

Providing Intensive Child Case Management Services: What Do Case Managers Do with Their Time?

Introduction

Within the past two decades, several trends have been instrumental in affecting the policy and intervention for families with children who have severe emotional and behavioral problems. In particular, the trends towards deinstitutionalization, family preservation, family reunification, and parent-professional collaboration have been synthesized to provide a coordinated systems policy to guide state mental health practice (e.g., Behar, 1988; Burchard, et al., 1991; Homonoff & Maltz, 1991). One key aspect of the emerging systems of care is the creation of family strengths and community based intensive child case management services. In an effort to increase our understanding of the factors associated with the successful implementation of family strengths based intensive case management services, this summary will focus on the results of an exploratory study, conducted to describe the efforts of one rural state's implementation of a family-strengths, community based intensive case management program (ICM) for families with children with severe emotional and behavioral problems.

Methods

An in-depth, systematic review of ICM case records was undertaken for the purpose of: (a) delineating characteristics of the children and families being served; (b) identifying service needs and barriers; (c) describing the amount and type of contact between case managers and families and other service providers; and (d) examining the relationship between case managers' contact with families and providers, and characteristics of the families and children being served.

Program Description

This study was conducted following the first year of implementation of a state wide intensive child case management services. The intensive child case management services are part of a

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continuum of child and adolescent mental health services developed and implemented by the State of Maine Department of Mental Health and Mental Retardation. This continuum of services (e.g. child case management, crisis services, community-based residential services, etc.) was legally mandated following agreement of a class action suit between mental health consumer groups and state mental health and human services officials, resulting in a substantial decrease in the number of state hospital beds for adults, a virtual elimination of state hospital beds for children and adolescents, and increased funding allocations for improving and expanding community based mental health services.

Six agencies were awarded two year contracts with the state department of mental health to provide intensive child case management services. Three of the agencies are community mental health centers, and three are private, non-profit child and family services agencies. There are a total of 13 child case managers employed throughout these six agencies, with each case manager expected to carry a caseload of 15 families with children with severe emotional and behavioral disabilities.

Population and Sample

The population consisted of the case records of all Maine children and adolescents who received Intensive Case Management (ICM) services from the initial start of the program in April, 1991 through June, 1992 (approximately 150 children). Based on discussions with state department of mental health staff, case managers and agency administrators, and the review of the literature on children with severe emotional and behavioral difficulties [e.g., Lourie, et al (1990); Ronnau, (1992); Stroul & Friedman, (1986)], a purposive sample of 50 case records was chosen for review in order to compare across several categories of records: children involved in a state class action

consent decree (20), children involved in the class action consent decree who were also in the custody of the department of human services (5), children who were psychiatrically hospitalized while receiving ICM services (10), children who remained in the community (without a more restrictive placement) while receiving ICM services (6), and children who were under the age of 12 when they began receiving ICM services (5). Each ICM Program supervisor randomly chose five cases for review, one case for each of the five categories. Sixty-eight percent (34) of case records involved boys; 32% (16) involved girls. The mean age for the children and youth was 13.42 years (*SD*: 2.88 years), with a range from 4 to 17 years. Of the 41 records noting the child's grade level, the mean grade level was 7.52 (*SD*: 2.61). The majority of the children and youth were White (88%, *n*=44), with 6% (3) Native American children and 6% (3) African American children.

Procedures and Data Analysis

Case records were reviewed by either the principle investigator or one of two graduate social work research assistants who had been trained by the PI. Three protocols were used in the review of the case records. First, the *Child Case Management Case Record Review Protocol* (developed by the principle investigator) consisted of a series of 18 close-ended questions related to child and family demographics, referral sources, family structure, and child's place of residence, and 27 open-ended questions on topics such as service needs, family background, child problems, and family strengths. Second, a revised version of the Vermont *Restrictiveness of Living Scale* (Burchard et al., 1991), was also completed for each case review, creating a graph of the number and type of placements experienced by the child from birth to the present review. Third, the *Child Case Manager Contacts Protocol* (developed by the principle investigator)

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provided a mechanism for recording case managers amount of contact (in hours), with whom (e.g., child, family, child therapist etc.), and the type of contact noted in each case record (direct, telephone, meetings, other). Each *Child Case Management Case Record Review Protocol* was read by the principle investigator and the two research assistants in order to look for emergent themes. Content analysis, based on the frequency with which themes were present in the protocol, was then conducted.

Results

Child Characteristics

At the time of referral to ICM 46% (23) of the children and youth resided with their families, 14% (7) were psychiatrically hospitalized, 12% (6) were in foster care, 12% (6) resided in an in-state residential treatment center (RTC), 10% (5) were at the Juvenile Detention Facility, 2% (1) lived in a therapeutic foster home, out of state RTC (2%, $n=1$), or a friend's house (2%, $n=1$). Birth parents were overwhelmingly the guardian of the children and youth at the time of referral (70%, $n=35$), followed by the department of human services (20%, $n=10$), and the child's adoptive parents (10%, $n=5$).

Families were most frequently referred for ICM by the state department of mental health (32%, $n=16$), department of human services (18%, $n=9$), psychiatric hospitals (16%, $n=8$), and local crisis intervention services (8%, $n=4$). Families waited a mean of 9.60 months (SD : 4.72 months; range: 0-18 months) from the date of referral for ICM services to the actual introduction to a case manager. Table 1 shows the percentage of child presenting problems noted in the records at case opening. Case records noted a total mean of 3.06 ($SD = 1.01$) presenting problems at the time cases are opened.

Family Characteristics

Information pertaining to the child's mother was found in 90% (45) of the case records. The mean age for the child's mother was 37.35 years (SD : 5.91, Range: 29-50). Fifty-eight percent (29) of the case records noted information about the child's father, with the mean age for fathers 40.21 years (SD : 6.23, Range: 29-49 years). The mean number of siblings (birth and step siblings combined) per family was 2.15 (SD : 5.68, Range: 0-16). Family problems were noted in all fifty of the case records (see Table 2), with a mean number of 2.42 family problems recorded (SD : .91, Range: 1-4).

Ninety-two percent (46) of the case records made mention of family strengths with the predominant strength noted as the family is "interested and supportive," followed by "mother is a strong advocate for the child" (32%, $n=16$), the extended family is supportive (22%, $n=11$), and characteristics of the child such as talented, gifted

Table 1
Percentage and Frequency of
Child Presenting Problems
($N = 50$)*

History of major mental illness	74%	(37)
Physically aggressive/ violent behavior	72%	(36)
Suicidal	48%	(24)
Interpersonal problems	40%	(20)
Substance abuse	18%	(9)
Sexual offender/perpetrator	16%	(8)
Delinquent acts	14%	(7)
Truancy/ runaway	8%	(4)
Fire setting	4%	(2)

* As noted at the time case record is opened

Note: A case record may note more than one presenting problem.

or insightful (20%, *n*=10). The mean total number of family strengths noted in the records was 1.39 (*SD*: .58; Range: 1-3). Only 48% (24) of the records mentioned the child and family’s vision and/or aspirations for the future. Common visions for the future included the child “living a normal life” (46%, *n*=23), the child getting a good education or vocational training (36%, *n*=18), and the child getting along well with others (24%, *n*=12), .

Service Characteristics

The majority of families received out-patient mental health services (68%, *n*=34), and one-third of the families (15) received school related services. At the time of referral for case management services, the referral sources recommended the need for family support services in 74% (37) of the case records, followed by case management/ coordination (64%, *n*=32). There continues to be a gap between services requested at the time of the Individualized Service Plan (ISP), and services

obtained (at the time of the case record review). For example, as Table 3 indicates, 78% (39) of the ISP’s recommended mental health services for the child with 54% (27) of these services actually obtained at the time of case record review. Educational services was another frequent item on the ISP

Table 2
Percentage and Frequency of Family Presenting Problems (N = 50)*

Family relationship/ interpersonal problems	70%	(35)
History of child abuse & neglect in child's home	42%	(21)
Father - history of substance abuse	30%	(15)
Mother - history of substance abuse	22%	(11)
Father - history of mental illness	20%	(10)
Mother - history of mental illness	14%	(7)
Economic/financial deprivation	18%	(9)
Extended family/ generational substance abuse	8%	(4)

* As stated in the case records.

* Note: A case record may note more than one presenting problem.

Table 3
Percentage and Frequency of Proposed and Obtained Services for the ISP (N = 50) *

	Proposed Services	Obtained Services
Mental health services for child	78% (39)	54% (27)
Educational services	70% (35)	50% (25)
Social/recreational	56% (28)	46% (23)
Respite; 1:1 aide	32% (16)	24% (12)
Residential services	26% (13)	18% (9)
Family participation; contact	24% (12)	18% (9)
Medical services	22% (11)	22% (11)
Crisis plan, safety plan	22% (11)	18% (9)
Individual therapy for anger management	20% (10)	10% (5)
Independent living services	20% (10)	16% (8)
Financial/housing assistance for family	20% (10)	14% (7)
Help with child's personal needs	14% (7)	12% (6)
Vocational/ employment services	12% (6)	8% (4)
Group therapy for anger management	8% (4)	-
Mentor/ Big Brother/Sister	6% (3)	4% (2)
Alcohol/substance abuse services	4% (2)	2% (1)
Legal services	4% (2)	-
TOTAL	100% (219)	72%(158)

* Note: Services obtained at the time of the case record review

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(70%, $n=35$), with 50% (25) of families obtaining educational services at the time of case record review.

The most frequently cited barrier to services and resources was the “lack of specific services” (38%, $n=19$). Other barriers to services cited in case records included problems arising from the child’s behavior (38%, $n=19$; e.g. the difficulty in finding a therapeutic foster home for a child who sexually acts out), inter-agency issues (16%, $n=8$), funding problems (12%, $n=6$), problems arising from family issues (12%, $n=6$), and cultural issues (4%, $n=2$).

Child Placement History

Table 4 provides details regarding the child placement history for the 50 case records reviewed.

Children receiving case management services have had a multitude of placements, with 88% (44) of the children having at least one in-patient psychiatric admission. Some of the children have been in as many as 60 foster placements over a 5 year period (see Table 5).

Child Case Manager: Contact Hours

Case managers spend the bulk of their time in contact with families and children, followed by contact with community services (e.g., school, out-patient community mental health) and residential settings (see Table 6). Case managers spend a *lot* of their time on the phone.

Analysis of the relationship between the

amount of time case managers spend in contact with parents, children and other service providers, and the characteristics of children and families receiving children case management services revealed the following results. First, child case managers have the largest amount of total contact hours per family when the child has a history of placement in therapeutic foster care, and the least amount of total contact hours when the child has a history of a correction’s placement. Second, Pearson *R* correlation coefficients were calculated for the frequency of the total child case manager contact hours by the child’s score on the functional assessment inventory, the number of previous out-of-home

Table 4
Child Placement History: Mean, Standard Deviation, and Range
by Type of Placement
($N = 50$)

Type of Placement	Mean # placements	SD	Range	Mean # months	SD	Range
In-pt. psychiatric 88% (44)	3.23	2.24	1-9	6.67	8.42	1-37
Foster Home 32% (16)	7.00	14.52	1-56	21.07	24.07	1-60
Group Home 36% (13)	2.08	1.08	1-4	9.58	6.52	1-24
Corrections Facility 32% (12)	2.27	1.49	1-5	6.55	5.54	1-20
Residential Treatment Center 24% (12)	1.18	.405	1-2	18.72	23.77	1-72
Substance Abuse Rehab 16% (8)	1.57	1.51	1-5	3.43	4.89	1-14
Therapeutic Foster Home 16% (8)	2.29	1.50	1-5	14.29	18.33	2-54

Note: Six children (12%) had no placement history.

Table 5
Reported Placement History

Type of Placement	Mean total placements	Total months	Total months: first to last placements
Therapeutic foster care	14.60	50.85	72.00 (6 yr.)
Foster care	13.70	40.07	64.80 (5 yr. 5 mos.)
Substance abuse rehab	12.62	27.86	63.86 (5 yr. 4 mos.)
Group home	11.41	32.76	48.66 (4 yr. 1 mos.)
Corrections	10.00	30.00	61.45 (5 yr. 1 mos.)
In-patient psychiatric	7.69	24.72	46.67 (3 yr. 10 mos)
RTC	6.81	44.36	72.18 (6 yr. 1 mos.)

Table 6
Case Manager Contact Time *

	Contact Hours		
	Mean	SD	Range
Family	2.73	2.70	0-13
Identified Child	1.67	2.10	0-13
Schools	.68	.98	0-6
Out-patient MH	.66	1.38	0-9
Foster care	.45	1.60	0-11
BCSN	.41	.86	0-6
DHS	.28	.58	0-3
Group home	.26	.69	0-4
In-patient MH	.24	.57	0-3
Crisis services	.19	.37	0-2
Corrections	.18	.35	0-1
RTC	.18	.36	0-2
Medical	.14	.41	0-3
Substance abuse	.03	.12	0-1
Phone time	3.56	7.22	1-50
Direct contact	2.59	2.33	1-10
Meetings	2.27	2.72	0-12
Total	8.53	10.65	1-74

* arranged by length of time case is open

placements, the total number of months in out-of-home placement, and the number of months from initial placement to most recent out-of-home placement. A moderate positive correlation was found between the total case manager contact hours and the child's score on the functional assessment inventory ($R=.31$, $p=.029$). All other child variables were found to have a minimum non-significant positive correlation.

Gender Differences

Analysis of gender differences between boys and girls with SED were calculated for child, family, and case manager variables (see Table 7). Mean scores on three variables were found to significantly differ between boys and girls. First, as noted in case records, boys, as compared to girls, had a higher number of family problems mentioned. Case managers spent more total contact time and total phone contact with families of boys, as compared to families of girls.

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Summary

Providing community-based child case management services is a labor intensive program with tremendous variability in the amount of time case managers must devote to helping families. While case managers spend an average of 2.5 hours per week in contact with a family (by phone, in person, and in community meetings), in some situations, case managers can spend as much as 20 hours per week helping just *ONE* family of a child with severe emotional and behavioral difficulties.

The children and adolescents served by intensive child case management services are experiencing severe behavioral and emotional difficulties, and have experienced multiple placements and substantial time in placements. For example, children with a history of psychiatric hospitalizations had experienced, on average, 3 different placements with some children experiencing as many as 9 different placements over a 3 year period. The situation for children with a history of foster care placement is of even more concern. These children have experienced, on average 7 different placements over a 2 year period, with the outer range exemplified by one child who experienced 56 different placements over a 5 year period. Not surprisingly, as the total number of functional impairments exhibited by children increases, so does the total number of contact hours by the case manager. In other words, the more severe the

child's behavior, the more time the case manager will spend with the child and family.

Case managers are spending the bulk of their time with families, children and community-based service providers: the people for whom this program was expected to assist. Families, children and school ranked highest for use of case managers' time. Case managers work with families of boys more often than families of girls, and likewise spend more time with boys than with girls. More family problems are noted in the records of boys than of girls, with case managers spending 50% more time in phone contact with boys' families. Case managers spend substantial time providing services to consent decree class members. Class members, who are not in the custody of DHS, receive the largest amount of in-person, direct contact with case managers. Case managers also spend the largest amount of time in

Table 7
T-Test: Gender by child, family and case manager variables

Mean Score for Total:	Boys N=34	Girls N=16	p
Child Problems	3.03	3.13	.78
Family Problems	1.97	1.28	.01**
Functional Assessment	3.18	2.69	.17
Symptoms	1.50	1.31	.40
Number Placements	7.68	4.94	.37
Number Months/Placements	26.73	14.31	.11
Months 1st to last placements	44.67	36.36	.47
Total Phone Contact	38.23	16.83	.05*
Total Direct Contact	21.68	19.05	.69
Total Meeting Contact	26.74	13.69	.07
Total Contact Time	87.43	50.43	.04*

* p > .05

** p > .01

meetings related to class members. For class members who are in the custody of DHS, the situation is different: case managers spend the least amount of their time with this group of adolescents.

Case managers work hard to return children, who have been psychiatrically hospitalized, to their communities. Children who are hospitalized while receiving case management services receive the highest number of total contact hours with the case manager: on average over 100 hours of service over a six month period. One of the major aims of the child case management program has been to assist families in creating an Individualized Service Plan (ISP) for their child. We are doing a fair job of meeting families' needs: a comparison of ISP services requested as compared to services received indicates that families receive the requested services 72% of the time, leaving families with unmet needs 28% of the time, particularly in the area of respite care.

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Outcome-Oriented Case Planning in Child and Family Services

Overview

Child welfare agencies across the United States, Canada, Great Britain, Wales and elsewhere are working to better define the service delivery outcomes they are striving toward (e.g., American Humane Association, 1993; Rapp & Poertner, 1987; Parker, Ward, Jackson, Wedge & Aldgate, 1991). Outcome-oriented case planning is not new to child and family services or mental health, but recently, agencies have begun to develop ways to implement this approach more thoroughly in practice.

To be most successful, the emphasis upon achieving specific outcomes must be present and supported throughout the provider organization, including line staff, supervisors, and managers. The process begins by determining how staff members assess children and families, set case goals, and develop service plans to meet those goals. Casework recording forms are critical to supporting a particular approach to service delivery planning and implementation (McDevitt, 1994).

The Importance of Goal-Setting

The human services literature has emphasized the importance of formulating clear and behaviorally specific treatment goals for many years. Research findings attest to the value of the social worker and client establishing agreed upon goals that will frame and guide their change-oriented relationship towards the desired outcomes.

Goals specify what clients wish to accomplish (Cormier & Cormier, 1991). Inherent in goals are desired outcomes or changes in life situations that correspond to particular problems that have been identified through a focused assessment process. In long-term family foster care, the client is a youth who is being cared for by someone other than immediate biological parents. Setting goals for short and longer range outcomes is often a teamed effort between the foster parent, youth and the agency social worker.

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The establishment of behaviorally clear goals serves the following valuable functions for the youth, foster parents and social worker:

- Promotes agreement among the youth, foster parents and social worker regarding the immediate and long range outcomes to be achieved, thus increasing the motivation of youth, foster parents and agency staff;
- Specifies desired behavior changes more clearly, thus providing direction and continuity to helping efforts;
- Facilitates the development and selection of appropriate treatment and intervention strategies;
- Assists the youth, foster parents and social worker to monitor their progress towards the desired long range outcomes, so that each will know when and where achievements have been made, and where effort needs to be focused;
- Indicates the difference between what and how much a particular youth is able to accomplish, developmentally, in the near future and the distant future;
- Permits agency staff members to determine if they have the skills, competencies, interest and time for working with the youth or whether there needs to be a referral of the youth to someone else for best service; and
- Serves as outcome criteria in evaluating the effectiveness of specific interventions and of the overall helping process.

Employing goal-setting to achieve the above functions requires knowledge about types of goals and skills in goal negotiation on the part of the line social worker. These are some of the core competencies necessary for implementing an outcome-oriented approach to practice.

Defining Long-Range Outcomes

Accountability is a special responsibility for any program that sees its mission to be the “raising” of a child to adulthood. In programs geared to the provision of short-term services, for example, a concentration on short-term service goals may be appropriate. In a program that takes on a long-term parental responsibility for a child’s development and future success, such a concentration is not adequate. Most long-term family foster care and group care programs have a number of long-range outcomes that guide overall practice with the youth and families they serve¹.

The primary outcome is helping youth to lead successful, independent lives by developing physically, emotionally, cognitively, socially and in other ways. For example, because The Casey Family Program (Casey) delivers long-term family foster care, its long-range outcomes are concerned with safe emancipation of youth; these outcomes are collectively referred to as the *Program Vision for Children*. One or more of these long-range outcomes will be used to develop a *Vision for a Particular Child* which is constructed individually for each child in the care of the program.

In planning for a youth, case outcomes are the expected *end states* or developmental milestones to be achieved. A vision for a child includes the quality, or characteristics, of eventual adulthood seen as appropriate for that youth. The term *case goal* is used to designate the types of outcomes that generally may take a year to two years to accomplish.

¹ The Casey Family Program is a privately endowed operating foundation, established in 1966 by Jim Casey, a founder of United Parcel Service. The Program provides planned long-term family foster care to children for whom adoption and family reunification are not probable alternatives. After child admission to the Program, family reunification or adoption permanency planning services are provided in response to a child and family’s needs. Headquartered in Seattle, The Casey Family Program currently serves over 1,300 children in 23 communities in thirteen states.

Outcome-Oriented Case Planning

Case *indicators* are the more immediate changes or improvements expected to occur as a result of some action or service using a 1-6 month time frame. Indicators can also be thought of as the smaller milestones on the path towards accomplishment of case goals. The term *indicator* here is used in the more specific manner adopted by many other human service programs which have implemented the *mission– goal– objectives/indicators* paradigm.

Components of Case Planning

There are at least three major components that pertain to professional case planning in long-term foster care agencies. Some of these components are assumed and not explicitly described in program training manuals or operating guidelines:

- I. Assessments
 - A. Child and family intake assessment; and
 - B. Periodic case review and assessment
- II. Outcomes
 - A. Program vision for children and families
 - B. Vision for a particular child and family;
 - C. Case goals for a particular child and family that are outcome-oriented; and
 - D. Indicators that mark the progress made towards case goals;
- III. Methods
 - A. Development of the service plan (including case resources and case methods); and
 - B. Services provision

Conclusion

This summary describes the role of case goals and indicators within the larger case planning framework in family foster care, and these goals' relationship to assessment and services provision. As we move toward greater reliance on managed care structures for providing health, behavioral health, and even general child welfare services, we

must continue to stress outcomes that are practice driven. If we don't, we will face systems that are driven by costs alone, without a basis for ensuring that we will take quality and program outcomes into account.

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Systems Outcomes from Case Management for Children with Serious Emotional Disturbance

System Level Outcomes

Having examined the major outcomes of intensive case management (ICM) for children and their families in New York State, we investigated the major outcomes at the systems level. We believe there are four major positive outcomes at this level: (1) a decrease in state-operated hospital bed use, (2) cost savings, (3) the development of additional research projects, and (4) the refinement of the ICM program.

Hospital Utilization

Being dependent on a one-group evaluation design, we used several statistical techniques to control for non-program variables that could explain the outcomes of ICM. One of these techniques is regression discontinuity analysis (Trochim, 1984). This technique was used to examine the state hospital utilization patterns of 917 children enrolled in ICM who had experienced state inpatient stays. We examined their hospital use for two years before their enrollment in ICM and two years following their enrollment. In Figure 1, the lines plot the average number of days used by children at risk of hospitalization during each time period. The analysis shows a decrease from more than 10 days (at 2 to 4 months before admission) to about 2 days per month in the post-enrollment period. This represents a significant change (-8.2 days; $p < .001$).

Regression discontinuity analysis, although one of the best types of analysis for single group designs, is open to criticism. Extreme groups such as the children enrolled in ICM may experience regression toward the mean. Therefore, we developed a post-hoc comparison group of children who had been admitted to state inpatient settings, but who were not enrolled in ICM, because this program was not always available to all eligible children. Comparison children were selected who matched an ICM client on age at first admission to the psychiatric center, gender, race/ethnicity, region of residence, diagnosis and total number of inpatient admissions, and whose total number of inpatient days

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was closest to the ICM client's total number of days in the two year period prior to that client's enrollment in ICM. Regression discontinuity analysis was conducted on the resulting sample of 784 children (392 x 2 groups). The analysis examined 90 day intervals over a three year period of time (See Figure 2).

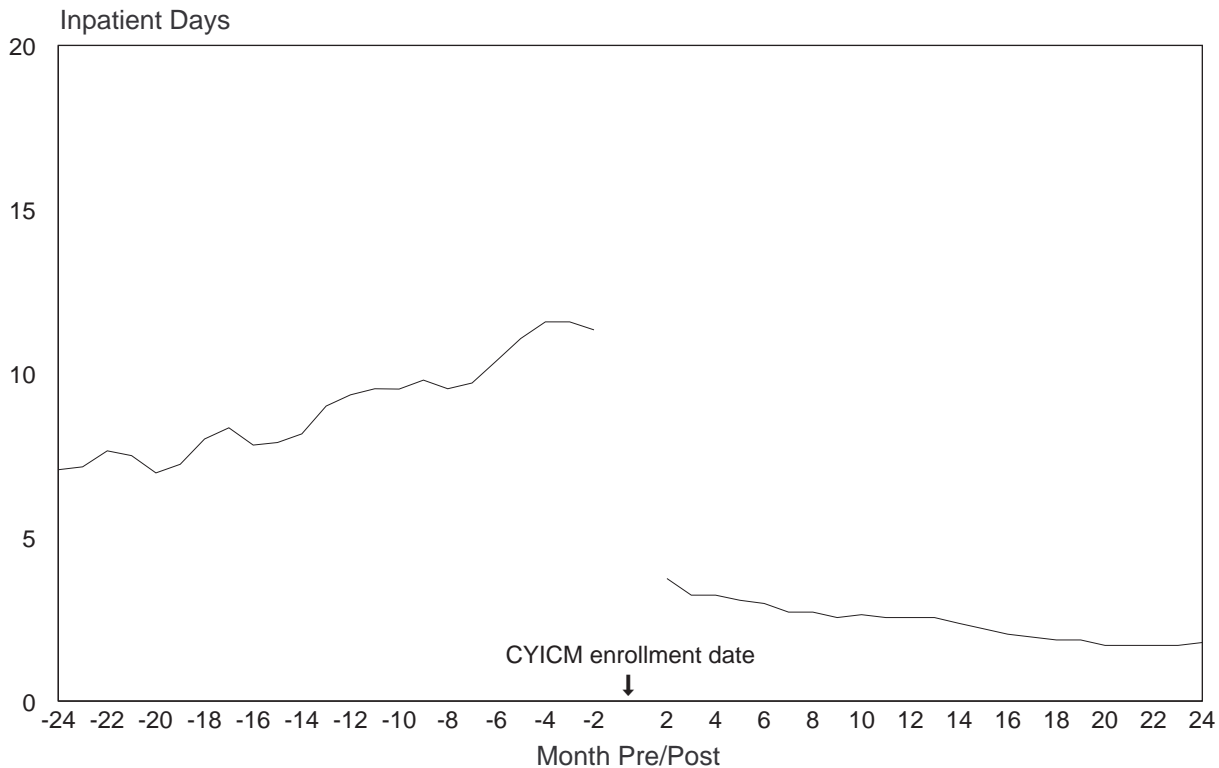
The analysis showed increasing inpatient use for both groups during the pre-intervention period, but this was particularly true for the ICM group (7 days/quarter for ICM and 5 days/quarter for controls). This mean utilization decreases over time for both groups to less than 1 day/quarter for ICM children and 3.5 days for controls. There is a significant difference in the slopes of the lines for

the ICM group, comparing their pre- and post-enrollment periods.

Cost Savings

Regarding cost savings, the matched group analysis was used to estimate cost savings which could be realized from a decrease in hospital use by children enrolled in ICM. If the patterns of decreased utilization are annualized, children in ICM show a decline of 83% in inpatient utilization, from approximately 28 days in the year before enrollment to 5 days in the period between 2 to 3 years post-enrollment. This compares to a decline of 34% for children in the comparison group. We converted this to bed days (22,109 bed days or

Figure 1
State Inpatient Utilization
Pre/Post CYICM Enrollment
(N = 917)



Systems Outcomes

60.57 beds for the ICM group compared to 15,994 bed days or 43.8 beds for controls during the year prior to ICM enrollment; see Figure 3).

For the year period beginning two years after enrollment the data for ICM was 3,759 bed days or 10.3 beds, and for the controls, 10,556 bed days or 28.9 beds. The difference in savings that is accounted for by ICM is 12, 912 bed days annually or 35.4 beds. In terms of cost savings, using the children's state inpatient Medicaid daily reimbursable rate of \$809.89/day, a decline of 35.4 beds used in a year can save \$10,464,588.

Research Projects

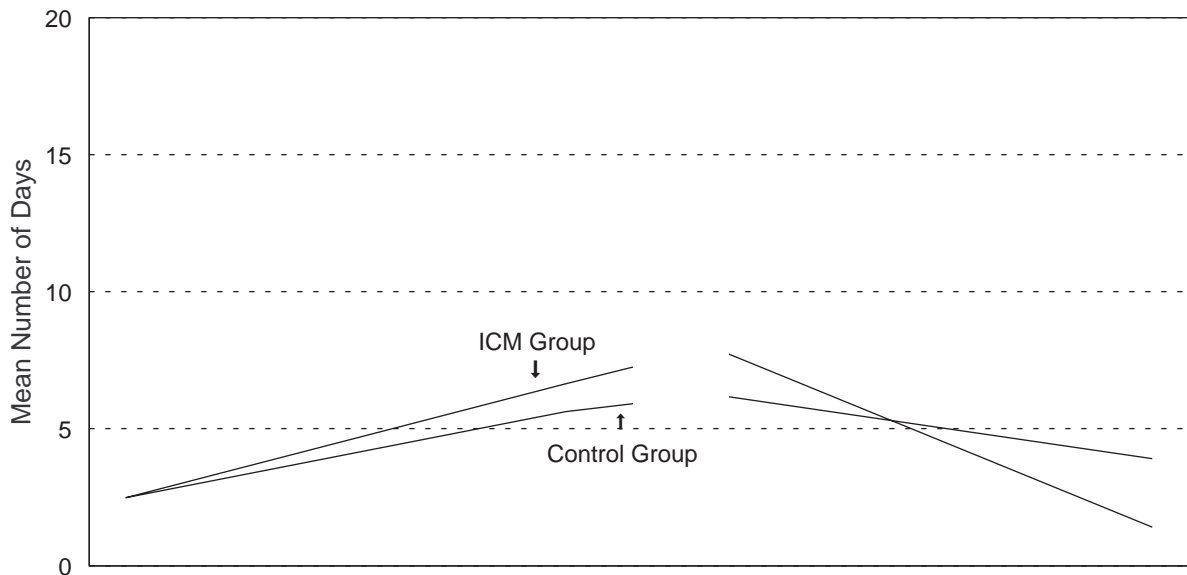
The third systems outcome was the development of federally funded research demonstration grants that involve modification of the ICM program. ICM was targeted to children, not families, and their

needs. We subsequently developed a Family-Centered Intensive Case Management model (FCICM) to be more sensitive to the context in which the child is located. For further information about this model, see Evans, Armstrong, Dollard, Kuppinger, Huz & Wood (1994). A short-term case management model (CCM) for children in psychiatric crisis also was developed, and we are conducting a study to compare the child and family outcomes associated with this model as compared to two family preservation models (see Evans, Boothroyd, Armstrong, Kuppinger, & Bellair, 1995 [this volume]).

Program Refinements

In regard to the fourth systems outcome, program refinements, in New York State we are moving to develop and disseminate a best practices

Figure 2
Mean InpatientDays -ICM vs .Non-ICM Comparison Group
Pre-post ICM Enrollment Comparison -90 Day Intervals
(N = 784)



Evans & McNulty

model of case management. We call this model Project SEED. This Project is an effort to combine the strengths of various community-based models of care including ICM and FCICM and to study its dissemination to counties with different characteristics, service systems, and populations.

In summary, we believe that there have been significant, positive outcomes for the system of care in New York State that are associated with ICM. We expect to continue our investigations of systems level outcomes as we complete evaluative research associated with FCICM, CCM and Project SEED.

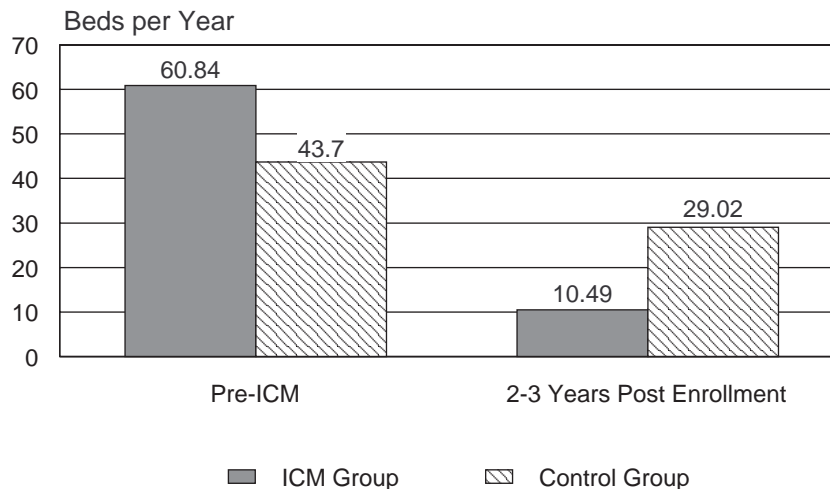
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Figure 3
State Inpatient Utilization
ICM vs. Comparison Group
(n = 784)



Child and Family Outcomes from Intensive Case Management for Children with Serious Emotional Disturbance in New York State

Introduction

Intensive Case Management (ICM) for children represents the cornerstone of the community-based system of care for children with serious emotional disturbance in New York State. Implemented in 1988 in various locations across the state, ICM combined high levels of service intensity with elements of individualized care to provide what was then considered to be a state of the art intensive, in-home, case management service for children who were at greatest risk of being removed from their homes.

More specifically, ICM provides 24 hour/7 day a week response capability. The program established a small caseload, 10 children per case manager, to encourage more intensive service provision. Intensive case managers conduct comprehensive assessment of child and family service needs and link to needed services. Flexible service dollars are available to meet either individual child and family needs or identified needs of the collective caseload that are not otherwise available in the local system of care.

The ICM model is an activist model which stresses the need for service delivery in non-office based settings, often in the homes of children and families. The model also promotes an advocacy role for case managers for the overall system and for children and families served.

Implementation of ICM has occurred in stages, beginning in 1988 with an initial group of 64 intensive case managers with a capacity to serve 640 children, who were spread across 34 counties in all five geographic regions of New York State. Since then the program has grown to 185 intensive case managers operating in all but a handful of counties.

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Methods

To assess the nature of, and outcomes associated with ICM, the Bureau of Evaluation and Services Research at the New York State Office of Mental Health (NYSOMH) used three complimentary evaluation and data collection strategies.

The first and most comprehensive is the collection of a *minimum data set* of descriptive data items on all children who are enrolled in the program. These data are completed by intensive case managers at intake and discharge. They enable the agency to understand the population served through collection of general demographic information about children, their treatment history prior to enrollment, and measures of their education, general functioning and behavioral status when they are enrolled. Data collected at discharge allow for the availability of proximal outcome assessments such as lengths of stay, discharge disposition and shifts in living situation between enrollment and discharge.

To assess outcome in greater detail, the second strategy initiated a longitudinal study of a 30% sample of children enrolled in ICM in 1990 was randomly drawn from the *minimum data set* database. Data from this sample of 199 children were collected to determine the child's status at enrollment, after 6 months, and at discharge or three years, whichever came first. This study assessed the

impact of the ICM program on addressing areas of unmet service needs, child functioning and provider-perceived family strengths and family functioning. Data presented from this aspect of our evaluation will focus on comparisons between baseline and the final data collection.

The third evaluation strategy employs a matching strategy between the minimum data set and other secondary data bases available from the NYSOMH to assess patterns of inpatient service utilization by children receiving ICM services and matched comparison groups.

Results

Table 1 presents data derived from the minimum data set on all children enrolled in ICM. To date, data have been collected on 2688 children served since early 1989. On average, ICM children are 12 years old. They are typically White and non-Hispanic, mostly male (67%), and live in a single

Table 1
Child Characteristics

Characteristic	N=2688
Age at Admission	Mean=12 years
Race/Ethnicity	White Non-Hispanic (62%)
Sex	Male (67%)
Living Situation	Single Parent Household (48%)
Custody Status	Biological Parents (75%)
Educational Placement	Special Education (57%)
Primary Diagnosis	Disruptive Behavior Disorders (45%)
Family Disruptions	Mean=2.0
Areas of Functional Impairment	Mean=2.5
Problem Behaviors/Symptoms	Mean=5.7
Length of Stay	Mean=413 Days; SD=308 Days (N=1267)
Maintained in Family Settings	81% (N=710)

Outcomes from Intensive Case Management in New York State

parent household in the custody of a natural parent (75%). The typical child enrolled in ICM is educated in a special education setting (57%) and has a disruptive behavior disorder (45%). On average, ICM children have been out-of-home (either hospitalized or placed in a residential setting) two times, they have functional impairments in an average of 2.5 areas out of 5 assessed, and display an average of 5.7 problem behaviors (out of a list of 25 areas assessed).

Data on 1267 children who have been discharged shows that, on average, their length of stay is about 13.5 months with a wide standard deviation. Comparative data on the living situation of children at enrollment and discharge tell us that 81% of the 710 children who lived in those settings at enrollment are there at discharge as well.

Data from the longitudinal study which followed a sample of children through their ICM experience provide further insight into outcomes of ICM for children served. At the final data collection point, the study lost 37 cases for an attrition rate of 19% and a final sample size of 162. A logistic regression analysis predicting membership in the sample from the general population yielded no significant differences on any characteristic for which data were available, suggesting that biases introduced into the sample by attrition did not invalidate our findings.

In addition to the minimum data set, data came from two other sources: the *Baseline Data Collection Form*, completed by intensive case managers, which supplemented the data routinely collected at intake; and a *Follow-up* form, which was completed by providers at either discharge or three years following intake. These data collection points included administration of the Child and Adolescent Functional Assessment Scales (CAFAS; Hodges, 1990) as a measure of child and family

functioning on six dimensions, and selected scales from among the extensive set of Child Well-Being Scales (Magura & Moses, 1986) as measures of family functioning. A measure of child behavior status, the Child Behavior Checklist (CBCL; Achenbach, 1991) was also administered to parents as part of the study.

The evaluation assessed changes in the level of unmet needs of ICM children in five life domains. Between baseline and discharge, unmet *recreation* ($p < .01$), *medical* ($p < .05$) and *education* ($p < .05$) needs declined significantly. Unmet *mental health* needs declined as well but not significantly. Unmet needs in the area of *social supports* remained unchanged.

The study elicited perceptions of the child's symptoms and behaviors at baseline and again at discharge. A factor analysis of 25 symptoms/behaviors that were assessed resulted in the 7 factor groupings. In the areas of *aggressive behavior* (physically aggressive, verbally aggressive, destruction of property, temper tantrums, dangerous to others), *suicidal behavior* (dangerous to self, suicidal ideation, suicide attempt), *anxiety* (anxiety, depression, phobias, sleep disorders), *fire setting/cruelty to animals*, and *psychotic symptomatology*, declines were significant ($p < .01$). Areas of functional impairment as measured by the CAFAS show positive change in all areas with *behavior towards self and others* significantly improved ($p < .05$). Data from the parent completed CBCL show movement in a positive direction. On the total problem score the sample mean moved out of the clinical range between intake and discharge.

Supplemental data collected on the sample provided some greater insight into the nature of the families of which ICM children are part. Families are characterized by high incidence of unstable relations between adult members, mental illness, poverty, adults who were themselves

Table 2
Family Conditions

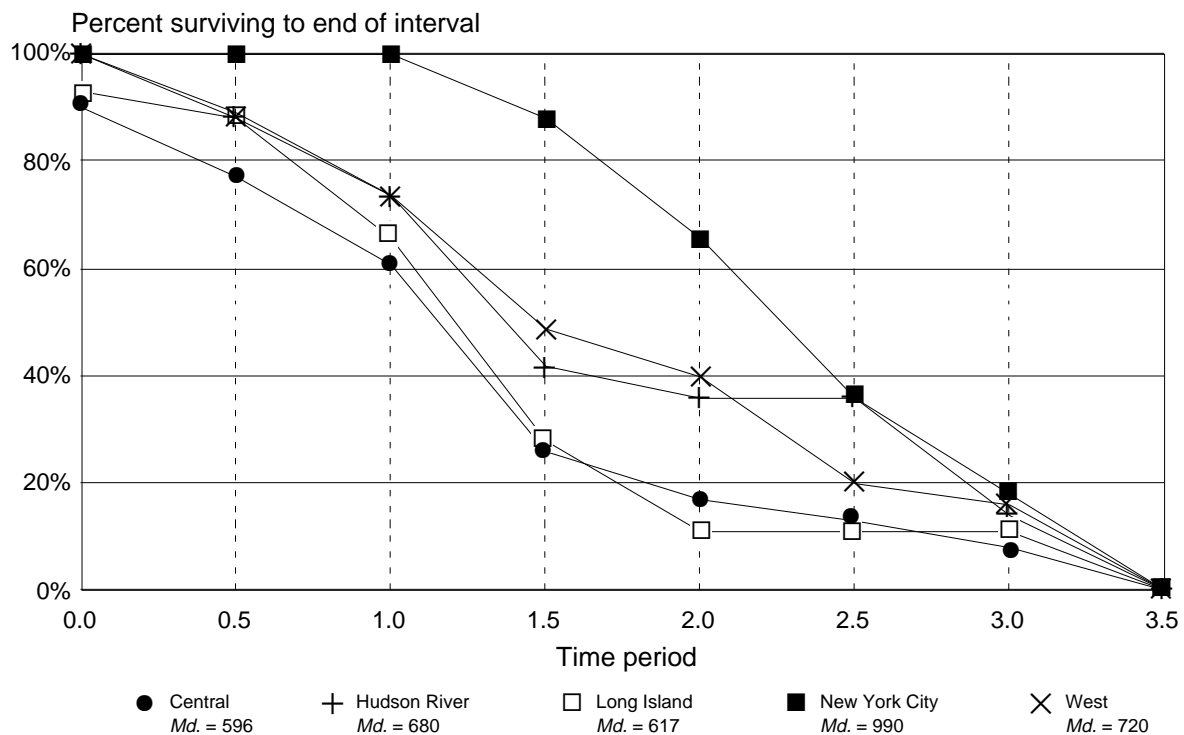
Characteristic	N=199
Unstable relationships	60%
Mental illness	56%
Poverty	53%
Adults abused as children	41%
Chronic unemployment	33%
Alcohol/Substance Abuse	30%
Domestic violence	27%

abused as children, chronic unemployment, alcohol/substance abuse, and domestic violence (see Table 2).

Providers were also asked to assess family strengths which they felt could be built on to benefit the children. Measures of these factors showed great stability between the two data collection points with only significant ($p < .05$) change in greater recognition of families' ability to make their child feel loved and lesser ability to provide structure.

Data on impact of ICM on families of children served showed no real change. The two CAFAS

Figure 1
Survival Analysis of Length of Stay for Each Region
(N = 106) *



* discharged children
Lee-Desu = 16.78, 4 df ($p < .01$)

Outcomes from Intensive Case Management in New York State

family resource scales–Basic Family Needs and Family Social Supports–show no change between baseline and discharge, although mean scores on both (especially basic needs) showed low levels of problems in these areas. The Child Well-Being Scale scores used to measure shifts in family functioning also show little change between baseline and discharge. Only family’s ability to recognize their child’s problems improves significantly ($p < .05$).

To examine length of stay (LOS) in ICM an ordinary least squares regression analytic model was used to assess our ability to account for variation. The strongest model had an R square of about .2. Variables that significantly contributed to the model are *presence of abuse in family history* ($p < .05$), the *number of areas of functional impairment* reported on a child ($p < .05$), *level of family cooperation* with service provision ($p < .05$) and, the strongest contributor, *geographic region*. In New York City after 1.5 years, about 90% of children are still enrolled in ICM. In other regions for a comparable amount of time, 50% or fewer remain enrolled. In Figure 1, a survival analysis displays this phenomena.

To examine our ability to predict discharge disposition, we used a logistic regression approach including a dichotomized dependent variable–successful/unsuccessful termination. The sample for this analysis is reduced to 63 because about 110 of the 162 children were discharged at the final time point and there was some difficulty in accurately determining disposition in some cases. Among the 63, there is almost an exact split between successful and not.

The model successfully classified 87% of cases. Variables significantly contributing to the predictive power of the variable were change in *strength of the family relationship* which reduces probability of successful discharge by 63% to only 29%. Table 3 presents the findings from this analysis.

Conclusions

To summarize, findings from ICM evaluation activities suggest that, overall, ICM is having a positive impact on the children it serves. Data on child-specific outcomes show improvement after enrollment in ICM. Children identified as particularly needy are remaining in least restrictive, family settings. These positive outcomes are however tempered by

Table 3
Post-Intensive Case Management
Discharge Disposition
(N=63)

Measure	Probability of Successful Discharge	Difference	High Model Probability of Successful Discharge
Change in Strength of Family Relationship*	0.29 (Decrease)	0.63	0.93 (Strengthening)
Change in Child CAFAS*	0.46 (Decrease)	0.47	0.93 (Improvement)
Change in Symptoms Index*	0.52 (Decline of 2)	0.41	0.93 (No change)
Age at Enrollment*	0.59 (15 Years Old)	0.34	0.93 (11 Years old)

* $p < .05$ Model successfully classifies 87% of cases.

findings suggesting that ICM has little impact on family-level outcomes. The importance of the strength of family relationship in predicting successful discharge and other data that show that case managers do spend much time working with families suggest that there may be a need to provide case managers with better tools to address family issues. The strength of regional variation in accounting for LOS variation suggest the need to investigate program differences and to examine the impact of ICM on the systems within which it operates.

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Project Seed: Services Evaluation and Dissemination

Introduction and Purpose

Through ongoing evaluation of statewide community-based programs (Huz, Evans & Dollard, in press; Huz, Evans, Rahn, & McNulty, 1993) and three active research demonstration projects, New York is actively engaged in children's mental health services research. It is logical that we now focus on understanding and documenting the processes through which these research programs can best inform practice and promote policy change.

Project SEED (Services Evaluation and Dissemination) is a study of the process by which researchers, policy makers and practitioners disseminate recent research findings and innovative practice related to the provision of intensive case management services to children and youth with serious emotional disturbance.

The specific goals of Project SEED are: (1) to summarize the outcomes and implementation experience of Project FIRST, the Children and Youth Intensive Case Management (CYICM) program and New York's efforts to operationalize Individualized Care principles; (2) to work in collaboration with service providers and parents to integrate these findings and design an enhanced model of CYICM; (3) to develop dissemination site selection criteria; (4) to implement the enhanced CYICM model in three sites, and (5) to describe the process of dissemination, the extent to which the components of the new model were implemented, and generalize about important factors in the dissemination process.

Models for transferring knowledge derived from behavioral science research to practitioners have not been well developed (Lorsch, 1979; Astley & Zammuto, 1992). Consistent with this theme, policy makers and practitioners of children's mental health services consistently underscore the importance of research as a vehicle for modifying the system of care model and its component services (Rivera & Kutash, 1994; Stroul & Friedman, 1994; Weisz, Weiss, & Donenberg, 1992; Burns & Friedman, 1990). Recently there has been an increasing focus on services research and these

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Armstrong, Evans, Kuppinger, Huz & Williams-Deane

studies are beginning to yield findings that can inform practice (Rivera & Kutash, 1994; Hoagwood & Hohmann, 1993). Our understanding of and commitment to dissemination is critical, if widespread system change is to occur.

The CYICM program model was developed in 1988 and it is appropriate six years later to revisit this model with input from the CYICM practitioners, family members, the service provider community, researchers and policy makers. Children and Youth Intensive Case Managers carry caseloads of no more than 10 and are available 24 hours a day, 7 days a week—either directly or through a coverage system shared with other ICM's. ICM targets children and adolescents most in need through a local selection process known as rostering. Once targeted, a child is entitled to ICM for whatever length of time is needed. A critical component is the availability of flexible service dollars for meeting individual client needs. The goal of ICM is to enable the child to succeed at home, in school, and in the community. The CYICM model's effectiveness is well-documented (Huz, Evans, Rahn, & McNulty, 1993; Banks & Evans, in press; Evans, Banks, Huz, & McNulty, 1994), and the practices of the most effective CYICM programs and providers will factor prominently in the design of an enhanced CYICM model.

In 1991 funding was obtained from NIMH for Project FIRST (Family-Focused Intensive Resources for Services and Treatment, NIMH R18MH5035/CMHS 5HD5SM50357). The project provided resources to compare child, family, and system outcomes for children referred and accepted for therapeutic foster care who are randomly assigned to either therapeutic foster care or Family-Centered Intensive Case Management (FCICM). FCICM, itself a modification of the original CYICM program model, has been successful in keeping

children at home who would otherwise have been placed in a therapeutic foster home or other more restrictive placement (Evans, Armstrong, Huz, & Dollard, 1993).

In the FCICM model, CYICM caseloads were reduced, a parent advocate joined the case manager as a member of the treatment team, and additional support services such as respite care, parent support groups, parent skills training, and flexible service funding (Dollard, Evans, Lubrecht, & Schaffer, 1994) were made available (Evans, Armstrong, Dollard, Huz, Kuppinger, & Wood, in press). An extensive battery of assessments and documentation of implementation issues from Project FIRST will inform the design of the enhanced CYICM model. The experience of FCICM also suggests that CYICM resources may be adapted to effectively service a population of children at particularly high risk of placement.

Finally, the enhanced CYICM model will incorporate individualized care principles and practice. New York is committed through a number of initiatives to ensure that services focus on the individual child and family; provide services within a normalized environment; work in partnership with families; use a strengths-based, ecological orientation; demonstrate cultural competence; and be provided "unconditionally"

In addition to the potential for improved service delivery at each site, this project will advance our understanding of a number of dissemination issues: (1) dissemination techniques (2) methodologies for measuring program model fidelity and adaptation, and (3) the relative importance of site, program, and population characteristics (Bauman, Stein & Ireys, 1991; Blakely, et al., 1987; McGrew, et al., 1994).

Project Seed: Services Evaluation and Dissemination

Research Design and Methods

This project takes place over a four year period. Year 1 involves preliminary work necessary to develop the enhanced CYICM program model, a dissemination plan, data collection and analytic strategies. During Year 2, the enhanced CYICM program model dissemination will begin in a pilot county. During Years 3 and 4, the enhanced CYICM model will be implemented in two additional counties for intensive study of the model dissemination and implementation process. Year 1 activities are described more fully below.

Year 1: Development of the Enhanced CYICM Program Model

The first year of this study involves the accumulation of information which will result in the development of an enhanced CYICM model and a plan for dissemination. Findings from the experience of implementing the novel program components of Project FIRST's FCICM program will be documented and aggregated and contribute to an enhanced CYICM program model. Project staff will interview key FCICM participants to gather detailed information on FCICM services such as: involving a parent advocate in the delivery of service to children and families, incorporating respite resources, developing parent support groups, and providing parents with behavior management skills training.

Data on the best practices of currently operating CYICM programs will also be collected during Year 1 to assess innovative and successful program strategies. A survey instrument on program elements that have been found to be successful is now being piloted at two ICM sites. The instrument covers the following areas: admission criteria, family involvement, use of flexible service dollars, interagency collaboration, and discharge practices.

A sample of 100 CYICM supervisors and case managers from 25 CYICM provider agencies will be selected to participate in the survey. The sample will be selected on the basis of findings from the evaluation of CYICM services. Criteria for selection will include geographic diversity, a well developed discharge policy, and a successful record of maintaining the most needy of the CYICM target population in the least restrictive living situations. A sample of parents and youth will also be surveyed for feedback on their experiences with receiving CYICM services.

Data from this survey and the Project FIRST experience will be analyzed and used to guide a series of focus groups involving intensive case managers, their supervisors, and parents of children enrolled in CYICM programs. The focus groups will be the final step in the development of a feasible enhanced CYICM program model and implementation plan.

Data Collection Strategy

Measures of child, family and provider characteristics, program fidelity, and service utilization will be administered over 18 months of initial program implementation in the two research sites. A Human Resource Questionnaire (HRQ) will be administered to assess characteristics of individuals directly delivering services to children and families. The HRQ has been used extensively in many evaluations of children's mental health services in NYS (Huz, Dollard, & Evans, 1990).

The Child Description Form (CDF) and Program Termination Form (PTF) are extensively used to collect data on the demographic characteristics of children enrolled in intensive community-based and residential services in NYS. (Huz, Evans, & Dollard, 1994). These data will allow for comparison of characteristics of children served in enhanced ICM with children served in other sites.

A Program Fidelity Index (PFI) adapted from an instrument and process designed by McGrew, Bond, Dietzen and Salyers (1994) will be developed to assess the degree of implementation of enhanced CYICM program components. The PFI will be administered to parents of children receiving enhanced CYICM, the service team (ICM's, parent advocates, respite staff), and program administrators. The degree of convergence from these multiple perspectives will reinforce the reliability of the research findings.

The Program Contact Log (PCL), adapted from the Daily Contact Log developed by Brekke and Wolkon (1988), will elicit data on the degree and intensity of contact between service providers and children and families.

The Service Involvement Survey (Research and Training Center on Family Support and Children's Mental Health, 1992) will be adapted and administered to parents and children receiving enhanced ICM services at the onset of the project and at 6, 12, and 18 months to elicit data from the parent perspective on enhanced ICM implementation. Items included in this form measure the intensity of service provision and key components of individualized care and cultural competence.

Significance of Study

This study can feed 2 streams of more intensive services research: outcome research associated with enhanced CYICM and services research technology transfer. An assessment of the outcomes of enhanced CYICM including changes in child and family functioning, system effectiveness, and parent satisfaction could be the impetus to modify children's case management programs across the country.

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Effectiveness of Intensive Case Management for Homeless Adolescents After Twelve Months

Introduction

Runaway and homeless adolescents present serious challenges to service providers. They are often victims of abuse, and as such they suffer from the developmental delays and emotional problems that would be expected. Others may be afflicted with behavioral or emotional problems that have interfered with their ability to stay connected with a non-abusive family. Dealing with emotional and behavioral problems while simultaneously trying to stabilize the living situations of these adolescents—perhaps reuniting them with their families or perhaps helping them to establish independent households—is a daunting task. On the face of it, it seems likely that professionals with mental health training and ample time to deal with each case should be able to do a better job than paraprofessionals burdened with substantially larger caseloads. We report here the results of a one-year follow up of runaway and homeless adolescents who were offered case management and mental health services at two levels of intensity.

Procedures

Procedures and interventions are described more fully in Cauce, Morgan, Wagner, Moore, Sy, Wurzbacher, Weeden, Tomlin & Blanchard (1994). We provide only a brief description here.

Subjects & Site

YouthCare's Orion Center, in downtown Seattle, houses a variety of services for runaway and homeless adolescents: meals, recreational programs, food and clothing banks, a school program that is part of the Seattle school systems, a health clinic affiliated with the University of Washington, and mental health services supervised by the Seattle Mental Health Institute. The subjects of the study were homeless and runaway adolescents who approached the Orion Center for services. To be eligible for study

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*This research was supported by NIMH/
SAMSHA Grant No. HD5 SM48087.*

participation, the youth had to be currently homeless, not in the physical custody of law enforcement agencies, at least 13 and not yet 21 years of age, not judged to be an immediate risk to the interviewers, and willing to agree to a series of interviews over the course of one year.

Interventions

Youth approaching the Orion Center for any services are assigned to a case manager who tries to connect the youth with appropriate services. "Regular" case managers have caseloads of 18 to 30 clients, and often have other duties.

The experimental intervention consisted of a core of case managers with at least masters-level training in mental health issues, usually with an MSW degree. These case managers were provided with low case loads (maximum 12), access to psychiatric services for clients, and flexible funds for the clients' benefit (See Cauce et al., 1994, for more information). Youth agreeing to take part in the study were randomly assigned to either "services as usual" or to the "intensive" condition.

Measurements

Study participants were interviewed at three-month intervals over the course of one year. The instruments administered included the Youth Self Report (YSR; Achenbach, 1991), the Reynolds Adolescent Depression Scale (RADS; Davis, 1990; Reynolds; 1987), the Problem Behavior Scale (PBS; Mason, Cauce, Gonzales, Hiraga, & Grove, 1994), the Personal Experience Screening Questionnaire for drug and alcohol use (PESQ; Winters & Henley, 1987), the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965, 1979), and as a measure of life satisfaction, the Life Domains Scale (LDS; Baker & Intagliata, 1982). A variety of biographical information was collected; here we report only on victimization.

Results

Three data points were examined on each measure for all participants with sufficient data. The baseline data points were based on the initial interview. Mid-point data were either from the six-month interview (first choice) or the three-month interview (second choice). Final data were either from the 12-month interview (first choice) or the nine-month interview (second choice). Repeated measures ANOVA with trend analysis was used on these three data points. One hundred and fifty youth were included in this analysis, 78 in the intensive condition and 72 in the regular condition.

The results are summarized in Table 1. As indicated in the "Group Differences" column, two of the ten measures (drug and alcohol use and reported victimization in the last three months) differed significantly between the groups at the start. We are unable to explain these differences as anything other than random sampling variation. The initial random assignment to conditions was rigorously adhered to. The results suggest that there were no significant differences in the ways the two groups responded to treatment, as shown in the "Group by Time" column. In nine of the ten measures, there were significant changes over time for both groups. These are shown in the "Time" column. All significant changes were improvements; nothing changed significantly for the worse.

Figure 1 shows a graph of the changes in the Youth Self Report Externalizing scale. Both groups showed improvement with time; the improvement is statistically significant, and the lines are close to parallel. The very slight differences between the groups that appear upon inspection are not statistically significant when tested. This is the typical pattern for the results in Table 1.

Intensive Care After 12 Months

Table 1
Group and Time Differences on
Ten Different Measures

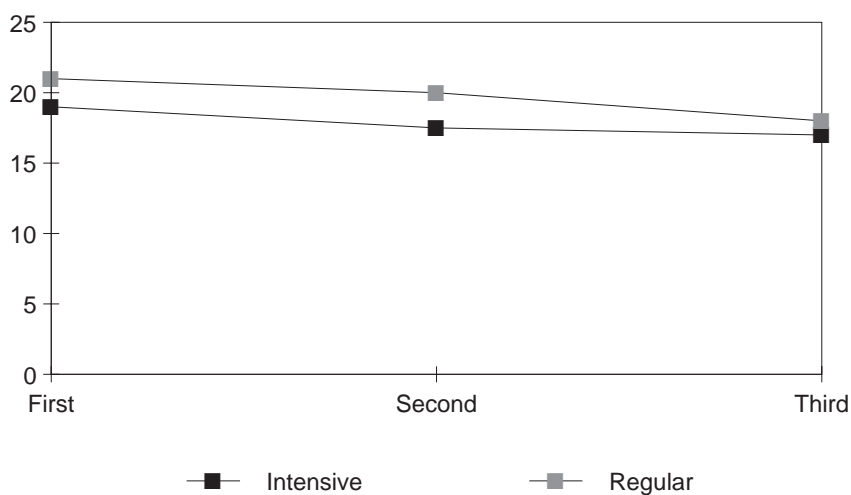
Variable	Group Difference	Group by Time	Time
Youth Self Report			
YSR Internalizing	ns	ns	$p \leq .001$
YSR Externalizing	ns	ns	$p \leq .001$
Aggressiveness	ns	ns	ns
Anxiety	ns	ns	$p \leq .01$
Individual Instruments			
Quality of Life (LDS)	ns	ns	$p \leq .01$
Frequency of Delinquency (PBS)	ns	ns	$p \leq .001$
Self Esteem (RSES)	ns	ns	$p \leq .001$
Drug & Alcohol (PESQ)	$p \leq .01$	ns	$p \leq .01$
Depression	ns	ns	$p \leq .001$
Victimization's (Interview reports)	$p \leq .01$	ns	$p \leq .001$

Discussion

Based on these results, we concluded that case management is effective in helping with the emotional and behavioral problems of runaway and homeless adolescents. The results do not show that specialized mental health training or artificially low case loads make a detectable difference in the overall effectiveness of these case management services. It appears that experienced paraprofessionals do as well as MSWs in this environment.

There may still be differences in the ways that individuals with different presenting problems or different background experiences respond to the different services. This possibility will be investigated in future analysis.

Figure 1
Changes Over Time for YSR Externalizing Scale



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