

The Treatment of Conduct Disorder: Perspectives from across Canada

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Objective: To provide a synopsis of treatment programs for conduct-disordered children in Canada.

Method: Five groups of authors from British Columbia, Ontario, Quebec, and New Brunswick describe their approaches to the treatment of children with conduct disorder.

Results: All programs emphasize the needs to use multimodal treatment schemes, including day and short-term residential care, and to base programs on identified factors associated with the development of conduct disorder.

Conclusion: Specific forms of treatment of conduct disorder are promising but are often hampered by social and political agendas.

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It is a well-known fact that conduct disorder is the single most prevalent and costly of all forms of developmental psychopathology (1,2). Conduct disorder negatively affects almost every aspect of psychosocial functioning, including family and peer relationships and school and vocational functioning. It is commonly accompanied by a host of comorbid disorders, for example attention-deficit disorder and substance use disorders, each of which is highly disruptive to development (3–5). If established early, conduct disorder is

likely to have a chronic course and to be associated with adult criminality, poor vocational and social functioning, substance use, and depression (6).

Promising Developments in the Treatment of Conduct Disorder

The treatment of conduct disorder is challenging. Reviews of treatment literature have routinely been negative (7–9). Many clinicians have reached the conclusion that conduct disorder is an untreatable condition that is best dealt with through the justice system. As research on the factors that contribute to the development of conduct disorder has progressed, however, so have attempts to develop new and effective treatments (10,11).

Although recent studies do not conclude that there is a simple, short-term “cure” for conduct disorder, there is a growing consensus that some interventions are quite valuable (6,12–14). Which interventions are effective and what changes they produce depend on a multitude of factors, only some of which are known at this time. Two factors that stand out as critical in predicting treatment efficacy are the age at which intervention is introduced and the clinical course and severity of the disorder. In the following discussion, we note the most promising interventions for young to middle-age children versus adolescents. Within each age group, we briefly address factors that moderate the generalizability of treatment findings and note research limitations. A comprehensive review of treatment efficacy can be found in the work of Kazdin (6), Henggeler (8), Reid (15), and Webster-Stratton (16).

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Interventions for Young to Middle-Age Children

There is little question that substantial progress has been made in the identification and treatment of aggressive behaviour in younger to middle-age children (10,15). The importance of intervening in this early age group is underscored by research that shows a strong relationship between aggressive behaviours in childhood and a wide range of adolescent social and academic deficits (17), as well as an increased risk of juvenile delinquency (18). Within this age group, there is strong evidence supporting the efficacy of 2 types of therapeutic intervention: parent management training and problem-solving skills training. These interventions are effective in producing short-term reductions in aggressive behaviour and in some studies have been shown to produce long-term improvements (6). The combination of parent management training and problem-solving skills training has been shown to be more advantageous than either treatment alone in producing significant and lasting (one year) reductions in behaviour problems (19,20).

The development of family-based interventions, including parent management training, is based on research documenting that children with aggressive behaviours are more likely to reside in families where parenting is compromised by parental psychopathology (21,22), marital discord, divorce (23), and social and economic marginalization (22). These factors have been shown to increase aggressiveness in children through their deleterious effect on parenting effectiveness (24). Parent management training targets this specific causal mechanism and is designed to reduce aggressiveness in children by teaching parents specific strategies to improve their effectiveness in promoting prosocial behaviour in their children. This is achieved in a step-by-step program that teaches parents the use of reinforcement principles (for example, use of positive reinforcement of prosocial behaviour, punishment of aggressive behaviours), negotiation of rules, and behaviour contracting.

The efficacy of parent management training has been extensively evaluated (10,25). Research by Webster-Stratton and colleagues (26–28) has demonstrated that parent management training produces consistent reductions in aggressiveness and noncompliance. These treatment effects have been shown to persist over very long follow-up periods (for example, 10 years [29] and 14 years [30]). Generalization of treatment effects into preschool settings have also been demonstrated (31). Parent management training appears to be effective, especially when delivered within a community-based program as opposed to a clinic (32).

Despite the clear evidence for the efficacy of parent management training, there are limitations to this approach. Research has shown that it is more likely to produce improvement in younger rather than older children. In an interesting study examining the issue, Patterson and others (33) found that 63% of younger children (3.5 to 6 years) showed improvement (defined as reduction in aggression to within 0.5 standard deviation points of a nonreferred control group), whereas only 27% of older children (6.5 to 12 years) showed this level of improvement. This is likely due to the

fact that parents and families constitute almost the entire social ecology for younger children, whereas this is not the case for older children. Such results have led researchers to recommend that, when directed toward older children, parent management training be used as one component of a broader treatment program integrating other interventions. The efficacy of parent management training has also been shown to be lower in families where functioning is severely compromised, and these families are less likely to maintain treatment gains (34).

Problem-solving skills training is also firmly based in research on the causes and correlates of aggressive behaviour in children. It stems from the finding that aggressive children are more likely than nonaggressive children to anticipate rejection and attribute hostile intentions to others (35). The training targets this specific mechanism and attempts to teach children effective interpersonal cognitive problem-solving skills. This intervention teaches children to identify and alter how they think about and respond to social situations using a step-by-step approach that uses modelling and role-play techniques. Reviews of treatment efficacy have shown that most studies are effective in producing reductions in aggressive behaviour (36,37). Again, however, there are limitations with this approach. Treatment efficacy is generally lower for older children, and the magnitude of reduction in aggression is often limited, particularly in highly aggressive children (37,38).

Interventions for Adolescents

As noted, the efficacy of parent management training and problem-solving skills training tends to be lower for older than younger children. One interesting exception to this general trend is found in the research of Bank and colleagues (39). These researchers contrasted the efficacy of parent management training with normal community care for delinquent adolescents with a significant history of offending (mean number of prior offences = 8.1). The families of these adolescents were severely distressed and required extensive support. Parent management training was modified for use with adolescents (for example, restitution and restriction of free time was used in place of time out), and functioning was assessed over a 3-year follow-up period. Results indicated that reduction in offence rates occurred more quickly in the parent management training than control group, although both groups achieved similar reductions at the end of the follow-up period. It is quite noteworthy, however, that youth in the parent management group spent a total of 1287 fewer days in institutional confinement, resulting in a savings of almost \$100 000 over a 3-year period. Nonetheless, the researchers noted that clinical work with these families was exceptionally difficult, and they suggested that the involvement of trained foster parents (40) may be more clinically viable. The use of therapeutic foster care for severely antisocial children has been shown to reduce recidivism and incarceration (40), as well as problem behaviours (41).

As children move outside their families, other influences, including peer relations and school functioning, become more salient to the development and maintenance of conduct

problems. As the scope of the factors that contribute to and are affected by conduct problems broadens, so must the scope of intervention strategies. This reasoning has led researchers to develop multisystemic intervention strategies—highly individualized treatment programs that integrate a variety of interventions (for example, family interventions, cognitive-behavioural interventions, peer intervention strategies, and school interventions) to respond to the broad range of factors that have been shown to contribute to antisocial behaviour (12,42,43). Interventions are delivered within the context of the adolescent's family, school, and community environment to ensure ecological validity.

Several trials have supported the efficacy of multisystemic therapy. Early research (44) showed that juvenile offenders and their families who received this therapy showed greater posttreatment improvements in behavioural and family functioning than youth who received regular community treatment. Multisystemic therapy was also more effective than individual outpatient counselling in reducing recidivism in adolescent sexual offenders over a 3-year follow-up period (45). Two randomized treatment trials have been completed. In the first controlled study, Henggeler and others (13) found multisystemic therapy superior to community treatment in producing increased family functioning, decreased peer aggression, and reduced recidivism and length of incarceration. Long-term follow-up (2.4 years) showed higher survival rates for adolescents who received multisystemic family therapy (39% had not been rearrested) than regular community treatment (20% had not been rearrested). In a second randomized treatment trial with serious juvenile offenders, Borduin and others (46) compared the long-term efficacy (4 years) of multisystemic therapy versus individual therapy. Multisystemic therapy was more effective than individual treatment in improving family functioning and reducing psychiatric symptoms and recidivism rates (26% recidivism in adolescents receiving multisystemic treatment compared with 71% in adolescents receiving individual therapy), including rates for violent offences.

This integration of multiple interventions within an ecological context is without question the most promising new strategy to emerge in the treatment of adolescent antisocial behaviour. The fact that treatment trials have included adolescents with histories of serious antisocial behaviour and difficult-to-treat multiproblem families supports the usefulness of this approach in clinical settings. Moreover, mental health professionals do not require extensive training to deliver therapy, and overall this method of intervention is highly cost-effective (13). Further research is necessary to assess the effectiveness of multisystemic therapy in treating conduct-disordered youth, particularly those with histories of early-onset and severe aggressiveness. In addition, effect sizes are typically stronger for recidivism than for other aspects of adaptive functioning, and thus the impact of this approach across a range of measures of functioning needs to be assessed. Ultimately, it may be more clinically useful to view conduct disorder, particularly the early-onset, severe case, as a chronic condition requiring long-term support (10). The use of multisystemic therapy within a long-term management

approach, combining periods of intensive and "booster" interventions, may therefore be the most promising direction for the treatment of adolescent conduct disorder.

Strengths and Limitations of Promising Treatment Approaches

Perhaps the most significant strength of these treatment approaches is their firm foundation in research. This foundation has led to an ability to tailor interventions to the individual developmental level and ecology of children and adolescents and to contextualize treatment. Nonetheless, these approaches are not without limitations. First, many treatment studies do not draw from clinical samples of highly aggressive children, and thus the prediction of efficacy for interventions within these more difficult samples is sometimes questionable. Second, active involvement of parents in treatment research is often one criteria for inclusion. As most clinicians will confirm, by the time conduct-disordered youth come to the attention of mental health services, their families may well be disengaged, and their involvement becomes extraordinarily difficult to ensure. Parent involvement can be increased, however, through the use of home visits to explain the nature of the programs and the importance of parent involvement, as well as to provide incentives for participation, services in-home, and frequent reminders. Capaldi and Patterson (47) found these strategies increased parent participation from a level of 35% to a level of 75%.

Another limitation of circumscribed treatment approaches such as parent management training or problem-solving skills treatment is their failure to demonstrate generalizability consistently across contexts. This problem has prompted researchers to integrate interventions that address problems across multiple domains, as is exemplified in multisystemic therapy. As noted earlier, although treatment effects are statistically significant, the clinical significance of treatment in some cases is questionable. This again raises the need to understand conduct disorder as a chronic condition that requires long-term care; in this context, small improvements can be valued as important steps rather than equated with the failure to produce a "cure" for the disorder.

At a conceptual level, there are still important questions that need to be addressed regarding which treatments are effective for children at different developmental stages and levels of clinical severity and how long they need to last for benefits to be derived and maintained. Issues regarding the causal mechanisms underlying treatment efficacy remain unclear and are particularly difficult to disentangle in the context of multisystemic approaches.

The Social and Political Context of Program Implementation

Even though there are many limitations and unanswered questions regarding the efficacy of new treatments for conduct disorder, it is clear that research is on the right track. If progress continues to be strong, the next decade should see significant advances in the implementation of effective interventions for conduct disorder. It is important to recognize, however, that the introduction of new treatment approaches

is often hampered by social and political agendas. During the past decade, public outcry regarding youth crime has prompted politicians to implement programs that respond to concerns regarding public safety and restitution. More often than not, the implementation of these programs is intended to appease public demands rather than to introduce viable new approaches that are based on sound research. Shrinking health care budgets also take their toll. Because program budgets are often cut, pressures mount to ensure accountability in service delivery.

It is within this context—of emerging trends showing promising new directions in treatment and political and social agendas that highlight public safety, due process, and cost-effectiveness—that program development and implementation takes place. Mediating the impact of the complex forces that impinge on program delivery requires skill and political sophistication that challenge even the most experienced practitioners. We now turn to an analysis of how the current sociopolitical climate has shaped the delivery of treatment to conduct-disordered youth across Canada.

British Columbia: An Attachment-Based Approach to Support Community Care

The care of conduct-disordered youth in British Columbia has undergone radical change during the past 10 to 15 years. In the middle to late 1980s, youth with conduct disorder were contained within a secure facility (Maples Adolescent Centre) for long-term residential treatment that primarily consisted of behavioural and pharmacological interventions. Several factors prompted the reexamination and reorganization of care. First, it became increasingly clear that the use of behavioural strategies that emphasized control and coercion was clinically ineffective in producing desired outcomes. Second, the resources required for long-term residential treatment were simply too expensive to maintain and defend within a context of fiscal restraint. Finally, and most significantly, a review of the Mental Health Act in 1989 provided adolescents with protection of their rights so that it was no longer possible to detain them in secure units simply on the basis of guardian consent. These factors combined to produce a unique opportunity and need for change in the delivery of service to conduct-disordered youth.

Transforming the clinical direction and model of practice within the Maples from 1988 to present has been a gradual process guided by research on the factors that contribute to conduct disorder and by promising treatment strategies. A new paradigm evolved that emphasizes attachment theory as an integrative model for understanding the problems of conduct disorder and gives direction and cohesion to intervention strategies. Attachment theory (48–50) proposes that experiences within the child–caregiver relationship are reflected in the development of “internal working models” or belief systems. These models have important survival value. When children experience aversive parenting, they are likely to develop a view of adults as unwilling or unable to provide care, support, and direction for them. They may prematurely turn toward peers to have these needs met. Children are also

likely to develop a sense of themselves as unworthy of the care of others or as possessing negative qualities that lead others to reject them. Once established, internal working models of self and others guide interpersonal expectations, interpretations, and responses to social situations. These expectations and interpretations tend to elicit responses from others that confirm the underlying beliefs. Consequently, these belief systems have a self-perpetuating quality. Although attachment representations may change, changes are unlikely to occur quickly or easily.

Several sources of research support an association between particular types of insecure attachment and the development of aggressive behaviour. Early research on the relationship between attachment and disruptive behaviour supports a link between avoidant attachment in infancy and early childhood and noncompliance and aggression. Longitudinal studies showed that avoidant attachment in infancy predicted negativity, noncompliance, and hyperactivity at 3.5 years of age and higher rates of problem behaviour in grades 1 to 3 (51,52). The relationship between avoidant attachment and later problem behaviour tends to be found more consistently in high-risk than in low-risk samples (53). With the introduction of the concept of the disorganized attachment pattern, studies documented a consistent link between disorganized attachment and the development of later aggressive behaviour (54–57).

Recent studies have examined attachment in adolescents with conduct disorder. Rosenstein and Horowitz (58) found that adolescents diagnosed with conduct disorder were more likely to be classified as dismissing, a finding reminiscent of the early attachment research which showed a relationship between avoidant attachment and disruptive behaviour. It is important to note, however, that this sample contained only 7 youth with a diagnosis of conduct disorder and an additional 12 youth with mixed conduct disorder and affective disorder. Our own research using Bartholomew’s attachment model indicated a predominantly fearful attachment pattern (46%) in a sample of 55 adolescents diagnosed with conduct disorder. A relatively small percentage of youth were classified as predominantly dismissing (20%) or secure (9%). The remaining youth (25%) were classified as preoccupied (59). It is likely that conduct disorder is not homogeneous with respect to specific patterns of insecure attachment. The question of the relationship between different patterns of insecure attachment and conduct disorder subtypes is provocative and may be important in understanding individual response differences to various intervention strategies. For example, interventions directed toward adolescents with a predominantly fearful attachment style need to be organized and delivered so they take into consideration the tendency of these individuals to be avoidant in relationships. In contrast, interventions directed toward adolescents with a predominately preoccupied attachment style need to be delivered with a consideration of subjects’ tendency toward overengagement and enmeshment in relationships.

Crittenden and Ainsworth (50) suggest aggressive behaviours may represent an acquired strategy for maintaining

proximity to caregivers. According to this view, coercive attachment strategies *force* reluctant parents into responding. In other words, aggression and violence become a style of maintaining comfortable levels of proximity with significant others. If aggression is a strategy for maintaining connectedness with others, this implies that intervention strategies need to assist caregivers and youth to understand the relational issues underlying aggressive behaviour and to develop alternate strategies for meeting attachment needs.

Other models of the relationship between insecure attachment and disruptive behaviour have been proposed (60,61). It may be that insecure attachment patterns (disorganized, dismissing, or fearful) and aggressive behaviour develop concurrently as a result of exposure to adverse experiences. It is more likely, however, that the relationship between attachment and disruptive behaviour is dynamic and reciprocal. Once established, insecure attachment patterns likely contribute to increased levels of aggressive behaviour, and likewise, increased involvement in aggressive behaviour produces experiences that reinforce insecure attachment patterns. Whatever the specific cause-effect relationships between attachment and disruptive behaviour across development, it is certain that attachment patterns are an important consideration in the selection and delivery of clinical interventions (62). An understanding of a youth's attachment style is also helpful in increasing the understanding of family and community members about disruptive behaviour and in supporting the delivery of interventions.

The Response Program: Using Attachment Theory to Integrate Care

Attachment theory does not specify that one type of intervention is critical in meeting the needs of conduct-disordered youth. Rather, this theory offers a developmentally sensitive structure for organizing multiple therapeutic strategies (for example, family therapy, therapeutic foster placement, parent management training, social-cognitive and school interventions, and vocational training) that are most relevant, depending on a youth's predominant interpersonal orientation (that is, attachment style) and the social context. This model is used at the Maples Adolescent Centre to integrate various interventions and support communities in the care of youth with conduct disorder. In this sense, attachment theory provides a developmentally and individually sensitive integrating framework for the program that is analogous to the social-ecological model which underlies multisystemic therapy (14).

A central program at the Maples is the Response Program, which services the entire province of British Columbia. Youth are referred by local mental health centres to ensure that those agencies with the greatest knowledge of their community's mental health needs control access to the program. These agencies identify youth in their community with severe behavioural problems who are most in need of services. The program accepts all youth between the ages of 10 and 17 years with the exception of children who have been identified as functioning within the intellectually deficient range.

Youth are in residence for 4 weeks. The program is housed in 2 units, each with the capacity to care for 12 youths. Care is provided in the least restrictive, most normative environment as is clinically appropriate. Youth are encouraged to attend school on the complex and engage in recreational activities. The program begins with an intake meeting. At this time, the youth, all concerned caregivers and community support systems, and Response Program staff meet to form an agreement regarding the process and purpose of developing a care plan. During the 3 weeks following intake, the multidisciplinary staff (social work, psychology, child care, education, and psychiatry) gather information regarding the social ecology and functioning of the youth by focusing on attachment and affiliation issues. The information derived from these investigations is presented to all individuals involved in the youth's care (parents, alternative caregivers, social service and school representatives) and the youth in a meeting 21 days after admission to the program. This is an open meeting in which professionals discuss their findings, and the contribution of all members of the community is encouraged. The open format of the care plan conference is unique and challenging to professionals, families, and adolescents. The discussion of the information focuses on understanding the unique problems of youth within a context of their pattern of attachment, affiliation, and social interaction in their social environment (for example, family, peers, school, and community members). The most beneficial care situations and strategies from this perspective are discussed. We believe that it is critical to include all members of the ecology in this meeting to ensure that they participate in this understanding of the youth and to establish their inclusion and commitment in the intervention process.

The information discussed in this meeting is summarized in the care plan document. Information is organized into 3 sections: life style issues, home life issues, and school issues. Within each domain, personal and family attachment dynamics and management strategies are addressed. Management strategies typically include family therapy or parent training interventions, involvement of child care or other appropriate mentors, vocational, recreational, and school recommendations, and individually based interventions as necessary. The broad range of the care plan ensures that attention is directed to the numerous domains in which these youths typically have difficulty (63). The care plan is also written in such a way as to ensure that it can be easily understood by a wide range of caregivers.

A discharge meeting is held one week following the care plan meeting, and at this time the care plan document is reviewed. This meeting also provides an opportunity for members of the community to respond to the process and to problem solve around issues related to the implementation of the care plan. The discharge meeting also marks the beginning of the relationship between outreach workers and the community. The Response Program makes a commitment to assist the community in interpreting the care plan throughout the youth's adolescence. In addition, the program commits to provide respite care of up to 2 weeks as often as required to support the preservation of a placement during this time.

Follow-up evaluations of this program have shown reductions in the level of problem behaviours (including symptoms of conduct disorder, oppositional defiant disorder, and attention-deficit disorder) and emotional difficulties (anxiety and depression) reported by youth and their caregivers for a period of up to 18 months (64,65). The model also led to the development of a multimodal program for youth and their caregivers in which youth remain in residence during the week and return to caregivers on weekends (Orinoco) (63). The success of both programs ultimately depends on the continued support of communities and caregivers in providing continuity of care for youth. Respite care is particularly important in helping to prevent the breakdown of placements.

Moving the Program into the Community

A founding principle of the Response Program is to maintain youth in their home communities. A long-term goal is to move the process of developing and supporting care plans into the community as well. With the impetus of the "New Directions" health care initiative in British Columbia, which calls for moving care "Closer to Home," there is a rare conjunction of clinical direction and practice with political and economic imperatives. Through formal and informal networks, we have provided consultative services to develop local programs and services that replicate or complement attachment-based services such as the Response and Orinoco programs. In the past year, there have been half a dozen partnership initiatives with communities ranging from immediate neighbours to the Maples' Burnaby location to communities in the province's North. Common challenges in moving the program from the Maples to the community have arisen. These are characteristic of problems that are encountered whenever duplication of newly developed programs is attempted (66). First, the provision of services for youth and families is fragmented so that coordination of services is extremely difficult. As a result, providers often attempt to define service requests as outside their mandate in order to preserve limited resources. In an attempt to address this problem, the province of British Columbia has created a single ministry for children. The development of a central agency to coordinate and integrate services is critical to the implementation of multimodal intervention strategies. The second obstacle encountered in moving the program to the community is that intrusion of outside "experts" in program reorganization is generally resisted. This has made it necessary to identify community players who will carry the new program forward. Several strategies have been helpful in this regard. First, we have been fortunate that our clinical philosophy is similar to changes in legislation for the delivery of services to children. Highlighting the compatibility of our program with these policy changes has been useful in enlisting support at the community level. Providing research documenting the impact of this program and expert presentations to communities has also been persuasive. Finally, offering mentoring relationships with communities where Maples professionals can assist the community professionals in developing expertise and competence is invaluable.

Conduct-Disordered Youth: A Report from Ontario

There have been 2 interesting and related developments in the field of antisocial youth in Ontario. The first was a study comparing conduct-disordered youth in treatment with youth in custody. This study, conducted at a tertiary-level treatment centre in Toronto, showed that youth in custody were very similar in symptomatology and family background to youth in treatment (67). The study also found that the majority of youth in custody met the criteria for conduct disorder. This is not surprising, since 8 out of 15 criteria for conduct disorder involve breaking the law (68). These include acts such as forcing someone into sexual activity, deliberately destroying others' property, and using of a weapon to cause serious harm. Many acts in the conduct disorder criteria are criminal acts, and therefore anyone caught committing such acts can be charged for breaking the law. More interesting, though, is the fact that it may be purely accidental whether a youth is diagnosed as conduct-disordered and receives treatment rather than incarcerated for breaking the law and receives no treatment. It is not suggested that youth who break the law should not be apprehended and charged. The question is: Should those in custody be managed differently from youth diagnosed with conduct disorder? Given the similarity in their clinical profiles and the goal in both cases to reduce the chances of committing another antisocial act, the management of the 2 types of youth should be similar. The present practice of providing youth in custody with little help in altering their behaviour serves neither the public nor the offender. The high rate of repeat offenders indicates the failure of the correctional system and the need to find cost-effective methods of managing young offenders.

A second development in Ontario is the government's concern for the increase in youth violence and the ineffective treatment of young offenders. The Ministry of the Solicitor General and Correctional Services established a task force to develop a strict discipline program for young offenders. This task force recommended establishing a pilot program. The concept of strict discipline resembles the boot camps that have been operating in the United States (US) since 1983. There are 41 such programs in 25 states (69). Recently, the US Department of Justice published an evaluative study of these programs (69) from 3 perspectives: attitude change, recidivism, and community adjustment of offenders upon their release. The results reported indicate that strict discipline itself did not change antisocial attitude in the long run, and it did not produce a greater reduction in the rate of recidivism than prisons. According to this study, one month after release from boot camp, 10% of youth were rearrested; after 12 months, 30% to 60% were rearrested. The results of community adjustment were not impressive either. In 3 states (Illinois, Louisiana, and New York), however, youth in boot camps did better in all respects than youth in prisons. These positive results are ascribed not to the strict discipline program of boot camps but to the intensive community supervision provided in those states after release from camp.

This research suggests that present policies are aimed at using the least cost-effective ways of dealing with youth

crime. A large number of young offenders are kept in custody. The cost of secure custody for Canadian young offenders is an estimated \$319 to \$370 per day (70). The total cost over an average stay of 142 days could be as high as \$52 540 per offender. Federal figures for 1993–1994 indicate the yearly cost of keeping a young offender in secure custody is \$95 000, more than twice the cost of keeping an adult in federal prison (71). The social return on this expense is very disappointing. For example, at a Toronto detention facility, 90% of 16- to 17-year-olds on custody orders had a prior history of at least one criminal act (70). This is not very surprising because there is evidence that frequent contact with deviant peers may increase the frequency of antisocial behaviour (72,73), and young offenders are not provided with effective treatment while in custody. Young offenders are separated from their families and allowed only very limited contact, despite the fact that research has shown repeatedly that family therapy is an effective tool in the treatment of young offenders (46,74).

In addition, there is no concentrated effort to establish early identification of aggressive children with concomitant services to help families. In most cases, these children grow up to become antisocial adolescents and are noticed only when they break the law. By that time, the aggressive behaviour has become part of their personality trait, the family has become very discouraged, and the adolescent has fallen many grades behind in school. When a child is brought to the attention of professionals for aggressive behaviour, the stability of the behaviour is often ignored; once there is improvement, the treatment is terminated with no follow-up. One study shows aggressive children are seen by 15 different agencies between childhood and adolescence (75). This retrospective study reveals that in most cases, there was no follow-up. Given that aggression is the most stable personality trait after intelligence (76), there is a clear need for follow-up to help ensure that aggressive behaviour does not recur.

The results of early interventions are very encouraging (77,78), and their cost is minimal. Knowing that if ignored, approximately one-half of these children will grow up to be antisocial adolescents (79) who will commit crimes against society and cost us millions of dollars, one would expect a determined effort to stop the cycle at this stage. Yet there is no evidence of commitment in Ontario to help early identification and intervention with aggressive children.

Many provinces in Canada may follow the example of Ontario and the US and establish boot camps for young offenders. Although we cannot be optimistic about the benefits of the strict discipline aspect of the boot camps, the following guidelines can make these programs more effective:

- 1) Entrance should be voluntary, whereby offenders are given a choice to go to training school or to boot camp.
- 2) Staff should receive training so that they relate to offenders in a warm and flexible way.

- 3) There should be rehabilitative components dealing with academic needs, drug use, and deficient problem-solving skills.

- 4) There should be intensive community supervision on release for at least one year.

- 5) There should be an evaluation component to determine efficacy of each program.

If boot camps are to appear on the Canadian scene, let us learn from the US experience and incorporate all features shown to improve the rate of recidivism. In fact, there should be little difference in programming for conduct-disordered youth in mental health centres and young offenders in correctional settings. The goal in both cases is to reduce the chances of the youth committing another antisocial act. Using all proven methods to reduce recidivism will provide protection to society and reduce costs.

Quebec: A Day Treatment Strategy

The present economic and social structure of Quebec has led to an increasing number of children with behavioural difficulties. Enormous cutbacks in the health care system led to the closure of psychiatric units and general hospitals. In schools, one social worker may provide services to as many as 10 schools. Furthermore, there is disintegration of family structure. Divorce is common, and grandparents are less involved in children's lives. Parents frequently face major financial difficulties that require long work hours. They often are so overwhelmed that they are unable to provide adequate structure for their children. At present, Montreal has the dubious distinction of being the poorest large city in Canada. A feeling of apathy is often present in the children we see in our clinics. With a provincial unemployment rate close to 10%, adolescents are uncertain of their future and do not believe that they can find a job easily.

The current restructuring of social services in Quebec led to a number of problems but also to advantages. With the closure of many group homes, most social workers and child care workers were reassigned to PSLs (*point de service local*), prompting the move of services into the community. This move provided needed parental counselling in the children's homes. Unlike previous group homes, however, most PSLs do not provide schooling, necessitating the reintegration of children with severe conduct disorder into the regular school system. Unfortunately, numerous school boards have abolished self-contained classrooms for special needs children, thus requiring that children with severe behavioural problems and learning disabilities be reintegrated into classrooms of 30 children.

In these times of severe economic restraint, it is important that we develop treatment programs for children with conduct disorder that are effective from both a therapeutic and a cost-management perspective. One such program is day treatment. Children with conduct disorder often present with behavioural problems, poor family and peer relationships, low self-esteem, feelings of hopelessness and depression, and learning disabilities. To produce lasting change, one needs to

target the child's social system as a whole. Day treatment allows therapists to work with children on behavioural, familial, interpersonal, and academic issues while maintaining them in their family and community setting. Our day treatment program offers a combination of individual, group, family, music and art therapy, psychodrama, zootherapy, and medication, as necessary.

Through our research, we have demonstrated the effectiveness of day treatment. In a study of 30 children who were assigned to either a day treatment program or a waiting list control group, we found that the treatment group showed greater improvement in self-esteem and in externalizing and internalizing behaviours as assessed by the Revised Child Behavior Checklist; they also felt more hopeful and less depressed than the control group. There was no significant improvement in the children who did not receive treatment (80). In a 5-year follow-up study, children who completed the day treatment program were found to maintain significant improvement in all areas of behaviour, self-esteem, depression, hopelessness, peer relations, and scholastic performance (81). Furthermore, of the 45% of our sample children aged 6 to 12 who had been permanently expelled from school for severe behaviour problems at admission to day treatment, 73% were functioning well enough to be in a regular school setting 5 years later, while 21% were in a specialized school setting, and only 6% had dropped out of school. Furthermore, a stepwise multiple regression analysis showed that 55% of the adjusted variance in behavioural functioning of children at the 5-year follow-up was explained by parental cooperation, highlighting the importance parent participation in treatment to assure a positive outcome.

In a third study comparing residential care with day treatment, we demonstrated that both groups improved to a similar degree, but the average cost of treatment per child for residential care was \$61 412 versus \$9213 for day treatment (82). Cost savings were due in part to the lower operating cost of day treatment but, more importantly, resulted from the shorter length of stay (19.6 months in residential care versus 6.1 months in day treatment). The length of residential care was due to the reluctance of families to take children home. Emergency placement for residential care youth was unavailable because children were considered by social agencies to be in a placement in the hospital. In addition, community schools were reluctant to admit these children because they were seen as severely disturbed. In contrast, the children in the day treatment group were discharged earlier because their families continued to be involved with them. Also, community ties were maintained because schools were warned that the day treatment program was a short-term intensive program and that they had to hold a place for the child. Children were extremely motivated to graduate to a regular school as soon as possible.

In a final study, we compared a group of 15 children enrolled in a day treatment program with 15 children with similar types and severity of psychopathology treated in a weekly outpatient treatment program (83). The group that received day treatment showed significantly greater

improvements in externalizing and internalizing behaviours than did the outpatient group, who demonstrated only mild improvements. Self-esteem, depression, hopelessness, peer relations, and family functioning improved only in the day treatment group. Thus it appears that an intensive, multimodal day treatment approach best improves secondary symptoms such as depression, poor peer relations, and low self-esteem.

In conclusion, with the increasing number of children with behavioural problems, we need to work on prevention and early intervention. Programs should be funded only if they can demonstrate effectiveness in improving adaptive functioning and cost-effectiveness. Finally, our research clearly confirms clinical impressions that parental involvement is critical for treatment to be effective.

New Brunswick: A Multimodal, Multiagency Community Strategy

The development of a community-based multimodal and multiagency intervention strategy for conduct-disordered youth has been underway in New Brunswick for 2 years. This initiative reflects a concerted attempt to move the province toward a decentralized, community-based system for at-risk youth—a system that is clinically effective and affordable. The central guiding concept for the program is the collaboration between the 3 agencies involved with youth: education, social services, and mental health.

Our challenge was to translate the growing body of knowledge about multimodal intervention strategies into a workable system for one of Canada's smallest and most rural provinces. In the implementation phase, a number of obstacles were encountered that were primarily systemic in nature. Long-guarded traditions of agency independence, differences in conceptual and theoretical orientations between agencies, and a system-wide belief that nothing works for conduct-disordered youth were significant hurdles. Nevertheless, New Brunswick presented unique opportunities as well. The population of slightly over 750 000 is rather evenly distributed. We also hoped to benefit from the tight system of family and social ties that exists in small communities.

Theoretical Orientation of the Program

Attachment theory (48–50) was adopted to provide a common set of concepts through which diverse professionals could work and communicate effectively. Attachment theory offers a strong conceptual base from which to plan and coordinate interventions where none seem to exist and is congruent with the growing body of research that points to family and community factors as pivotal to successful rehabilitation of conduct-disordered youth. It is also inclusive of other approaches and provides a powerful conceptual bridge to understand the interaction between biological and environmental forces. Considerable resources were given to providing inservice training in attachment theory for clinicians from the 3 partner agencies. Working from this perspective also guided program priorities. Dedication to increasing the effectiveness of foster care services, initiatives in family preservation work, and redefining the use of longer-term group home

beds were all influenced by our commitment to supporting secure attachments.

Description of Program Elements

The program has 3 principal components. These are: 1) a system of regional communities across the province; 2) a 3-member Provincial Coordinating and Resource Team; and 3) a 6-bed treatment centre for conduct-disordered youth from ages 12 to 18.

Regional Teams. There are 14 identified regions in which teams are active. Each team consists of professionals from the 3 participating agencies (mental health, social services, and education). Participation rates among agencies has reached 90% to 95%, figures that have been stable for the last 2 years. This stability is due in large part to the strong commitment to the program by provincial executive directors and their regional counterparts.

The objective of the regional teams is to develop a high level of expertise in planning, consulting, and providing care for conduct-disordered youth. As the expertise in the regional teams grows, they become an important resource for various service elements of the community, and each team member becomes an important internal resource for his or her respective agency. Three strategies are used to promote and achieve this high level of expertise. The first strategy is inherent in the program design, that is, the creation of a group of knowledgeable individuals from different perspectives. This "specialist group" structure is perhaps the most widely used and most successful method for creating expertise in small and large systems. To further promote expertise, one member of the Provincial Resource Team, consisting of 2 psychologists, a clinical social worker, and a psychiatrist, participates in each of the regional team meetings and contributes expertise to the case deliberations. A web site is also being developed so that team members can stay abreast of recent regional, national, and international developments in the treatment of conduct disorder.

The regional teams are active primarily in supporting direct-care providers and helping front-line workers from each of the partner agencies. This means that each agency has its own internal procedures for deciding which case will be brought forward to the team. Once a case is accepted, the team undertakes to support the front-line workers through a case review consultation process. The team's commitment to the youth is long-term (that is, to age 18), and a case is not closed unless consent is withdrawn. This approach is consistent with the understanding that conduct disorder is chronic and requires an approach that incorporates at least intermittent long-term contacts.

The regional teams are also the sole referring and admitting body for the province's conduct disorder assessment and treatment facility, the Pierre Caissie Centre. This move to community empowerment allows interveners to sharpen their objectives for admission and to prioritize need from a regional perspective. To date, less than a third of cases seen by regional teams have been referred to the centre; other cases are

managed locally through the regional team process using local resources.

The Pierre Caissie Centre. This 6-bed facility is mandated to provide in-depth assessment and short-term inpatient interventions for youth aged 12 to 18 years. The centre provides a 28-day assessment and short-term intervention similar in design to that proposed by Holland and colleagues (64). The aim is to develop a comprehensive and community-sensitive care plan. Assessments deal with educational, psychiatric, psychosocial, and psychological dimensions and address 3 important domains of the youth's life (home, school, community) from an attachment perspective.

The short-term treatment aspect of the 28-day program is inspired by the work of Durrant (84), who proposes building interventions by defining and exploiting strengths. This approach often allows us to avoid provoking defensive reactions and can create the relational context in which to develop a viable working attachment with youth. Pharmacotherapy is often initiated to bring relief and opens up the possibility for better relationships.

One of the innovations of our residential program is the inclusion of a parents' unit inside the treatment centre. Prior to admission, parents are asked to spend time at the centre to participate in the assessment process and to engage in some interventions. In our family work, we are again guided by attachment concepts and the work of Durrant (84) as we focus primarily on existing bonds and family strengths. The centre also offers respite to those children who have already gone through the program and whose care plan is in need of revision or could be facilitated by having the child spend a short time at the centre.

Prior to the implementation of the program, fears were expressed that the treatment centre would soon be paralyzed with long waiting lists from the 14 regional teams referring clients to the 6-bed facility. In fact, the opposite has taken place. Similar to the experience at the Maples Centre in British Columbia, this approach has produced a shift in attitude among region-based clinicians so that services tend to be used only when fully justified.

Special Initiatives

The Youth Treatment Programme's unique position within the government, that is, being based in mental health but reporting to all 3 partner agencies, allows it to move freely across departmental lines to initiate programs for conduct-disordered populations. One example of such a project is attachment-based fostering. Frequent placement changes constitute probably one of the most important iatrogenic factors preventing success for this population. It is not uncommon to encounter children in care who have undergone up to 20 placement changes by the time they reach the age of 16. In this program, foster parents caring for particularly resistant youth are trained to shift their priority from control activities to relationship and bond-building activities. Parents are coached in approach methods and in how to make conflict a useful part of the attachment process. In addition, a support worker is assigned to the family to provide parents with

ongoing counselling and support. The objective is to allow the parent to remain emotionally available to the child despite his or her difficult behaviour.

Conclusion

The province of New Brunswick has moved away from expensive and rather ineffective long-term residential care to a community-based, interagency care system coordinated by a provincial clinical team. Within this system, the major investment is in community services with centralized assessment. A minimum of treatment beds is available.

Though still young, the program has already resulted in important gains for the province. Out-of-province placements, which used to cost the province between \$1 million and \$1.5 million a year, have been virtually eliminated. Polling of regional directors from all participating agencies reveals that interagency cooperation has consistently and significantly improved since the initiation of the program. Gross indicators, such as the frequency of residential placement changes, delinquent acts, and school attendance, point to gains for a significant number of those youth seen by regional teams. Finally, important improvements have been made in expanding the skill set of community-based interveners. Further empirical evaluation of the program is planned for the coming 2 years.

Common Themes, Problems, and Strategies

Although program initiatives are different among the provinces and in some cases are hampered by political agendas, a common view of the types of problems associated with conduct disorder and the need for broad-based care is apparent. There appears to be agreement that long-term residential care is generally undesirable and expensive. Youth with conduct disorder are viewed as in need of comprehensive evaluation and long-term multimodal intervention. The need to invite, facilitate, and support the participation of families, alternate caregivers, schools, and other support systems is underscored.

These views reflect the impact of research, which has investigated both the factors that contribute to conduct disorder and the promising interventions, on the provision of care for conduct-disordered youth in Canada. The need to ground programs on identified factors associated with the development of conduct disorder and on those interventions demonstrated to be effective is clearly and consistently expressed. Similarly, there is the recognition that programs need to demonstrate efficacy through outcome research and other types of supporting documentation.

These characteristics of the programs suggest that if there is a problem with the care of conduct-disordered youth in Canada, it is certainly not due to a lack of knowledge of research or to a failure of clinicians to accept new directions in treatment. The value of new intervention strategies (for example, family interventions, multimodal treatment packages) is clearly recognized in all the Canadian provinces represented here, but these strategies have been more successfully implemented in some provinces than in others. In British

Columbia, the government initiative to bring care closer to home has provided the necessary impetus and opportunity for change and reorganization. In New Brunswick, a province-wide commitment to community-based care has been advantageous to implementing a new approach in the treatment of conduct disorder. In contrast, the political climate in Ontario seems unlikely to embrace such programs for young offenders and appears more intent on responding to public demands for retribution and containment, despite the clearly documented lack of efficacy of boot-camp approaches (11). In general, research findings do not lead governments to endorse the most clinically effective and affordable programs. Rather, program designs and mandates are determined by government agendas, and clinicians must struggle to implement the best strategies they can within these parameters. Clearly, this situation does little to promote the welfare of children.

The structural organization of the existing service delivery system also seems to influence the introduction of new treatment strategies. In some provinces (for example, Quebec and New Brunswick), the service delivery system is better integrated to provide cohesive, well-managed care, and this has facilitated and supported new program development. Good structural organization is essential to the delivery of multimodal programs that cut across domains (for example, family services, mental health, education) which traditionally have been represented by separate ministries or government agencies. When services are not integrated with a common goal, a common paradigm for understanding the social problem, a common language, and a shared agreement of how to work together, families and children fall prey to fragmented services and interagency debates about mandates and responsibilities.

In some cases, conceptual frameworks (for example, attachment theory) were found to be helpful in creating a common structure to direct interventions delivered by different mental health providers. The importance of ensuring that new conceptual frameworks are disseminated across the spectrum of service providers is challenging yet essential to ensuring integrated care. Once established, these provide a common base from which mental health professionals, families, schools, and other support systems can deliver effective interventions that are identified as most appropriate to the case.

Interestingly, despite significant health care cutbacks, these cutbacks were not in the forefront of the discussions. What were more salient among the obstacles to implementing new programs were systemic difficulties that arose in integrating complex political agendas and service delivery systems. Indeed, the programs described as advantageous to meeting the needs of conduct-disordered youth did not call for an influx of funds but rather for reorganization and integration of existing resources.

A final concern is that programs discussed in this paper and typically available in Canada treat conduct disorder rather than prevent it. Youth who come into care usually have a long history of problems and mental health contacts, and their patterns of behaviour are well established (67). Despite

the facts that conduct disorder is extraordinarily costly and that early intervention strategies are well founded in research and promise effective returns (15), prevention programs are rarely considered. This again likely reflects short-term political agendas that focus on appearing to solve current problems and demands rather than long-term investment in preventing future ones.

What directions need to be pursued to improve the quality and efficacy of care for conduct-disordered youth in Canada? Clearly, our programs are informed by new research on the most effective treatment options. Continued research needs to occur to address the outstanding issues discussed in the introduction of this paper. In particular, we need to determine whether the intervention strategies reported here are effective in highly aggressive youth and how to specify which interventions work best for which children. Research evaluating the efficacy of newly established programs needs to begin or to continue. On the political front, mental health providers need to find avenues to exert more influence on government policy. Perhaps the best route to achieve this outcome involves developing support and demand within communities for empirically supported programs and petitioning senior governments to consider the new facts regarding treatment efficacy for conduct disorder. Political leaders face election every 4 years in Canada. Unless and until the public is convinced of the need for long-term intervention strategies for the social problem of conduct disorder, politicians will be seduced by the lure of appearing to "do something" about it with short-term, quick-fix programs.

Clinical Implications

- The implementation of effective treatment for conduct disorder.
- The application of multisystemic approaches in Canada.
- The navigation of sociopolitical obstacles in order to implement new programs.

Limitations

- The need for continued research on program effectiveness.
- The need to tailor interventions to specific patient needs.
- The need to exert more influence on government policy.

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Résumé

Objectif : Établir un sommaire des programmes de traitement des enfants atteints du trouble des conduites au Canada.

Méthode : Cinq groupes d'auteurs de la Colombie-Britannique, de l'Ontario, du Québec et du Nouveau-Brunswick décrivent leurs approches à l'égard du traitement des enfants atteints du trouble des conduites.

Résultats : Tous les programmes insistent sur la nécessité de recourir à des plans de traitement multimodal, notamment les soins de jour et les soins en établissement de courte durée, et de fonder les programmes sur les facteurs identifiés et liés à l'apparition du trouble des conduites.

Conclusion : Certains traitements spécifiques du trouble des conduites sont prometteurs, mais des programmes politiques et sociaux en compromettent souvent l'adoption.