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ABSTRACT

The evaluation plan for New York State's Children and Youth Intensive Case Management (CYICM) Program is described, which was introduced in July 1988. The CYICM Program is a statewide intervention focusing on keeping children with serious emotional disturbances in the least restrictive environment appropriate to their needs. It is a client-centered service provided to children in their natural settings of home, school, and community. Each Intensive Case Manager (ICM) has a caseload of 10 children. The 3-year evaluation design is a panel design with a comparison group. A Client Description Form and Program Termination Form are used. The first year of the evaluation involved collecting descriptive information concerning all CYICM children, conceptualizing the research design, and developing outcome measures. In the second year, 30% of the caseload of each ICM will be sampled to determine child characteristics, child functioning, and ICM behavior. This paper addresses three measures of child outcomes: (1) comparison of the child's living situation on admission and discharge; (2) comparison of CYICM clients' inpatient usage 6 months before and after the ICM intervention; and (3) comparison of CYICM clients' inpatient usage to that of a matched group. Baseline data on 682 children provide a profile of the typical client and the 92 children who have been discharged from the program to date. The typical child served is a 14-year-old White non-Hispanic (58%) male (66%). Nine figures illustrate the study design and results. (SLD)

Evaluation of New York State's Children and Youth Intensive Case Management Program

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Evaluation of NYS Children and Youth Intensive Case Management Program:

Children and Youth Intensive Case Management (CYICM) is a statewide intervention whose primary goal is to keep children with serious emotional disturbance (SED) in the least restrictive environment appropriate to their needs. CYICM was introduced in New York State in July, 1988 to expand the range of community-based service options and improve care for children with SED who have been unserved or underserved by the mental health system.

Defining SED: there is no consensus on the definition of SED on the state or national levels, although work groups are being convened to defining SED. According to the current Office of Mental Health (OMH) population definition, SED is defined as:

- less than 18 years of age and have a primary mental health diagnosis
- is currently or has been within the last 12 months seriously functionally impaired due to mental illness in two of the following areas:
  - self-care
  - social relationships
  - family life
  - learning ability
  - self direction

- must have at least of the following characteristics currently or within the past twelve months.
  - psychiatric hospitalization or out of home placement in a certified OMH residential setting or currently at risk of such placement
  - serious suicidal or self-destructive symptoms
  - significant psychotic symptoms
  - currently at risk of causing personal injuries or property damage

PROGRAM MODEL

INSERT FIGURE 1 - PROGRAM MODEL OVERHEAD

CYICM is an intensive, client-centered service provided to the children in natural settings; at home, in school and in the community. Referrals are made by other mental health programs, schools, social services, juvenile justice and families. CYICM services are dictated by the needs of the child and delivered in the context of his or her family. CYICM is a full time services, provided 24 hours a day, seven days a

week.

Each Intensive Case Manager (ICM) has a caseload of ten children. The ICM is responsible for ensuring that all needed services and supports are available to enable children to remain in the community. This is achieved through the provision of aggressive linkage with community human service providers, advocacy on behalf of the children and their families. In addition, ICMs have access to $2,000 in flexible service dollars, half of which are specific to a particular and half are to be used to purchase services, such as respite, which may be accessed by any child whether enrolled in CYICM or not.

EVALUATION PLAN

INSERT FIGURE 2 - EVALUATION PLAN

The research design is a panel design with comparison group that will continue for two more years. The first year of the evaluation was spent collecting descriptive information on all children served by CYICM, conceptualizing the research design and developing outcome measures. Data collection and analysis will be driven by the domains outlined in Figure 3; client characteristics and outcomes, service system characteristics and outcomes, and Intensive Case Manager characteristics and behaviors domains.

INSERT FIGURE 3 - LOGIC MODEL

The evaluation will test the hypothesized relationships between these domains. The main effect that will be tested for by the evaluation is the difference between the matched group and CYICM children on the number and lengths of placements in the most restrictive settings. For the purposes of the evaluation, a long stay is defined as 90 days or more in a Residential Treatment Facility or psychiatric hospitalization.

Baseline data are collected on all children within 30 days of enrollment. The Client Description Form for Children and Adolescents in Community Based Programs was adapted from the minimum data standards for adult mental health data collection promulgated by Mental Health Statistics Improvement Program at the

National Institutes of Mental Health[1]. Demographic information, living situation, custody status, educational placement, problem behaviors and symptoms, treatment and placement history and functional impairment are among the data elements captured by this form. The Client Description Form is currently used in Home Based Crisis Intervention program and the Family Based Treatment program. These are an inpatient diversion program based on the Tacoma Home Builders model and a treatment foster care model, respectively. The Client Description Form is important in that it shows who is being served by community based programs and to allow for cross program comparisons.

The Program Termination Form is the companion form completed upon discharge. This brief form provides information on reason for termination, service referrals, living situation on discharge and whether this living situation has changed since admission.

Thirty percent of each ICMs' caseload will be sampled to form the second part of the evaluation. Family characteristics, child functioning and ICM behavior will be assessed using the Baseline Supplemental and Follow-up forms, Achenbach's Child Behavior Checklist and Hodges' Child and Adolescent Functional Assessment Scales at various intervals. This affords a multidimensional perspective, that of the provider and that of the parent/caregiver over time. This approach enhances the comparability of findings to other studies conducted elsewhere in the nation and generalizability to children served in NYS programs.

Data on outcomes such as child and family functioning will be collected in a subsequent phase of the evaluation and are not yet available. This paper addresses three other measures of child outcomes; 1.) comparison of the child's living situation on admission and discharge (N=92), 2.) comparison of CYICM clients' inpatient usage six months before and after the ICM intervention (N=104), and, 3.) comparison of CYICM client's inpatient usage to that of a matched group.

INSERT FIGURES 3-4 - INSTRUMENTATION OVERHEADS

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[1]Leginski, W.A. *et al.* (1989) Data standards for mental health decision support systems. Rockville, MD: National Institute of Mental Health (ADM 89 - 1589)

DESCRIPTION OF KIDS

INSERT FIGURE 5 - CYICM KID

Analysis of baseline data received thus far (N=682) shows that the typical child served by CYICM is a 14 year old white non-Hispanic (58%) male (66%). He is in the custody of a natural parent (70%), lives in a household headed by a single parent (41%), has Medicaid coverage (66%) and is in a special education placement (43%). Typically children served by CYICM display 5.1 problem behaviors, such as aggressive behavior, suicidal ideation and fire setting. On average, the children are functionally impaired in 2.5 areas, e.g., age appropriate self-care and social relationships and have been hospitalized or placed out of home due to psychiatric impairment 1.5 times.

Twelve percent of children (N=92) have been discharged so far. These children spent approximately ten months (288 days) enrolled in CYICM. This average length of stay is expected to increase since children with longer lengths of stay have yet to be discharged.

PRELIMINARY OUTCOME DATA

As a caveat, I should repeat that outcome data at this time is rather limited since caseload turnover has been small.

LIVING SITUATION AS AN OUTCOME MEASURE

Since the primary goal of CYICM is to maintain children in natural environments, restrictiveness of living situation and change in living situation between admission and discharge is one measure of the intervention's success. A desirable outcome of CYICM is that children would remain in family settings or move to less restrictive settings relative to their living situation on admission.

INSERT FIGURE 6 - LIVING SITUATION GRAPH

Living situations are broken into four categories, family or independent living, foster care, group homes and residential settings. Family settings include one parent, two parent, adoptive parents and relative's homes. Foster care settings include regular family foster care and treatment foster care regardless

of auspice. Groups homes include all group homes regardless of auspice and institutions include all institutional settings whether they're under the jurisdiction of social services, juvenile justice, education or menta. health authorities.

FIGURE 7 - LIVING SITUATION ON DISCHARGE

Overall, 82% had the same living situation at admission and discharge, 16% moved to more restrictive living situations and two percent moved to less restrictive settings. Of children and adolescents who lived in a family or independent living situation (N=67) on admission, 79% were still in a family or independent living situation at discharge and 21% moved to more restrictive settings, such as group homes (3%) and residential facilities (18%). By our definition, no children could have moved to a less restrictive environment than family or independent living.

Children in family foster care, treatment foster care (N=9) or group home (N=3) living situations on admission tended to remain in these settings, although two children moved into an independent living situation. These children are for the most part in the custody of social services or juvenile justice systems and not their parents. This might explain why these children do not move to less restrictive environments.

All children who were in an institutional living situation (Nvalid=8) on admission returned to one on discharge. The custody status of the child does not seem to influence this placement pattern. Approximately, two-thirds of these children are in the custody of their parents or other family members. Interestingly, these children had substantial lengths of stay on the CYICM rolls between institutional placement.

INPATIENT USAGE AS AN OUTCOME MEASURE

Given that the goal of CYICM is to maintain children in as natural environment as possible, one would expect a reduction in number and length of inpatient admissions. Although some children will always require inpatient care, diversion of inappropriate admissions and reductions in length of stay are important outcome measures. An analysis of state inpatient usage of CYICM clients was conducted.

INSERT FIGURE 8 - # ADMISSIONS

All children enrolled in CYICM on or before June 30, 1990 with inpatient stays within six months preceding admission to CYICM were included. In all, there were 116 inpatient admissions pre or post CYICM. Of these, 79 admissions (68%) occurred prior to CYICM and 37 (32%) occurred after discharge. Although data are limited at this time to a rather short window of time, preliminary findings show that there has been a reduction in the number of admissions in the post-CYICM period.

INSERT FIGURE 9 - # OF DAYS

We also looked at the number of days spent in inpatient care as an outcome measure because children, due in part to age effects, are unlikely to have more than one admission, i.e., there is not enough time for the event (hospitalization) to occur. A comparison of the number of days of inpatient care used before and after CYICM shows the same trend as the number of admissions. The number of days used in the post period is lower than that of the pre period. The number of inpatient days used by the 70 children with admissions in the 6 months prior to enrollment in CYICM is 3,829 days. The number of days used in the post period is 1,951.

Attempts to compare CYICM clients with admissions to a non-equivalent matched group of children with similar state inpatient histories have proven inconclusive so far. The number of inpatient days used in the pre period, the number of days in the post period and average number of admissions of CYICM clients and their matched pair have shown no significant differences.

Average LOS is about the same for both groups, 48 days pre and 53 days post. The percent of total admissions that occur in pre period is 69% and 31% in the post period. In essence then, the number of admissions fall but the average LOS stay does not change. I.e., number of inpatient days falls commensurate with the reduction in the number of admissions.

There are some limitations to using state inpatient usage as an outcome measure for children because there are limits to the usefulness of number of admissions as an indicator. Young children are more likely to be placed in residential settings, such as foster care, than hospitals. Secondly, the number of children's state inpatient beds is quite limited in many areas. Reduction in inpatient usage is confounded by recent policy guidelines issued by the State OMH that stress the importance of keeping children out of

state hospitals. Nor do we have access to general hospital and private psychiatric facility data at this time. Based on data from the Client Description Form, however, we know that 44% of all children enrolled have been in state inpatient care at least once prior to CYICM intervention and higher percentages have been in general hospital psychiatric units and private psychiatric facilities. Finally, there are regional and facility based differences which we have yet to explore. In sum, then, there are limits to the usefulness of any inpatient figures as outcomes measures for children.

LIMITS TO THE ANALYSIS

The period of time over which inpatient usage can be observed is brief - only six months pre and post intervention. As CYICM continues and caseload turnover increases, an assessment of inpatient usage over a longer interval can be undertaken. Secondly, relatively few children and adolescents have been discharged from CYICM. At this juncture, we are unable to determine whether they are representative of all children served. Again, more time is needed to test for differences between those discharged so far and those with longer tenures in CYICM.

LIMITS TO MEASURES OF CHILD OUTCOMES/AREAS OF FUTURE RESEARCH

To date, there has been relatively little research in children's mental health services, in general, and less on what constitutes good child outcome measures, in particular. To overcome this shortcoming, the evaluation of CYICM includes multiple perspectives, e.g. parents and Intensive Case Managers using several measures e.g. functioning and hospitalization patterns.

The lack of outcome measures for children has often resulted in wholesale imposition of adult measures, such as hospitalization patterns, on chil .en. As discussed earlier, inpatient usage may not be a good indicator for children. Secondly, functioning measures must be carefully tailored for children because there are underlying developmental changes which can affect functioning. Finally, the concept of the identified patient is misleading in the case of children because they live in family settings. Child outcomes, therefore, must be studied in the context of family characteristics and family functioning.

FIGURE 1

CHILDREN & YOUTH INTENSIVE CASE MANAGEMENT

PROGRAM ATTRIBUTE	CYICM
TARGET POPULATION	Children with SED with history of or at risk of out of home placement.
PROGRAM GOAL	Ensure needed supports & services are available to keep child in community.
PROGRAM FOCUS	Children with SED within the context of their family.
INTAKE	Interagency Committee.
CASELOAD	10 children with SED and their families. (Total N=682)
CRISIS SERVICE	24 hour/day availability.
ADVOCACY EFFORTS	Targets individual child & service system improvements.
FLEXIBLE SERVICE DOLLARS	$2,000 per child.

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FIGURE 2
EVALUATION DESIGN

- Description of Children Served by Program
- Thirty Percent Stratified Random Sample with Comparison Group
- Panel study
- Areas of Measurement:
  - Child & Family Characteristics
  - Organizational Service System Characteristics
  - Provider Characteristics & Behaviors
  - Changes in Status of Children & Their Families
  - Changes in Service Utilization
  - Changes in the Service System

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FIGURE 3
LOGIC MODEL FOR THE EVALUATION OF CHILDREN & YOUTH INTENSIVE CASE MANAGEMENT

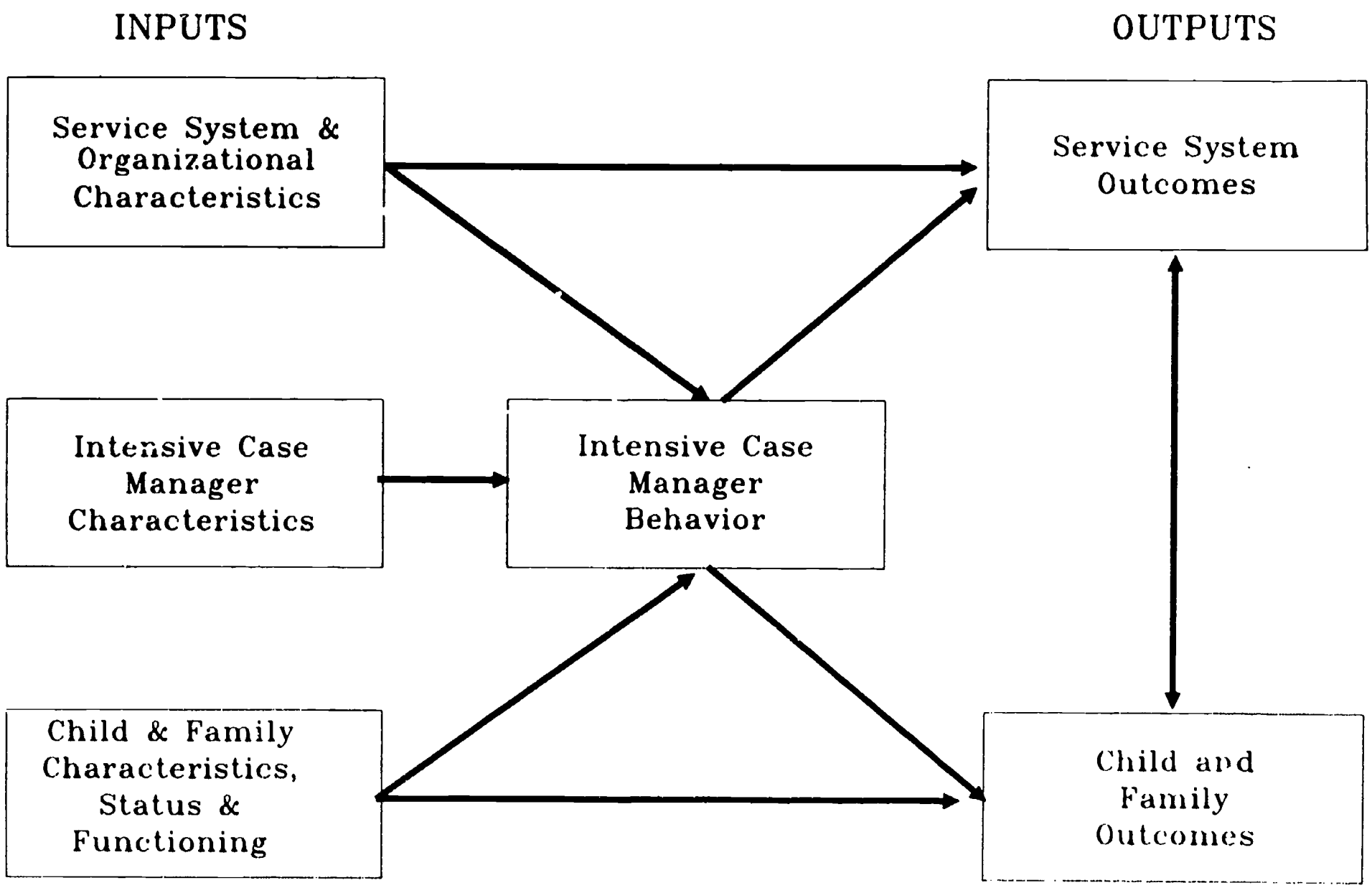

FIGURE 4

Family & Child Outcomes

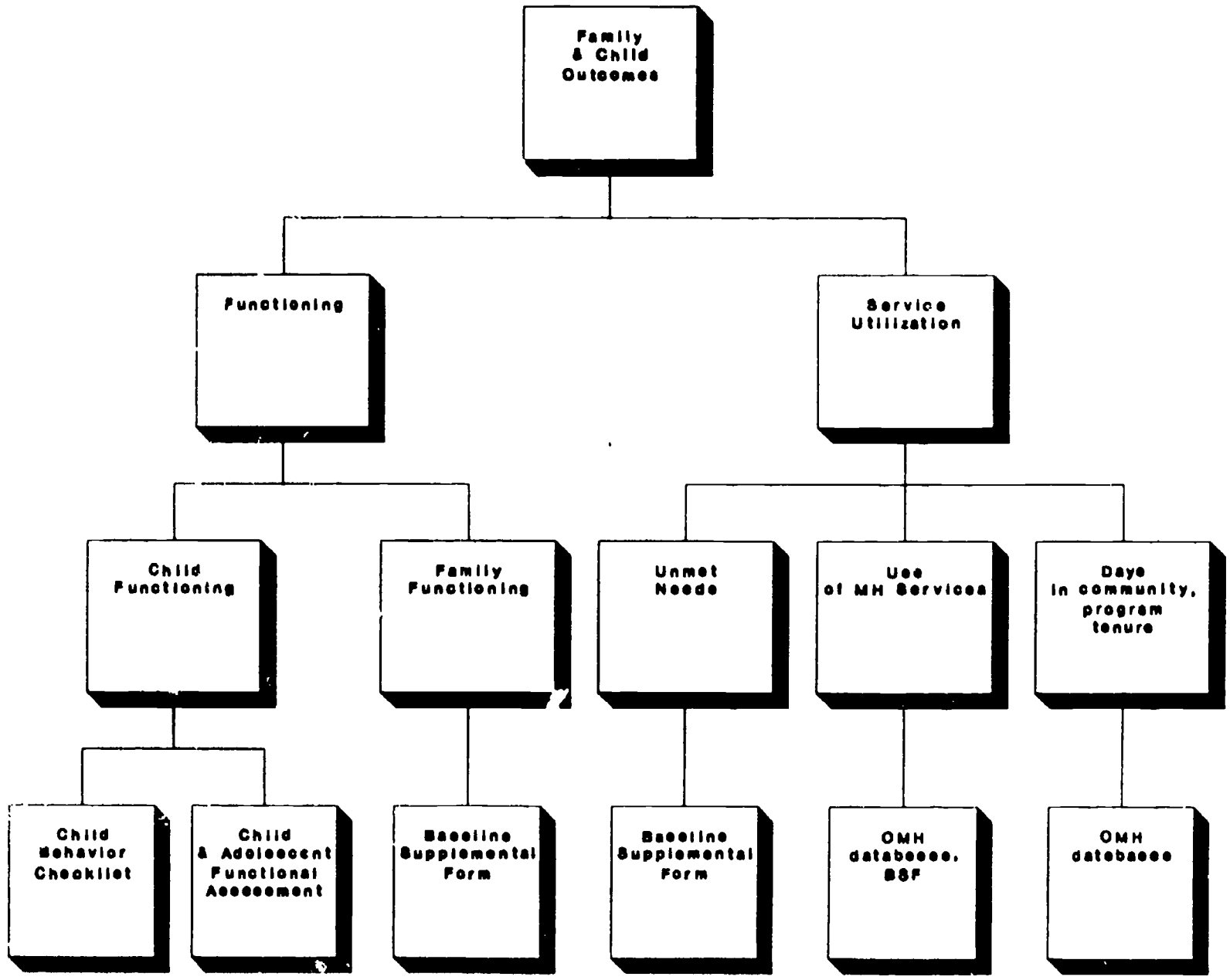

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FIGURE 5

THE TYPICAL CHILD SERVED:

- is 14 years old, white non-Hispanic (58%) & male (66%)
- is in the custody of a natural parent (70%)
- lives in a single parent household (41%)
- has Medicaid coverage (66%)
- is in a special education placement (43%)
- was referred to CYICM by a mental health program (55%)
- on average, displays 5.1 problem behaviors and symptoms
- on average, has been out of home due to psychiatric impairment 1.5 times
- on average, is functionally impaired in 2.5 areas

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Figure 6
CYICM Clients
Living Situation on Admission

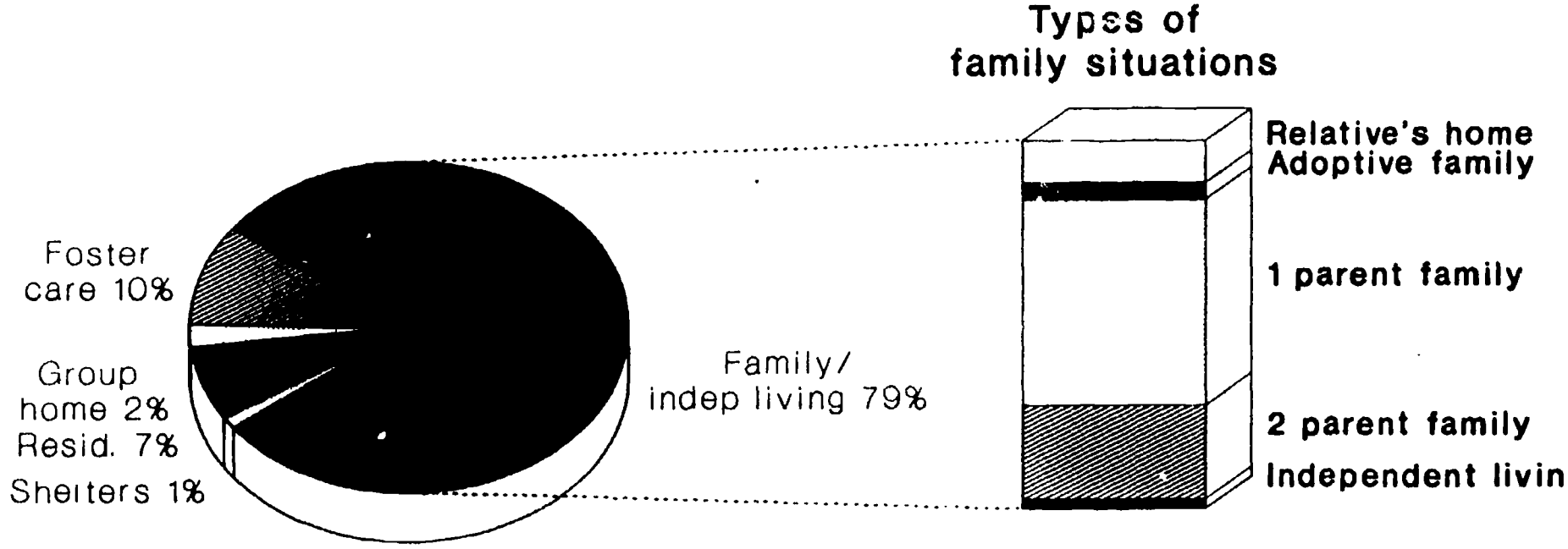

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Figure 7
Living Situation on Discharge

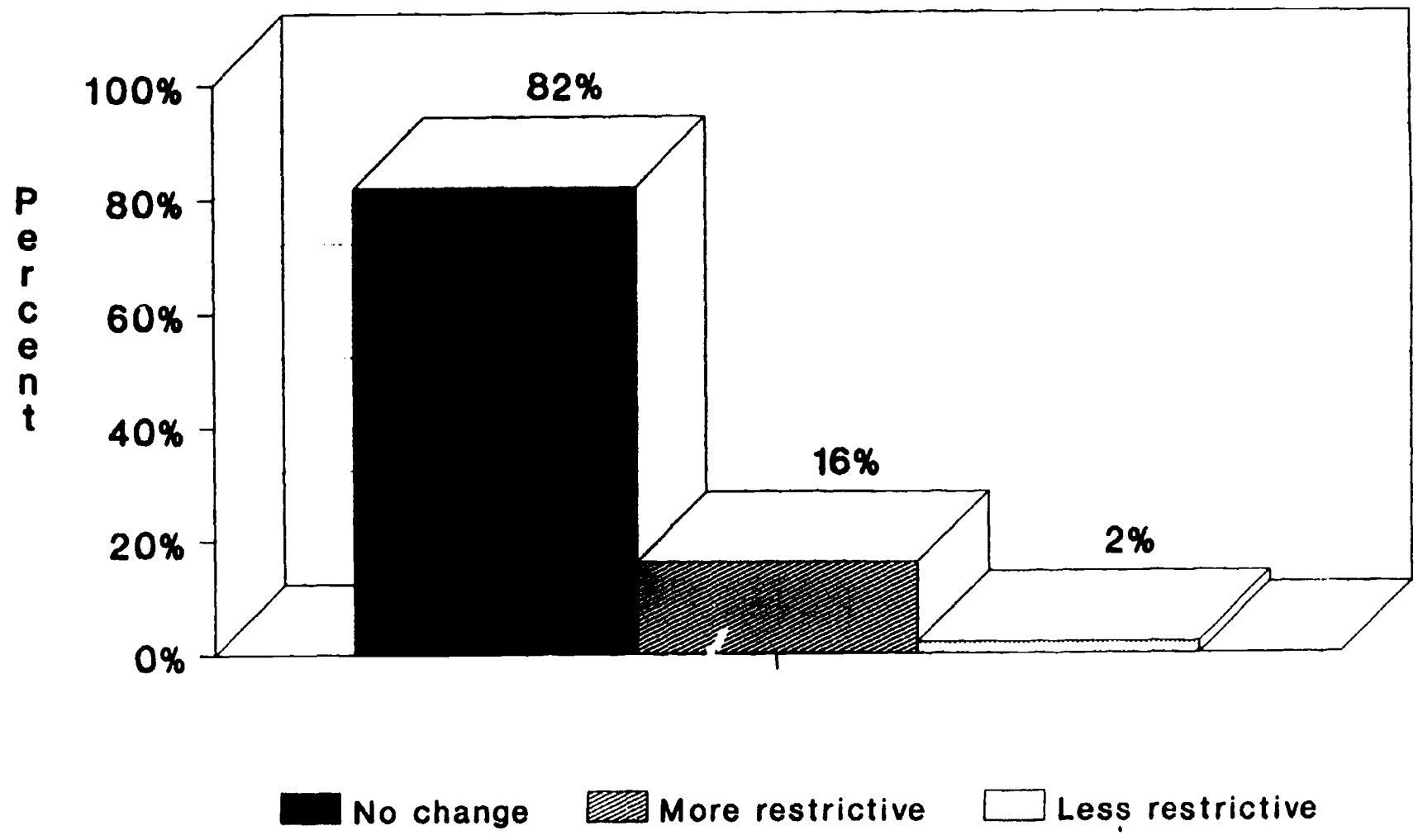

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Figure 8
Admissions pre & post CYICM

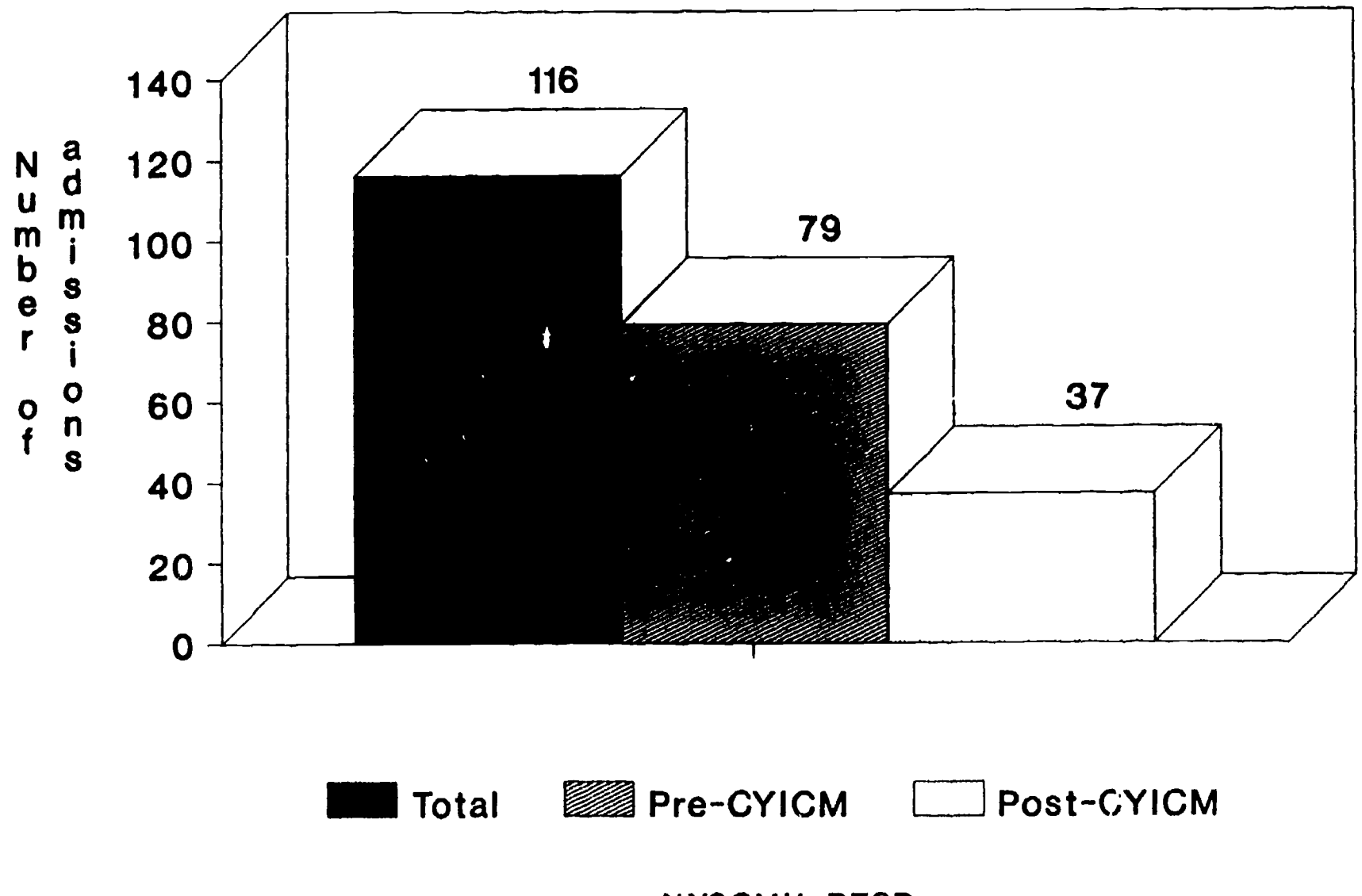

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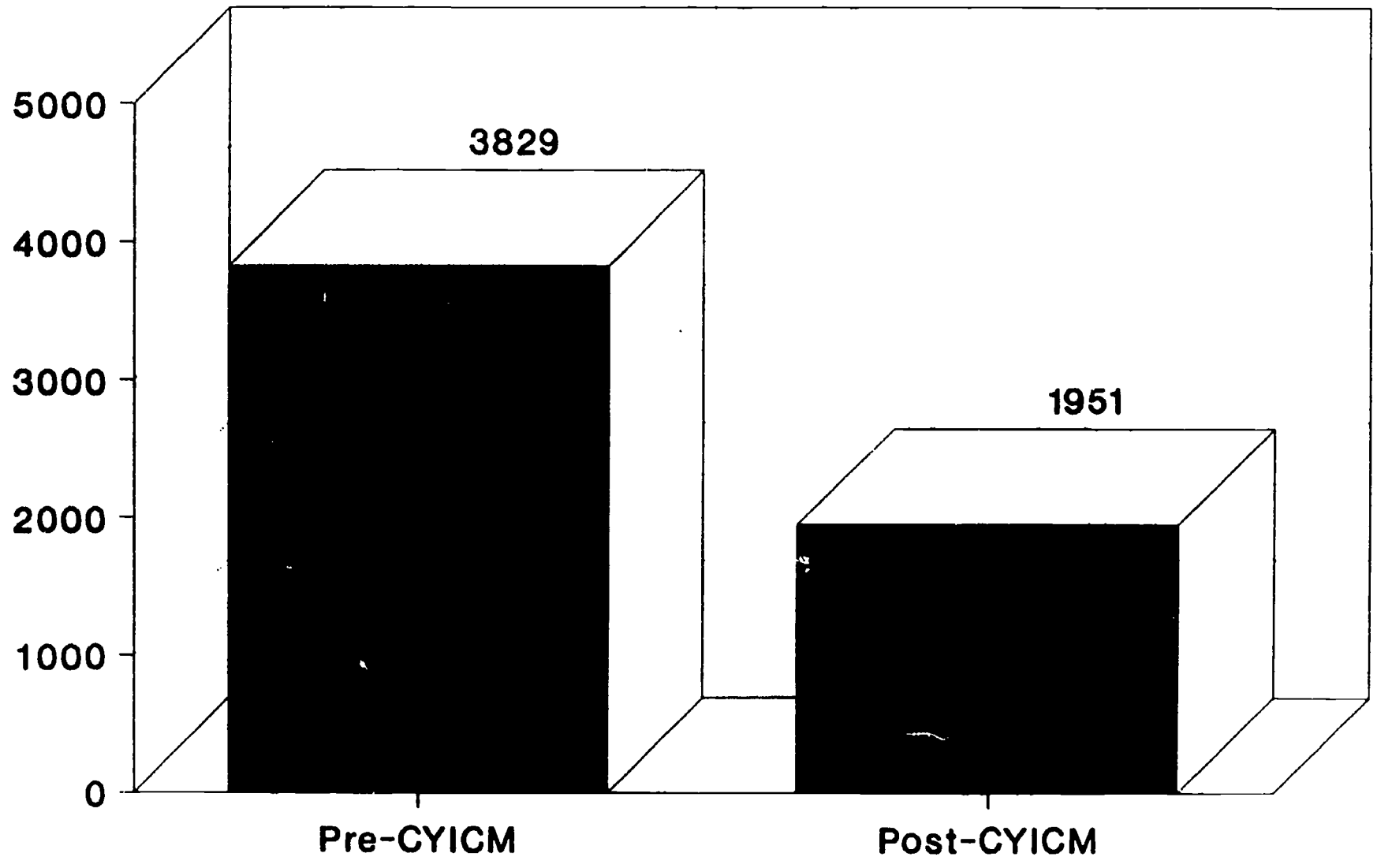
Figure 9
Number of inpatient days
pre & post CYICM



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