This paper describes the Tennessee Children's Plan, a program phased in between 1991 and 1993 that implemented a coordinated service system for children, youth, and families. A study involving children and youth (birth through 21 years) who were in the custody of the State of Tennessee investigated the effectiveness of coordinated service systems in reducing utilization rates of psychiatric hospitals. Results of the study indicate that between 1991 and 1995, the total number of children in custody increased by almost 3,000 to 11,131, with 35 percent of the children having a documented mental health need. Use of restrictive, residential psychiatric placements increased from 1991 to 1995. These data indicate that the Children's Plan, while decreasing the use of psychiatric hospitals, has shifted children to longer-stay residential treatment centers. Any cost savings that might have been incurred through decreased use of hospitalization has been more than taken up through this increased use of residential treatment centers. Furthermore, a significant proportion of the children in state custody experience multiple and long-stay institutional experiences. (CR)
Modeling Utilization of Child Residential Psychiatric Treatment

Authors

Introduction Method Results Discussion

Introduction

Much concern has been expressed about the high utilization rates of psychiatric hospitals, both public and private, for children and adolescents in our nation and in the State of Tennessee. These restrictive placements may not meet the needs of the child so placed, perhaps causing harm in some cases, and are so expensive that they deplete what are already scarce fiscal resources. The establishment of a continuum of mental health care that would offer a range of services has been the goal of the Tennessee Department of Mental Health for several years and was a focus of the Tennessee Children's Plan.

The Tennessee Children's Plan represents Tennessee's efforts to reorganize the delivery of services to children through a coordinated service system for children, youth, and families. The Children's Plan was phased in over the 18 month period between October, 1991 and April, 1993. Although state resources have been channeled into communities toward less restrictive care, residential services are still heavily used. In Tennessee, millions of state dollars flow both into the public and private service sectors under TennCare (the Medicaid waived managed care system for Tennessee) for inpatient psychiatric care. In addition, departmental funds have been used to pay for residential services not reimbursed by the TennCare or other third-party-payor systems.

This ongoing study was designed to provide some very basic information for filling some of the numerous gaps that exist in the knowledge base about the use of both inpatient and residential mental health care for children and adolescents in state care. This summary presents data from three aspects of the project: (a) the Baseline Survey, (b) Baseline - 1995 comparisons, and (c) patterns of placements leading to hospitalization.
Method

Sample

This study focused on children and youth, ages birth through 21 years, who were in the custody of the State of Tennessee on two points-in-time: July 31, 1991 (N = 8,467) and January 31, 1995 (N = 11,131), representing "before" and "after" snapshots of the implementation of the Tennessee Children's Plan. All children in custody on those dates were included in this study. The population, overall, was 55-58% female (see Table 1), 34-37% African-American, and spread across all age groups. Children had been committed to the custody of the following state agencies: Youth Development (15%); Education (2 - 4%); Human Services (81%); and Mental Health and Mental Retardation (< 1%).

Sources of Data

Two existing state databases were analyzed for this study. The "Modeling Utilization" project uses existing state databases and integrates information in order to be able to link services provided to children and youth by multiple agencies over time. These two databases were reviewed for equivalence of item content and variables; the comparisons presented represent those with items having good match between data sets.

Baseline survey: 1991. A baseline survey was conducted by the Tennessee Commission on Children and Youth for all children in state care on July 31, 1991. The study was designed to provide a baseline description of the population of children and youth in state care prior to the implementation of the Tennessee Children's Plan.

1995 Follow-up. The Client Operations and Review System (CORS) database was used for 1995 comparisons. January 31, 1995 was chosen as the point-in-time comparison based on completeness of the data fields of interest. CORS is maintained for all children served by the Children's Plan.

Analyses

Descriptive statistics were used to profile the similarities and differences in the characteristics of the youth. Children were identified with mental health needs if one or more of the following was present: (a) presence of a mental health diagnosis, (b) placement at any time during custody in a residential treatment center designated as a mental health setting, or (c) placement at any time in custody in a psychiatric hospital. To examine patterns of placement, the six most recent placements were arranged in sequence and resulting patterns were collapsed to form no more than 15 types of sequences.

Results
Results

First, characteristics of the children in custody in 1991 and 1995, respectively, are examined. Next, the subpopulation of children with identified mental health needs is described. The use of residential psychiatric placements and patterns of placement leading to hospitalization are then presented.


Of the total children in custody in 1991, almost half (47.5%) had some documented mental health need. Slightly more than half of the total were males (see Table 1). The average age of children in state care was 12 years, although those who were admitted to a psychiatric hospital were slightly older (14 years), and those admitted by a Juvenile Court Commitment Order (JCCO) were older still (15.6 years). Between 1991 and 1995, the total number of children in custody increased by almost 3,000 children. Only 35% of the children in custody in 1995 had a documented mental health need. There were only slight differences between 1991 and 1995 in the proportions who were either male or African-American, or of a given age group for the total population.

Most of the increase in the number of children in custody occurred with children who did not have a documented mental health need (from 4,451 to 7,186; a 61% increase), were male (40% increase), African-American (47% increase), young adolescents (43% increase), and were assigned to the department of human services (33% increase).


Although the proportion of children identified with mental health needs decreased (47.5% to 35%) as the total number of children in custody grew, the actual number of children with mental health needs remained relatively stable over this period (from 4,016 to 3,945). There was some slight increase in the proportions who were male (as opposed to female), or African-American, and there was a slight increase in the proportion who were age 13-15.

Children with mental health needs were in state custody an average of 761 days in 1991 and 645 days in 1995. They most often lived in foster care (44% in 1991 and 33% in 1995; see Table 2). In 1991, there were 120 children in public psychiatric hospitals (3%) and 122 in these settings in 1995 (also 3%). In 1991, there were 180 children in private psychiatric hospitals (5%), and this number dropped to 49 (1%) in 1995. The placements for Level III residential treatment centers (RTC-III's), which provide 24-hour care for emotional and behavioral problems, increased dramatically from 268 (7%) to 626 (16%) from 1991 to 1995.

Children in residential psychiatric treatment had been in
Children in residential psychiatric treatment had been in their current placements, on average, over 6 months (see Table 2). There was a decrease of 34 days (from 215 to 181) in the average days of placement in a public psychiatric hospital, but increases of 55 days in the length of stay in private psychiatric hospitals and 56 days in the length of stay in RTC-IIIIs. The lengths of stay shown in Table 2 are slightly misleading since they include only the children who had not left those settings and therefore include those with very long stays. For those who had completed a residential psychiatric treatment for the 1995 data only, it was found that the average days in placement for completed residential treatment was 92 days for stays in public psychiatric hospitals, 89 days for stays in private psychiatric hospitals, and 163 days for completed stays in RTC-IIIIs. In 1991, 22% of the children currently in public psychiatric hospitals had been there 30 days or less, in 1995 the comparable figure was 18%. The corresponding figures for private psychiatric hospitals were 32% for 1991 and 22% for 1995. For those staying over one year in public psychiatric hospitals, the percentage was 11% in 1991, and for 1995, it was 8%; and for private psychiatric hospitals 5% had stayed over one year in 1991, and 14% had stayed this long in 1995. The actual maximum days for a current psychiatric hospitalization in a public hospital were 3,378 days in 1991 and 1,076 days in 1995. The maximum days for private psychiatric hospitalizations were 771 for 1991 and 717 for 1995. In 1995, the total days of residential psychiatric care, which includes psychiatric hospitalization and RTC III placements, was 211% of that for 1991, increasing from a total of 97,044 in 1991 to 206,307 in 1995.

When compared to 1991, children in psychiatric hospitals in 1995 were more likely to be African-American (42% vs. 22%), and more likely to be in the custody of the Department of Youth Development (15% vs. 8%). Children in residential treatment centers in 1995 were more likely to be male (82% vs. 67%) and in the custody of the Department of Youth Development (24% vs. 18%) when compared to 1991. For both years, the most common diagnoses listed for children in residential psychiatric treatment were behavior problems, depression, and adjustment disorders.

**Psychiatric Hospital Placements**

For the 1995 data, reflecting only those children in state custody on January 31, 1995, considerably more information was available on placement history. A total of 903 children had been placed in a psychiatric hospital within the current custody period and the past 6 placements. This amounts to 8% of all children in custody and 23% of all children with mental health need who were in custody on January 31, 1995. Of those 903 children, 19% were currently (i.e., on the target date) in a psychiatric hospital (122 children in public hospitals and 49 in private hospitals). A total of 52% had been in a psychiatric hospital
multiple times while in custody: 429 (48%) had only one hospitalization, 349 (39%) had two hospitalizations, 10% had 3-5 hospitalizations and 3% (26 children) had 6 or more hospitalizations. For the 171 children currently in psychiatric hospitals on the target date in 1995, this was the initial custody placement for 26 children (15%). The placement experiences since entering state custody of the children currently in psychiatric hospitals were varied:

- 23% in a private psychiatric hospital only;
- 16% in a public psychiatric hospital only;
- 4% in both public and private psychiatric hospitals;
- 10% in a RTC and a psychiatric hospital;
- 8% in an assessment center and a psychiatric hospital;
- 8% in foster care and a psychiatric hospital;
- 7% in a family setting and a psychiatric hospital;
- 5% in a Youth Development setting and a psychiatric hospital; and
- 2% in some other setting and a psychiatric hospital.

Most referrals to a psychiatric hospital might better be called transfers since the level of care or restrictiveness of the setting did not change. A full 28% of those currently in public psychiatric hospitals had come from another public psychiatric hospital program to the current setting. For current private psychiatric hospitalizations, this percentage was 27%. However, from the child's perspective, even these transfers represent an actual change in their living environment and the accompanying stressors.

**Discussion**

Use of restrictive, residential psychiatric placements increased from 1991 to 1995. These data indicate that the Children's Plan, while decreasing the use of psychiatric hospitals, has shifted children to longer-stay residential treatment centers. Any savings that might have been incurred through decreased use of hospitalization has been more than taken up through this increased use of RTCs. Furthermore, a significant proportion of the children in state custody experience multiple and long-stay institutional experiences.

The description of children in custody, those identified with mental health needs, and placement patterns were the focus of this summary. These are first steps needed to provide background information about the population and use of residential placements before proceeding with further efforts toward modeling service utilization and patterns of care.

**Authors**

Craig Anne Heflinger, Ph.D.
Senior Research Associate
Vanderbilt Center for Mental Health Policy
1207 18th Avenue, South
Nashville, TN 37212
Celeste G. Simpkins
Research Associate
Vanderbilt Center for Mental Health Policy
1207 18th Avenue, South
Nashville, TN 37212
Voice: 615/322-8435
Fax: 615/322-0749
simpkins@uansv5.vanderbilt.edu

This research was supported by a grant from the National Institute of Mental Health (5-R29-MH50101, Principal Investigator: Craig Anne Heflinger, Ph.D.).

NOTICE

REPRODUCTION BASIS

☐ This document is covered by a signed "Reproduction Release (Blanket) form (on file within the ERIC system), encompassing all or classes of documents from its source organization and, therefore, does not require a "Specific Document" Release form.

☐ This document is Federally-funded, or carries its own permission to reproduce, or is otherwise in the public domain and, therefore, may be reproduced by ERIC without a signed Reproduction Release form (either "Specific Document" or "Blanket").