 2(4), 221-229.
- Washington State Institute for Public Policy, (2004). Benefits and costs of prevention and early intervention programs for youth. August 20, 2013 from <http://www.wsipp.wa.gov/rptfiles/04-07-3901.pdf>
- Watt, B., Howells, K., & Delfabbro, P. (2004). Juvenile Recidivism: Criminal Propensity, Social Control and Social Learning Theories. *Psychiatry, Psychology And Law*, 11(1), 141-153.
- Westermarck, P. K., Hansson, K., & Vinnerjung, B. (2008). Does Multidimensional Treatment Foster Care (MTFC) reduce placement breakdown in foster care? *International Journal of Child & Family Welfare*, 1, 2-18.
- Weston, R., Tinsley, H. A., & O'Dell, I. (1999). Wilderness Adventure Therapy for At-Risk Youth. *Parks & Recreation*, 34(7), 30.
- Whittington, A. (2006). Challenging girls' constructions of femininity in the outdoors. *Journal of Experiential Education*, 28(3), 205-221.
- Williams, B. (2000). The treatment of adolescent populations: An institutional vs. a wilderness setting. *Journal of Child and Adolescent Group Therapy*, 10(1), 47-56.
- Wilson, S. J., & Lipsey, M. W. (2000). Wilderness challenge programs for delinquent youth; a meta-analysis of outcome. *Evaluation and Program Planning*, 23(1), 1-12.
- Wolf, M. M., Phillips, E. L., Fixsen, D. L., Braukman, C. J., Kirigin, K. A., Willner, A. G., et al. (1976). Achievement place: The teaching-family model. *Child Care Quarterly*, 5, 92-103.

Appendix A – Key Research Studies

Program Examined	Author(s)	Sample Size	Key Findings
Wilderness Challenge Programs	Wilson & Lipsey, 2000	Meta-analysis of 28 studies	<ul style="list-style-type: none"> - 29% of wilderness challenge participants officially reoffended in comparison to 37% of youth in the control group - Higher intensity Wilderness programs had greater reductions in delinquency than other levels of intensity - Programs that had a therapy component were linked with lower delinquent and antisocial behaviour than programs with just physical components.
Wilderness Challenge Programs	Hattie, Marsh, Neill, & Richards, 1997	Meta-analysis of 96 studies	<ul style="list-style-type: none"> - Both males and females have similar outcomes after experiencing this type of programming. - Programming longer than 20 days was related to more positive outcomes than programs with a shorter duration
Wilderness Challenge Programs	Cason & Gillis, 1994	Meta-Analysis	<ul style="list-style-type: none"> - Adventure therapy programs contribute to improved self-concept, decreased behavioral problems, increased internal locus of control, and improved clinical functioning
Wilderness Challenge Programs	Jones, Lowe, & Risler, 2004	35 male adolescents	<ul style="list-style-type: none"> - Programming tends to lose its effect over time (25% recidivated at 6 months and 60% recidivated at 12 months) - Recidivism rates were similar to those of incarcerated youth
Wilderness Challenge Programs	Bedard et al., 2003	Meta Analysis of 13 studies	<ul style="list-style-type: none"> - Wilderness therapy programs are more effective than incarceration and

Models	Reid, 1998	youth offenders in group homes to MTFC	leave in MTFC compared to group homes (31% versus 58%) - More youth completed the MTFC program (73% versus 31%) than youth in group home care - Youth completing MTFC had significantly fewer self reported acts of delinquency than youth who completed a group home program (29 acts versus 13 acts in a 6 month time period)
Family Care Models	Farmer, Burns, Wagner, Murray, & Southerland, 2010	Compared Treatment as usual TFC and enhanced TFC	- Youth in treatment as usual Treatment Foster Care remained stable throughout the intervention whereas youth in enhanced Treatment Foster Care showed improvements over a 6 month and 12 month time frame in clinical symptoms, problem behaviour, and strengths.
Family Care Models	Aos, Phipps, Bamoski, & Lieb, 2001	Comparison of 13 program evaluations	- Multidimensional Treatment Foster Care has been found to have the largest treatment effects of thirteen comparable youth justice programs - Provided strong evidence to support the cost effectiveness of Multidimensional Treatment Foster Care
Family Care Models	Chamberlain & Reid, 1998	79 male youth with histories of serious and chronic delinquency	- Youth who complete Multidimensional Treatment Foster Care tend to have reduced rates of incarceration and reoffending; have half as many arrests as their community treatment peers; and spend 60% fewer days incarcerated compared to group home peers

		justice girls	delinquent peer associations, and fewer days in locked settings compared to girls in group homes - Compared to girls in group home settings, girls in Multidimensional Treatment Foster Care have improved school attendance and lower levels of pregnancy
Family Care Models	Leve & Chamberlain, 2006	Comparison between MTFC and group home care	- Youth in Multidimensional Treatment Foster Care are more likely to sustain treatment effects after leaving the foster home compared to youth in treatment group homes. - Youth in Multidimensional Treatment Foster Care have fewer arrests, days incarceration, drug use, and better school attendance.
Community Group Homes	Chamberlain & Moore, 1998	15 boys – randomized trial	- Boys in positive peer culture group home care have fewer arrests one year post treatment - However, group home youth had higher rates of arrests and lower rates of treatment completion compared to Family Care Models - Youth in group homes have more contact with delinquent peers compared to Family Care Models
Community Group Homes	Hair, 2005	Literature Review	- Family therapy in the treatment plan and parental involvement while the youth is in residential care is predictive of successful discharge from programming

Appendix C – Contact Information for Programming Options

The following is a list of contact information for the various programs mentioned in this report:

Title of program: **Behaviour Management Through Adventure**

Developer: Dr. Michael Gass

Website: <http://www.pa.org/programs/behavior-management-through-adventure/>

Title of program: **Boys and Girls Town - Nebraska**

Developer: Father Edward Joseph Flanagan

Website: <http://www.boystown.org/>

Title of program: **Multidimensional Treatment Foster Care**

Developer: Dr. Patricia Chamberlain, Oregon Social Learning Center

Website: www.mtfc.com

Training Center: TFC Consultants, Inc.

Cost Effectiveness Information:

<http://www.blueprintsprograms.com/programCosts.php?pid=632667547e7cd3e0466547863e1207a8c0c0c549>

Wilderness Challenge Licensing Board: **Outdoor Behavioural Healthcare Industry Council**

Website: www.obhic.com

Title of program: **Project Venture**

Developer: National Indian Youth Leadership Project

Website: <http://www.niylp.org/projects/project-venture-national.htm>

Implementation Information: <http://www.niylp.org/project-venture-info.htm>

Title of program: **Together Facing the Challenge**

Contact: Maureen Murray

Program Brochure: <http://serp.mc.duke.edu/Brochure---Real%20Version%206-7-11.pdf>

Development Center: Duke University Medical Center

Useful Resource: Murray, M. M., Southerland, D., Farmer, E. M., & Ballentine, K. (2010). Enhancing and adapting treatment foster care: lessons learned in trying to change practice. *Journal of child and family studies*, 19(4), 393-403.

Title of program: **Wilderness Adventure Therapy**

Developer: Dr. Simon Crisp

Website: http://www.neopsychology.com.au/wilderness_adventure.html

Training Center: Neo Psychology