

Center for Mental Health Policy
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The Status of Mississippi Medicaid Children:

Behavioral Health, Health, Service Use, and Consumer Satisfaction

The IMPACT Study Baseline Report on Interview Data

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Executive Summary

The IMPACT Study was funded by the United States Department of Health and Human Services, Substance Abuse and Mental Health Services Administration as part of a national study of the impact of managed care on vulnerable populations.¹ The Center for Mental Health Policy at Vanderbilt University's Institute for Public Policy Studies, under the direction of Dr. Craig Anne Heflinger, is conducting a carefully designed evaluation of the Medicaid programs in Mississippi and Tennessee. The Impact Study is a collaboration between academic, government, provider, and consumer and advocacy groups in both states. The Mississippi Medicaid program participates as a traditional fee-for-service program. The focus of the project is on Medicaid behavioral health services; however, all services under the Medicaid program will be included in several components of the study.

This report includes information from a baseline parent interview about children and adolescents served under the Mississippi Medicaid program. The focus of this project and this report is on children with serious emotional disorders, but information on a representative sample of Mississippi Medicaid children is also included. Chapter 1 provides background information and Chapter 2 describes the study methods in detail. Findings are reported in Chapters 3 through 6 and summarized with implications for services and policy in Chapter 7. Several themes emerged from the findings:

- ◆ Mississippi Medicaid Children demonstrated a high level of mental health needs – Almost one-quarter (22%) of the representative Medicaid total population met the federal criteria for classification as having a serious emotional disorder (SED) at the time of the interview. The group of Mississippi Medicaid children and adolescents with SED includes a group who have demonstrated chronic and long-term mental health needs.
- ◆ Mississippi Medicaid children were able to access behavioral health services more often than reported in most other national reports -- Overall, 12% of the Mississippi Medicaid population and almost half (45%) of children and adolescents with SED used some type of formal behavioral health service within the past 6 months.
- ◆ Mississippi community mental health centers (CMHCs) were the most frequent provider of behavioral health services – Three quarters (74%) of children with SED who had received any formal behavioral health service within the past six months had been seen at a CMHC.
- ◆ Mississippi Medicaid children had access to medical care – 99% of the parents/caregivers named a specific source of care and most were individual physicians

¹ UR7 TI11304 from the Center for Substance Abuse Prevention and UR7 TI11332 from the Center for Substance Abuse Treatment (Principal Investigator: Craig Anne Heflinger). See www.hsri.org/coord.html for more information.

or clinics, which corresponds with Medicaid's goal to link each beneficiary with a primary care provider.

- ◆ Overall, the physical health plan and benefits under the Mississippi Medicaid program was given high satisfaction ratings (at or above 90%) for: quality of health care, ease of getting health care and hospital care, and coverage for illness visits.
- ◆ Parents/caregivers of Mississippi Medicaid children were satisfied with many aspects of their behavioral and physical health services and plans, particularly regarding family-friendliness of staff and sharing of information.
- ◆ Parents/caregivers of children with SED in Mississippi gave significantly higher satisfaction ratings for their Medicaid plan than did parents of similar children in two other states and those whose children were in Medicaid managed behavioral health programs.
- ◆ However, parents/caregivers of children with SED were significantly less satisfied with almost all aspects of their Medicaid physical health plan and benefits than parents of other Mississippi Medicaid children.
- ◆ Mississippi Medicaid children demonstrated a high level of physical health problems.
- ◆ Children with SED had more physical health problems and used more emergency and inpatient medical care than other Mississippi Medicaid children.
- ◆ Many children with SED experienced gaps in service delivery -- half (55%) of the children with SED had not received any formal behavioral health services during the past 6 months and parents of 40% of the children with SED who HAD received a behavioral health service did not think that service was helping their child.
- ◆ Families of children with serious emotional disorders demonstrated high levels of needs yet they had received few supports from the behavioral health system.

The IMPACT Study

Purpose and Overall Design

The IMPACT Study was funded by the United States Department of Health and Human Services, Substance Abuse and Mental Health Services Administration (SAMHSA) as part of a national study of the impact of managed care on vulnerable populations.² In response to GFAs TI 96-01 and 97-001 from the Substance Abuse and Mental Health Services Administration (U.S. Department of Health and Human Services) and as part of their Cooperative Agreements for Managed Care, the Center for Mental Health Policy at Vanderbilt University's Institute for Public Policy Studies (VIPPS) is conducting a carefully designed evaluation of the Medicaid programs in Mississippi and Tennessee. The Mississippi Medicaid program participates as a traditional fee-for-service program. The focus of the project is on Medicaid behavioral health services, however, all services under the Medicaid program will be included in several components of the study.

This project is part of a national study that includes 13 states and examines four population groups: children with serious emotional disorders, adolescents with substance abuse problems, adults with serious mental illness, and adults with chemical dependence. Information on the national study is available at www.hsri.org/coord.html.

To meet the overarching goals, this project is organized into three related components:

- 1) The Administrative Data component relies on Medicaid enrollment and claims data, both statewide and for a subsample of children that participate in the standardized interview component.
- 2) The Standardized Interview component is a prospective study based on the national common protocol. This component follows a sample of Medicaid children and adolescents. Interviews are held with parents (or the designated most knowledgeable caregiver) and children age 11 years or older at two or three points in time, six months over the course of a year.

It is the first, or baseline, interview about approximately 500 Medicaid children and adolescents that is the focus of this report.

- 3) The In Depth component is an addendum to the standardized interview data and is collected at 6 months for a subsample of children and adolescents. For these children, the standardized interview is enhanced by a series of professional interviews and record reviews to provide a comprehensive description of their experiences during the past six months.

² UR7 TI11304 from the Center for Substance Abuse Prevention and UR7 TI11332 from the Center for Substance Abuse Treatment (Principal Investigator: Craig Anne Heflinger).

The Impact Study is a collaboration between academic, government, provider, and consumer and advocacy groups in the states of Tennessee and Mississippi. The VIPPS Center for Mental Health Policy has collaborated with:

- ◆ State agencies: the Mississippi Department of Mental Health, and the Mississippi Division of Medicaid, who provide data and other support for the project;
- ◆ Advocacy agencies: the Mississippi Families as Allies, who also collect interview data using the standardized interview protocol.

This report is the first in a series of reports and includes information from a baseline parent interview on the mental health status and the health status of children served under the Mississippi Medicaid program, their use of mental health and other services, parent satisfaction with services, and family issues that may impact service delivery. The focus of this project and this report is on children with serious emotional disorders, but information on a representative sample of Mississippi Medicaid children is also included.

Sample

A stratified random sample of children who were eligible for Medicaid during July 1, 1995 – June 30, 1996 (defined as FY1996 for the purposes of this report) was drawn to recruit participants for the study. These analyses excluded children who were in state custody (at the time of the baseline interview) from the sample for the prospective interview study³ and children who were from counties participating in the Medicaid Primary Care Case Management demonstration during that year. Children were also required to be between ages 4 and 17 at the date of their first interview, so birth dates between 4/1/1981 and 3/31/1993 were selected.

Samples of Medicaid children were drawn using extracts of paid encounter/claims data and eligibility history information from the Mississippi Division of Medicaid. Three “study” groups of children were identified:

Study Group 3 (High-Users of Mental Health Services) were children who had used a “high end” mental health Medicaid service or who had used a lot of Medicaid mental health services during FY1996. “High end” services were considered: psychiatric inpatient care, residential mental health treatment, day treatment or partial hospitalization, or mental health case management. Children who had at least three mental health services of any type within one week or who had received at least 10 mental health services during a four-month period were also considered to be in the high-user group. There were 5,141 children so identified from the Medicaid data, representing 3.9% of the total number (132,733) of Medicaid children who met study criteria. Half (47.2%) of these children were included in the recruitment sample.

³ This was done because in the comparison state of Tennessee, children in state custody were eligible for a different benefits package to be managed outside of the TennCare Partners Program BHO network by the Department of Children’s Services.

Study Group 2 (Low-Users of Mental Health Services) were children who had received at least one Medicaid mental health service during FY1996 but did not meet the criteria to be included in the high-user group. In all, there were 5,877 of these children identified, and a sample of 903 children (15.4%) was selected randomly to be included in the recruitment sample. This group represented 4.4% of the total number of Medicaid children who met study criteria.

Study Group 1 (Non-Users of Mental Health Services) were children who were eligible for Medicaid during FY1996 but who had not used any mental health services during that time period. Of the total number of 121,175 children, a sample of 2,489 (2%) was selected randomly to be included in the recruitment sample. This group represented most (91%) of the total Medicaid population who met study criteria.

Thus a total of 5,817 of the 132,733 Mississippi Medicaid children who met study criteria were selected through a stratification process to be included in the recruitment process. The group of 132,733 Mississippi Medicaid children described in this report represents 74% of all Mississippi Medicaid children within the age range of 4 to 17 years.⁴

Recruitment

A two-step recruitment method was used in the Impact Study. Step one involved sending letters to the parents/caregivers of prospective participants requesting permission to contact them about joining the research study. The Mississippi Division of Medicaid mailed the recruitment letters in order to protect the privacy of Medicaid beneficiaries. A second step focused on obtaining informed consent to participate in the project from those who had agreed to be contacted. After parents/caregivers either called the toll-free project number or returned a self-addressed and stamped postcard, they were contacted by phone and asked: (a) was their child still eligible for Medicaid, and (b) was their child currently in state custody. If the answer was yes to the former and no to the latter, they were invited to set up an appointment for an in-person informed consent.

From the total number of 5,817 letters mailed, the following responses were received:

- ◆ 679 letters (11.7%) were returned as having a non-usable address;⁵
- ◆ 98 (1.9%) parents/caregivers contacted the project and declined to participate;
- ◆ 998 (19.4%) parents/caregivers contacted the project and agreed to be contacted. It is this group that the response rate is based upon.

⁴ The 26% excluded group are those children and youth who were living in a county with the Medicaid Primary Care Case Management Demonstration (26%) or who were in state custody/foster care at the time of recruitment (<1%).

⁵ This group was deleted from the sample for further analysis on response rate, but was included in analyses of representativeness.

The response rates differed somewhat by the study group based on FY1996 mental health service use. 23.7% of Study Group 3 (the high-users), 21.4% of Study Group 2 (the low-users), and 14.5% of Study Group 1 (the non-users) agreed to participate. Overall, using a statistical process that weights the study groups to be comparable to the overall Medicaid population, there was a response rate of 19.5%.

Although a higher response rate would have been desired, this was the first comprehensive mail recruitment attempt with the Medicaid population, so there are no other standards by which to compare the response. However, the representativeness of the responding sample is important to assess. This is discussed below.

Of the total 998 children in the responding sample, 490 participated in the interview process.⁶ Whether or not a responding case was interviewed was based on the interviewer and parent schedules and the project time frame. The representativeness of the interviewed sample is also discussed below.

Description and Representativeness

The demographic characteristics of the children who participated in the study are shown in Table 1-1.

As described above, children had been recruited from three groups related to their mental health service use during FY1996. There were several differences in demographic characteristics among the study groups based on past use of mental health services that were statistically significant. Those with past low and high use of mental health services were more likely to be male, white, and older than children who had not used any Medicaid mental health services during FY1996.

Analyses of the similarities between the total Mississippi Medicaid population and the interview sample were conducted regarding gender, race, and age. The interviewed sample tended to be more often male and pre-teen (ages 9-11 years) than the overall Mississippi Medicaid population. In order to control for these differences, and those by Study Group as discussed above, a statistical weighting technique was applied. This technique assigned “weights” to each of the children in study groups according to their gender, age, race, and FY1996 use of Medicaid mental health services based on the representativeness of those groups in the overall Medicaid population. A column on the right side of tables throughout this report shows the Weighted Total that represents the findings for the overall Mississippi Medicaid population. As described above, the children in Study Group 1 represented most (91%) of the Mississippi Medicaid children, so their data were weighted the most to match their proportion in the total Medicaid population. Because children from Study Groups 2 and 3 were selected at a higher rate, unadjusted (or unweighted) analyses would bias results. Therefore, weights were constructed to ensure that a child had an equal chance of selection allowing unbiased conclusions to be made about the population of Mississippi Medicaid children. Other factors that influenced response rates (age, gender, race) were also included

⁶ The interview process was terminated once the project reached the goal of 500 cases. An additional 16 who were interviewed were later excluded from these numbers and further analyses when it was discovered, based on revised data from the Mississippi Division of Medicaid, that they did not meet study criteria.

in the adjustment. Children from all regions of the State of Mississippi were included in the study.⁷

All of the children shown in Table 1-1 had a parent or other knowledgeable caregiver participate in a standardized interview. Children age 11 years and older were invited to be interviewed and 202 participated in the Wave 1 interviews. However, unless noted, all data presented in this report are from the parent/caregiver interview.

Table 1-1: Demographic Characteristics of the Interview Sample

	Study Group 1 (Past Non-User)	Study Group 2 (Past Low MH User)	Study Group 3 (Past Hi MH User)	Total Medicaid Population ⁸
Gender*				
Male	53%	75%	67%	51%
Female	47%	25%	33%	49%
Race/ Ethnicity*				
African-American	84%	65%	69%	70%
White	13%	34%	27%	27%
Asian-American	-	-	2%	NA%
Other	3%	1%	2%	3%
Hispanic*	-	1%	2%	NA%
Age*				
8 Years and Younger	44%	17%	11%	46%
9-11 Years	32%	35%	34%	32%
12 Years and Older	24%	48%	55%	22%
Mean Age (Years)	9.41	11.53	11.80	9.82
Urbanization				
Rural	23%	22%	26%	30%
Mixed	51%	50%	53%	48%
Urban	26%	28%	21%	21%
Number of Children	124	91	275	132,733

Note : children were designated as Hispanic in addition to their primary racial group, so race sums to 100% and children designated as Hispanic is additional.

*Significant differences between study groups at $p < .01$.

⁷ See Saunders (2000) for more detailed information on the representativeness of the sample.

Of those children comprising the “high-user” group, the following shows their highest level of mental health service use during FY1996:

- ◆ 26% had at least one psychiatric inpatient stay;
- ◆ 40% had participated in both day treatment and case management;
- ◆ 22% had case management (without day treatment or any higher level of care);
- ◆ 4% had day treatment;
- ◆ 8% had received a great amount of mental health outpatient services.⁹

Children in the unweighted interview sample had qualified for Medicaid coverage through the following eligibility categories:

- ◆ 33% AFDC/TANF
- ◆ 42% SSI Disability¹⁰
- ◆ 25% Family Poverty

In addition, demographic information was available to describe the adult respondents in the interviews (see Table 1-2). For each child, an adult interview was conducted with a parent or another adult who had been designated as the most knowledgeable caregiver of the child. A total of 490 adults were interviewed. The adults who participated were primarily female (96%), in their 30s and 40s (82%), and, similar in racial background to the sample of children described above with 71% African-American.

Relationship of the respondent to the child was also examined:

- ◆ 75% were biological parents (with or without a stepparent)
- ◆ 2% were adoptive parents
- ◆ 19% were grandparents or other relatives
- ◆ 4% were legal guardians who did not identify themselves as one of the above.

Throughout this report, adult respondents are referred to as “parents/caregivers.”

⁸ The total group of 132,733 Mississippi Medicaid children and adolescents who met study criteria. For a discussion of study criteria, see page 3 above.

⁹ “A great amount” means more than 3 services within a one-week period, or at least 10 services within a 4-month period.

¹⁰ The interview sample tended to be more likely eligible for Medicaid through the SSI Disability program than the overall Mississippi Medicaid population due to the large numbers of children in Study Groups 2 and 3 who had so qualified.

Table 1-2: Demographic Characteristics of Adult Respondents

Sample Total	
Gender	
Male	4%
Female	96%
Race/ Ethnicity	
African-American	71%
White	27%
Asian-American	-
Other	2%
Hispanic*	-
Age	
20-34	42%
35-49	41%
50+	17%
Mean Age (Years)	39.2
Number of Adult Respondents	490

More information on the parents/caregivers is included in Chapter 6 below.

Sources of Data

Two sources of information are used in this report: Interview data collected by the Impact Study and Medicaid administrative data.

Interview Data

Methods of Collection

In-person interviews were held with the parent or other most knowledgeable caregiver of each child in the interview sample. If children were age 11 years or older and their parent/caregiver gave consent for them to participate, they were also interviewed. Separate Interview Protocols were developed for the adult and child interviews. The Interview Protocols contained a series of standardized questionnaires (described below), other items included as part of the national study, and a series of site-specific questions.

This report includes findings from the baseline interview, the first interview conducted with the parent/caregiver and/or child. For approximately half of the participants, a 6-month follow-up interview was conducted. For all participants, a 12-month follow-up interview was conducted. The follow-up interviews will be the focus of forthcoming reports.

Interviews were conducted by trained interviewers who were required to attend and complete training, then conduct and be screened on pilot administrations of the interview. All subsequent interviews were audiotaped for supervision, and at least 10% of each interviewer's tapes were reviewed for adherence to the standardized procedures.

Standardized Questionnaires Included in the Interview Protocol

The Interview Protocols that were developed for children and adults contained several standardized questionnaires that had been developed for other projects and are widely used in the field of children's research.

Child Behavior Checklist (CBCL)

The CBCL¹¹ is an empirically derived measure that is completed by the child's parent, or by a caretaker who has known the child for 3 months or more. For children ages 4 through 18 years, a parent or primary caregiver reports on the child's academic performance, social and peer relationships, and family relationships, and indicates how true a series of 112 problem behavior items are for the child. It has been norm referenced for large populations.¹² The CBCL provides a total problem score indicative of clinical status, two broad-band scores (Externalizing, Internalizing) and scale scores for eight syndromes (Withdrawn, Somatic Complaints, Anxious/Depressed, Social Problems, Thought Problems, Attention Problems, Delinquent Behavior, and Aggressive Behavior). The cut points for borderline clinical and clinical range designations are based on *T* scores formed on a clinical population.¹³ For the CBCL, high scores indicate more clinical behavior and low scores age appropriate normal behavior. Furthermore, many studies have shown the relationship between CBCL subscale scores and diagnoses.¹⁴

The CBCL has major advantages as a measure of the behavioral health symptoms for children, including extensive support for its psychometric properties and national norms based on thousands of nonreferred and referred children. Standardized scores permit comparisons between gender and across age groups. The author¹⁵ provided cutoff scores based on national norms to classify children as in the "clinical" range (≥ 64 for Total, Externalizing, and Internalizing; ≥ 70 for the eight syndrome scales) where they score similar to or report more problems than children in the normative sample who were receiving formal treatment, or in the "borderline" range (60-63 for broad band scores, 67-69 for syndromes) where children score similar to children who were judged in need of treatment. For many child behavioral health professionals, the functional (as opposed to diagnostic) approach of the CBCL provides important and more useful information about

¹¹ Achenbach (1991a, 1991b); Achenbach & Edelbrock (1983).

¹² Achenbach (1991a); Zima, Wells, & Freeman (1994).

¹³ Achenbach (1991a); Armsden, Pecora, & Payne (1996); McConaughy & Achenbach (1988).

¹⁴ For instance, the syndrome Anxious/Depressed was strongly associated with a diagnosis of Depression (Achenbach, 1993; Rey & Morris-Yates, 1992), attention problems with a diagnosis of Attention Deficit Disorder and delinquent behavior with Conduct Disorder (Edelbrock & Costello, 1988).

¹⁵ Achenbach (1991a, 1991b).

how children meet their developmental tasks in the areas of behavior and social problems than do psychiatric diagnoses.

The CBCL has a parallel form completed by youth age 11 years and older in the study, called the Youth Self Report (YSR).¹⁶

Columbia Impairment Scale (CIS)

The CIS is a 13-item scale designed to provide a global measure of psychosocial impairment. It originally was developed for the NIMH Methods for the Epidemiology of Child and Adolescent Mental Disorders (MECA).¹⁷ The scale was designed to assess four major areas of functioning: interpersonal relations; certain broad areas of psychopathology; functioning at school or work; and use of leisure time. Items are scored on a Likert scale ranging from 0, “no problem”, to 4, “a very big problem” with the potential total score ranging from a minimum of 0 to a maximum of 52. It was determined that a score of ≥ 16 would be most indicative of definite impairment;¹⁸ thus, higher scores indicate greater level of impairment. There are two parallel versions of the instrument, one designed to be administered directly to a child or adolescent respondent (YCIS) and the other to his/her parent or to another knowledgeable caregiver (PCIS). A card with the five possible options is provided to the respondent, allowing him/her to point to the score s/he gives each item. In this way the CIS yields a respondent-based rating. It has been demonstrated that the CIS provides an adequately reliable and valid measure of impairment as well as correlates highly with the clinician-determined scores of the CGAS (Children’s Global Assessment Scale).¹⁹

Child Health Questionnaire (CHQ)

The CHQ provides a profile of 14 health concepts and summary indices of physical and psychosocial functioning and well-being for children five years of age and older. There are four available versions of the CHQ: 98-item, 50-item, and 28-item parent-completed versions (CHQ-PF98, CHQ-PF50, and CHQ-PF28 respectively) and an 87-item child-completed version (CHQ-CF87). The designers of the instrument constructed the measure around core concepts extracted from careful study of multiple generic instruments for children, among them the FSII-R,²⁰ the Program for Pre-Paid Managed Health Care,²¹ the National Health Institute Survey,²² and the Ontario Child Health Study.²³ Also influential were a theoretical framework initially posited by Starfield in 1974²⁴ as well as the principal architect’s (Landgraf) work with the initial conceptualization and development of the COOP Adolescent Charts.²⁵

The designers of the measure, highlighting the need for balance, incorporated scales that test both positive and negative health states as well as provide both objective and subjective ratings. The instrument is comprised of 14 scales: (1) physical functioning, (2) role/social limitations – physical, (3) general health perceptions, (4) bodily pain, (5)

¹⁶ Achenbach (1991b).

¹⁷ See, for example, Flisher *et al.* (1997) and Glied, Hoven, Garrett, & Moore (1997).

¹⁸ Bird *et al.* (1996).

¹⁹ Shaffer *et al.* (1983), Bird *et al.* (1993).

²⁰ Stein & Jessop (1990); Lewis, Pantell, & Keichefer (1989).

²¹ Davies (1989).

²² National Center for Health Statistics (1989).

²³ Boyle, Offord, Hofmann *et al.* (1987).

²⁴ Starfield (1974).

²⁵ Baribeau, Berger, Jette *et al.* (1993).

parental impact – time, (6) parental impact – emotional, (7) role/social limitations – emotional, (8) role/social limitations – behavioral, (9) self-esteem, (10) mental health, (11) general behavior, (12) family activities, (13) family cohesion, and (14) change in health. (Note: the child version does not contain the two parent impact scales.)²⁶ Drawing from the CHQ-PF50, the present study used scales 1 (global health), 2 (physical activities), 4 (pain), and 8 (health) and those questions in scale 10 relating to physical health only. The CHQ is scored positively such that higher scores indicate higher levels of functioning and fewer limitations. As the response continuums of each scale are of different lengths, there is no set clinical cutoff; for information on the scoring of each of the scales, see The CHQ User’s Manual, pp. 33-39.²⁷

Caregiver Strain Questionnaire (CGSQ)

The CGSQ is a 21-item self-report in a paper-and-pen format. Based on the work of previous researchers,²⁸ six areas of burden were included: disruption of family life and relationships, demands on time, negative mental and physical health effects for any member, financial strain, disruption of social/community life for any member, worry and emotional strain, and embarrassment. Factor analyses support the existence of three dimensions of caregiver strain: objective, internalized subjective, and externalized subjective. The respondent is requested to report subjective burden experienced only by her/himself instead of asking for global ratings of family burden. The respondent caregiver is asked to indicate how much of a problem each burdensome occurrence of feeling was in the past six months. Responses are scored on a 5-point scale ranging from “not at all” to “very much” a problem. A total score that sums values of all items has been used, specifically in the Fort Bragg Evaluation Study.²⁹ The CGSQ demonstrated adequate validity and reliability, and moreover the scale as a whole, as well as its three subscales, demonstrated high internal consistency. The instrument was validated using the Family Assessment Device (FAD) and the Brief Symptom Inventory (BSI).³⁰

SF-12 Health Survey

The SF-12 Health Survey is a 12-item instrument for self-report of health status condensed from the Medical Outcomes Study SF-36 Health Survey.³¹ Norm-based scoring for both the SF-36 and the SF-12 was derived and developed using the National Survey of Functional Health Status (NSFHS) and the Medical Outcomes Study (MOS). The measure includes a physical component summary (PCS) and a mental component summary (MCS) and provides an eight-scale profile: physical functioning, role physical, role emotional, mental health, bodily pain, general health, vitality, and social functioning. For the SF-12, higher scores indicate lower levels of functioning, whereas low scores suggest higher levels. Because the SF-12 is a direct subset of the SF-36, it allows for comparison across studies using either of the instruments or other instruments derived from the MOS. Adequate reliability and validity of

²⁶ Landgraf, Abetz, & Ware (1996).

²⁷ Landgraf, Abetz, & Ware (1996).

²⁸ Grad & Sainsbury (1963); Hoening & Hamilton (1967); Montgomery, Gonyea, & Hoeyman (1985); Thompson & Doll (1982).

²⁹ Bickman *et al.* (1995).

³⁰ See Brannan, Heflinger & Bickman (1997).

³¹ Hays, Sherborne, & Mazel (1993).

the shorter SF-12 have been demonstrated, as has its ability to replicate the global scores of the SF-36.³²

Center for Epidemiological Studies Depression (CES-D) Scale

The original CES-D³³ is a 20-item self-report of depressive symptoms designed for use in large-scale surveys. Its scale ranges from 0 to 60, and it is commonly accepted that a score of ≥ 16 indicates depressive symptoms³⁴ while a score of ≥ 22 is indicative of clinical depression;³⁵ thus, the higher the score, the greater the degree of depression. Two shorter forms of the scale were developed in order to reduce administration time as well as to minimize the burden of stress on the respondent and to clarify his/her response options. The present study used one of these: the Iowa form consists of 11 items and 3 response options. Adequate reliability, factorial validity, and comparability of the short forms relative to the 20-item form were demonstrated; moreover, the Iowa form was shown to be the more precise of the two short forms in its ability to estimate 20-item CES-D scores. The CES-D short forms retain acceptable reliability and successfully tap four symptom dimensions – (1) depressed affect, (2) positive affect, (3) somatic complaints, and (4) interpersonal problems.³⁶ However, the scale's high internal consistency "argues against undue emphasis on separate factors",³⁷ and it therefore is recommended that subscales not replace a total CES-D score. The 1974 National Health and Nutrition Examination Survey (NHANES-I), with a sample of 3,059 persons, provided national norms for all three forms.³⁸

Measures of Substance Use

Youth drug and other substance use was measured through items in youth and parent reports. Adaptations of the CASI³⁹ and the SUDDS⁴⁰ provided information on type, quantity, frequency, and duration of substance use. Parents/caregivers were also asked to provide descriptive information on their own levels and types of alcohol and drug use through similar items.

Other Issues Included in the Interview Protocol

In addition to the questionnaires described above, there were many items included to describe a variety of child and family issues. For instance, parent/caregiver and child demographic information included age, race, gender, education, income and other family resources, marital status, religious preference, family constellation, and family use of mental health services in the past. At the child level, series of questions were included about the types and amounts of health and behavioral health services they had received in the past, with a focus on the last six months. Also, child involvement in other service systems was examined through items on educational services, juvenile justice involvement, and contact with social service agencies.

³² Ware, Kosinski, & Keller (1996).

³³ The Yale form (Radloff, 1977).

³⁴ Comstock & Helsing (1976; Frerichs, Aneshenel, & Clark (1981); Goldberg, Comstock, & Hornstra (1979); Hankin & Locke (1982); Weissman, Sholomskas, Pottenger *et al.* (1977).

³⁵ Shrout & Yager (1989).

³⁶ Kohout, Berkman, Evans, & Cornoni-Huntley (1993).

³⁷ Radloff (1977),

³⁸ Kohout, Berkman, Evans, & Cornoni-Huntley (1993).

³⁹ Meyers (1996).

⁴⁰ Harrison & Hoffman (1987).

Medicaid Administrative Data

Existing enrollment and claims data for the statewide population of children and adolescents who are eligible⁴¹ for Medicaid were available through the Mississippi Division of Medicaid. Enrollment files include demographic and eligibility data and provide information on the entire population. Claims data include diagnostic, service, and provider information and are available for individuals who have received Medicaid health and/or behavioral health services.

Administrative data include information on diagnoses (health or behavioral health) recorded as ICD-9⁴² or DSM⁴³ codes. Services utilization data for a wide spectrum of health and behavioral health, in both inpatient and outpatient service settings, are recorded using CPT,⁴⁴ UB92, or national and state specific HCPC⁴⁵ codes. In addition, demographic information includes age, gender, and location so that community indicators (such as rural versus urban status) can be developed.

Extensive analyses are underway using the Medicaid administrative data. This report includes information on: eligibility status of the children interviewed (presented above), diagnoses, and services used during FY1996 (presented below in Chapter 2). A forthcoming report will provide further information on eligibility and service use based on Medicaid administrative data.

Report Structure

This report is structured by chapters that focus on different types of information available from the baseline interviews. Chapter 2 presents information on the children's mental health status, including the proportion of children who could be classified as meeting the federal definition of having a serious emotional disorder (SED). Chapter 3 shows related information on child needs, including health status and use of legal, child welfare, and educational services. Chapter 4 summarizes the use of mental health and related services. Chapter 5 reports parent/caregiver perceptions of behavioral health service providers used by their children and their satisfaction with the Medicaid program. Chapter 6 includes information on the family context of children with SED.

Throughout the report, findings are presented in tables that focus on the child's status of SED (discussed in Chapter 2). In most tables, the column on the far right is labeled "Weighted Total" and includes information representative of the overall Medicaid population of children ages 4-17.⁴⁶

This report is the first in a series of reports that will be generated about the children in the Mississippi Medicaid program. The planned series is shown in Table 1-3 below.

⁴¹ Note, Medicaid-eligible means enrolled in the Medicaid program under one of the Federal eligibility guidelines.

⁴² U.S.D.H.H.S. (1996).

⁴³ American Psychiatric Association (1994).

⁴⁴ American Medical Association (1995).

⁴⁵ Medicode (1995); Mississippi Division of Medicaid (1997).

⁴⁶ See Appendix I for results presented by study group, reflecting history of past mental health service use.

Table 1-3: Planned Series of Future Reports⁴⁷

Focus of Report	Data Source Primarily Used	
	Interview Data	Medicaid Administrative Data
Quality of Behavioral Health Care	<p style="text-align: center;">V</p> <p style="text-align: center;">Case reviews</p>	
Service System for Adolescents with Substance Abuse Problems	<p style="text-align: center;">V</p> <p style="text-align: center;">Implementation interviews</p>	
1-year Outcomes and Patterns of Service Use	V	V
Trends in Service Use over Time		V

In addition, the project is preparing a series of papers or presentations on subtopics that include information on Mississippi children. These include the following topics:

- ◆ the relationship between serious emotional disorders and health problems;
- ◆ the co-occurrence of mental and substance abuse disorders in adolescents;
- ◆ predictors of caregiver strain and the impact of caregiver strain on service use and child outcomes;
- ◆ trends in eligibility for the Medicaid child population and impact on service use.

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⁴⁷ To be available as resources permit. Additional reports, or additional special sections of these reports, may be generated upon request by the Mississippi Families as Allies, Mississippi Department of Mental Health, or Mississippi Division of Medicaid as project resources permit.

What is the Behavioral Health Status of Mississippi Medicaid Children?

The primary focus of this study was on the behavioral health care needs and subsequent service use of Medicaid children. In this chapter, several aspects of behavioral health status are discussed. First, the group of children who met criteria for the federal classification of serious emotional disorder (SED) are identified. This classification, along with the study groups based on previous Medicaid service use as described in Chapter 1, is used throughout this report to describe sub-groups of children and show findings. Next, symptoms reported and psychosocial functioning are discussed using standardized questionnaires. Diagnostic information from parent report and Medicaid administrative data is presented. Finally, an examination of substance use among this population is reported.

This report is structured to provide information on the Mississippi Medicaid population using two types of classification – 1) the status of children using classification as having a serious emotional disorder (SED) following the federal two-part definition (children are classified as either SED for meeting the criteria for classification or Not SED because they did not meet the criteria) and 2) by the weighted total that reflects the representative Medicaid population.⁴⁸ Federal block grant funding⁴⁹ required that the assessment of functional impairments be a component of applications for federal assistance, and the definition includes both a DSM⁵⁰ diagnosis and an impairment in psychosocial functioning. Symptomatology or diagnosis provides a direction or category of emotional/behavioral problems and level of functioning provides the depth or degree of impairment. The Mississippi Department of Mental Health⁵¹ also applies the two-part definition for classification as SED.

Federal Criteria for Determining SED

Federal SED status for this project was determined from baseline data from the parent/caregiver interview using scores on the Columbia Impairment Scale (CIS) and the Child Behavior Checklist (CBCL). Taken together, these two scales (CIS and CBCL) measure the child's ability or inability to function in his or her community in a variety of age appropriate ways. A score in the impaired range on the CIS indicated impairment in psychosocial functioning. The CBCL was used to identify significant emotional or behavioral

⁴⁸ See Appendix I for results presented by study group, based on history of past mental health service use.

⁴⁹ Federal Register (1993).

⁵⁰ American Psychiatric Association (1994).

⁵¹ See the MDMH Annual Block Grant Reports (e.g., 1998).

problems as a proxy for diagnosis in the two-part federal definition of SED. A score on the total CBCL in the clinical range was used to identify a significant behavioral or emotional problem. Findings specifically from the CIS and CBCL are presented in more depth below.

SED status was first examined by looking at the total representative Medicaid population. A weighting technique was used to construct a total profile that would be representative of the overall population of Medicaid children (see Chapter 1).

If a child had both psychosocial impairment (on the CIS) AND significant emotional and behavioral problems (on the CBCL), he/she was classified as meeting SED criteria (see Table 2-1). The presence of one dimension in the absence of the other (i.e., impaired functioning on the CIS OR significant behavioral or emotional problems on the CBCL) indicates a problem but of lesser degree than SED and is designated in the tables that follow as “any problem”. Table 2-1 shows the number of children who are labeled as SED using this procedure.

Table 2-1. CIS Impairment and CBCL Range for the Interview Sample

CBCL Range	CIS Not Impaired	CIS Impaired	Total %
CBCL Normal/Average or Borderline	30%	10%	40%
CBCL Clinical	7%	53%	60%
Total %	37%	63%	100%
Number of Children	171	303	474

Note: Sample size does not sum to 490 due to missing data on CBCL or CIS.

Overall, 30% of the interview sample of children were reported to be in the average or non-impaired range on the CBCL and CIS questionnaires. However, 53% of the children were reported to have significant levels of problems on both the CBCL, showing clinical levels of emotional or behavioral problems, and the CIS, indicating impaired psychosocial functioning.

Table 2-2 shows the proportion of children who met the two-part criteria for SED, corresponding to the total shown in Table 2-1. In addition, it shows the children (“Any Problem”) who had significant problems on either the CBCL (symptoms) or CIS (psychosocial functioning) but not both. “No problems” is used to designate the children who were in the normal or borderline range on the CBCL and in the normal or unimpaired range on the CIS.

The Weighted Medicaid total adjusts for the oversample of past mental health service users and the low response rates in order to be representative of the total Medicaid population.⁵² It should be noted that the Weighted Total Medicaid proportion of children with SED (Table 2-2) is lower than that reported in Table 2-1⁵³ because the sample actually interviewed was more likely to be impaired due to their past use of mental health services. For policy planning purposes, the Weighted Medicaid Total in Table 2-2 should be used to reflect the mental

⁵² As discussed in Chapter 1, this is defined as children between the ages of 4-17 who were categorically eligible for Medicaid.

⁵³ CBCL Clinical and CIS Impaired = 53%.

health status and related service needs of the total Mississippi Medicaid population of children ages 4 through 17 years of age.

Table 2-2. Federal SED Status by Weighted Medicaid Total

SED Status	Weighted Total
No Problems	64%
Any Problem	14%
SED	22%
Number in Weighted Sample	130,582

- ◆ Almost one-quarter (22%) of the representative Medicaid total population met the federal criteria for classification as having a serious emotional disorder (SED) at the time of the interview.

Twenty-two percent (22%) of the Medicaid population is equivalent to over 29,000 children ages 4-17 across the state of Mississippi who likely meet the federal criteria for classification as SED. This is approximately double the stated current capacity of the Mississippi Department of Mental Health for publicly-funded community-based services.⁵⁴ The number of children with SED who received any mental health services during the 6 months prior to the interview will be discussed in detail in Chapter 4 below.

It should be noted that children who had a history of mental health service use in the past were significantly more likely to still be rated as SED at the time of their interview. Appendix 2-2 contains information on SED status by study group. Over two thirds (69%) of children in Study Group 3, with a history of high levels of mental health service use during FY1996, could be classified as SED based on their current interview data. The high proportion of children who received mental health services through Medicaid during FY1996 (and thus were included in our interview sample) and then met criteria for SED status at the time of their interview approximately two years later indicates a group of children with chronic and high mental health needs.

Throughout the rest of the report, the tables report children by their SED status. “SED” reflects that the child met criteria for classification. The “no problem” and “any problem” children did not meet federal criteria, so they are combined and shown as “Not SED” in the following tables. However, it should be noted from Table 2-1 that 17% of the interview sample, or over one-third of the “not SED” group of children, was exhibiting significant levels of problems in either emotional or behavioral symptoms (CBCL) or psychosocial functioning (CIS).

⁵⁴ The objective for service delivery in the 1999 MDMH Block Grant plan was to provide community-based services for 14,000 – 16,000 children with SED.

Comparison to Other Studies of SED Prevalence

The level of serious emotional disorders in this Medicaid population is slightly higher than those typically reported in other studies of community samples but within a reasonable range given the characteristics of this Medicaid population. Prevalence estimates of childhood psychopathology in broad community studies have varied widely, from 1 to 51% with a mean of 15.8%.⁵⁵ One reason that the findings in this project may be higher than others is measurement—the CBCL may identify more children than studies that used structured diagnostic interviews. Studies using structured diagnostic interviews with children, instead of the parent questionnaire as in this project, have reported rates of serious emotional disorders from 2%⁵⁶ to 19%⁵⁷ of the populations they included. The prevalence rates in this sample are more similar to those found in a study of children in state custody in Tennessee (31%)⁵⁸ that used similar methods. It should also be noted that the Medicaid population that is the focus of this study is, by virtue of qualifying for Medicaid, primarily composed of poor children or those with disabilities. All studies to date have noted that when socioeconomic status is taken into consideration, children from poorer families have significantly more health and behavioral health problems than other children.⁵⁹

Symptoms

Symptoms, or types of behavioral health problems, were described using the scales on the Child Behavior Checklist (CBCL) (see Table 2-3). Three general scores summarize overall behavioral health: the Total score reports overall symptom levels; the Internalizing score shows problems overall with anxiety, depression, and similar issues, and the Externalizing score gives information on the level of problems with conduct disorders, attention problems, and other “acting out” behavior.

The CBCL scores differed significantly by SED status. For the SED group, 87% of the children were rated at the clinical level on the Externalizing score, and 83% on the internalizing score. Since a clinical score on the Total scale was required for SED classification, all of the SED children were in the clinical range on that scale.⁶⁰

⁵⁵ Roberts, Attkisson, & Rosenblatt, (1998); see also Friedman, Katz-Leavy, Manderscheid, & Sondheimer (1996) for summaries of other studies.

⁵⁶ Costello *et al.* (1996, 1998).

⁵⁷ Jensen *et al.* (1995).

⁵⁸ Heflinger & Simpkins (1998).

⁵⁹ National Health Interview Survey (Adams & Hardy, 1989).

⁶⁰ When the child was age 11 years or older, he/she also answered questions about his/her own behavioral or emotional problems on the Youth Self Report (YSR), a parallel form to the CBCL. Overall, the parent and youth agreed in 60% of the cases. In 18% of the cases, the parent reported significant problems but the youth did not, and in 22% vice versa. The least agreement was on the Internalizing score, where overall agreement was 46%. For all scores, the youth endorsed more items than the parent endorsed for the child. If the scores where the youth scored in the clinical range but the parent did not was added to the above scores, the overall rate of children in the clinical range rises to 70%.

A standardized T-score of 65 or greater on the Total, Externalizing, or Internalizing scales marks the clinical cutoff. In Table 2-3, it can be seen that the mean scores for children in the SED, high user, and low user groups were all above the clinical cutoff.

Overall, a large proportion of children (39%) were rated as clinical on *both* the Internalizing and Externalizing scale, indicating significant problems in both areas.

Table 2-3. CBCL Total, External, and Internal Standardized T-Scores by Weighted Federal SED Status and Weighted Total

	Weighted Federal SED Status		Weighted
	Not SED	SED	Total
Total Problem Score		*	
Non-clinical	81%		63%
Borderline	10%		8%
Clinical	9%	100%	29%
Mean Score	46.64	74.11	52.8
Total Externalizing Score		*	
Non-clinical	80%	2%	63%
Borderline	11%	11%	11%
Clinical	8%	87%	26%
Mean Score	47.96	72.12	53.4
Total Internalizing Score		*	
Non-clinical	92%	4%	72%
Borderline	<1%	13%	3%
Clinical	8%	83%	24%
Mean Score	45.90	69.01	51.1
Number of Interviewed Respondents	225	258	
Number in Weighted Sample	100,517	29,033	130,583

*Group differences are significant at $p < .01$

The CBCL also offers information on the type of emotional and behavioral symptoms displayed by the interview sample. Table 2-4 presents the proportion of children in the unweighted interview sample who scored in the borderline or clinical range in each of the subscales. The table also includes the mean T-score. A T-score of 70 is the cutoff for the clinical range on these subscales, and the group of SED children scored above this cutoff on four of the subscales (attention problems, aggression, thought problems, and social problems). These same four subscales were the ones with the highest proportion of SED children scoring above the clinical level.

Table 2-4. Children with Standardized T-Scores in the Borderline or Clinical Range on the CBCL Subscales by Federal SED Status

	Federal SED Status	
	Not SED	SED
Withdrawn	7%	53%*
Mean Score	53.98	67.81*
Anxious/depressed	5%	55%*
Mean Score	53.92	68.18*
Social Problems	10%	67%*
Mean Score	56.81	71.21*
Thought Problems	15%	76%*
Mean Score	56.00	71.80*
Attention Problems	19%	81%*
Mean Score	58.14	75.39*
Delinquency Problems	9%	61%*
Mean Score	54.88	68.38*
Sexual Problems**	5%	29%*
Mean Score	52.02	59.63*
Somatic Problems	11%	50%*
Mean Score	56.37	65.86*
Aggression	7%	78%*
Mean Score	55.50	75.02*
% of children with 3 or more subscales in borderline or clinical	12%	88%*
Number of Interviewed Respondents	224	258

*Differences significant at $p < .01$.

** This subscale is only used for children ages 4 to 11 years.

Comparison to Other CBCL Studies

Total Problems, Externalizing, and Internalizing scores for the SED group are quite similar to those found in the Fort Bragg Evaluation Project with a sample of treated children.⁶¹ Both the Fort Bragg study and the current study included those with ongoing health insurance.⁶² However, there was a difference between these studies in family socioeconomic status. All families in the Fort Bragg study included at least one employed adult (military), whereas 54% of our Medicaid household included no employed adult. As mentioned above, other studies have found that children from poorer families are reported to have more problems in health and mental health status than children from families with more resources.

The high user group (Study Group 3, see Appendix 2-3) of the current study is quite comparable to other high user groups on CBCL scores. The Stark County Evaluation Project⁶³ looked at children with serious emotional disorders who were placed or at risk of

⁶¹ See Bickman *et al.* (1995).

⁶² In Ft. Bragg, all participants had CHAMPUS health insurance. In this study, all had Medicaid.

⁶³ Bickman, Summerfelt, Firth, & Douglas (1997).

placement out of the home. In that study, 71% of the sample scored in the clinical range for Total Problems, 70% for Externalizing, and 52% for Internalizing scores. These proportions are quite similar to those shown above for the high user group. A four-state⁶⁴ SED population receiving residential treatment had a mean Externalizing score of 73, and an Internalizing score of 72 (compared to the current 72 for Externalizing and 70 for Internalizing for the SED population and 68 and 65 for the high user group). Recall that our high user group is not the same as Silver's high user group in that our high users are not necessarily in residential treatment. Likewise, a small study of SED youth in residential treatment⁶⁵ found 73% in the clinical range on the Total Problems Score (compared to our 75% for the SED group).

Psychosocial Functioning and Impairment

Broadly defined, psychosocial functioning is the level at which an individual meets age-appropriate expectations in a number of domains. Both social and psychological aspects of the child's functioning are taken into account. Success in relationships and activities at home, school, and in the community is the goal for children. When significant problems exist in one or more of these settings, psychosocial impairment is said to be present. Psychosocial functioning is considered separately from diagnosis or symptoms because diagnoses of mental illness are generally considered to be long term since the illness is often chronic in nature, however an individual's level of functioning may differ greatly during the course of the illness.⁶⁶

The Columbia Impairment Scale (CIS) was used in this project to describe psychosocial functioning. The CIS provides an overall score for psychosocial functioning and a cutoff for "impaired" versus "non-impaired" has been determined in a national epidemiological study⁶⁷. Users of mental health services were more often scored as impaired on the CIS than non-users. A full 80% of high users and 67% of low users were in the impaired group while 24% of the non-users were considered impaired (Table 2-5). Because the CIS impairment level was used as one of the dimensions of the federal SED status variable, there is an obvious and direct relationship between CIS impairment status and SED status. All SED children were impaired on the CIS, and children with no SED, by definition, could not score as impaired on this measure.⁶⁸

- ◆ Over one quarter (29%) of the representative Medicaid total scored in the impaired range for psychosocial functioning at the time of the interviews.

Although most of the children with psychosocial impairment also had clinical CBCL scores and were considered SED (22% of the 29%), the remaining children with impairment but not

⁶⁴ Silver, Duchnowski, Katash, Friedman, Eisen, Prange, Brandenburg, & Greenbaum (1992).

⁶⁵ Kelly (1992).

⁶⁶ Canino, Costello, & Angold (1999).

⁶⁷ E.g., Flisher *et al.* (1997).

⁶⁸ CIS as determined from the caregiver interview was compared to the CIS as determined from the child interview for 212 children for whom both were available. Over two-thirds of these interviews were in complete agreement (both impaired or both not impaired). In 4% of the cases the child rated him/herself as impaired while the parent did not do so, and in 27% of the cases the caregiver rated the child as impaired when the child did not do so.

meeting SED criteria should also be of concern since they are exhibiting high levels of problematic behavior at home, school and/or community.⁶⁹

Table 2-5. Columbia Impairment Scale (CIS) by Weighted Federal SED Status and Weighted Total

	Weighted Federal SED Status		Weighted
	Not SED	SED	Total
CIS Rating			
Not impaired (0-15)	91%	-	71%
Impaired (16 +)	9%	100%*	29%
Mean Score	6.84	27.72	11.48
Number of Interviewed Respondents	225	258	
Number in Weighted Sample	101,550	29,033	132,604

*Differences significant at $p < .01$.

Comparison to Other CIS Studies

The findings for the Weighted Total Medicaid population are quite similar to the mean of 11 found by others⁷⁰ for parent ratings on the CIS for their overall population of clinical and community children. However, those community subjects (drawn from school classrooms) scored much lower than the Not SED group (mean 8.1) as did their clinical (who met DSM-III-R criteria) subjects (mean 16.5). A study of abused and non abused children⁷¹ in New York and Puerto Rico, reported much lower CIS scores than those found here. They reported a mean of 8.4 for abused children and 5.6 for non-abused children. This Mississippi Medicaid population appears to be much more impaired than either normal populations or other children with psychiatric diagnoses.

Diagnoses

Two sources of diagnostic information were available for this group of children. First, the parent/caregiver was asked during the interview if his/her child had ever been given a formal mental health diagnosis. This information is reported in Table 2-6. In addition, Medicaid claims and encounter data provided information on professional diagnoses (see Table 2-7).

Parent-Reported Diagnoses

- ◆ Only 25% of the weighted sample of parents of children with SED reported their child had ever received a formal mental health diagnosis.

Parents of children who met the criteria for SED during the interview but were from Study Group 1, who were non-users during FY1996 (see Appendix 2-6), were significantly less likely to have ever been told their child had a mental health diagnosis.

⁶⁹ Angold *et al.* (1999).

⁷⁰ Bird *et al.* (1992).

Table 2-6. Parent-Reported Diagnosis by Weighted Federal SED Status and Weighted Total

	Weighted Federal SED Status		Weighted
	Not SED	SED	Total
Any MH diagnosis	4%	25%*	9%
Number of Children with Diagnosis (Weighted Sample)	4,061	7,242	11,303
Number of Interviewed Respondents	225	258	
Number in Weighted Sample	101,550	29,034	130,584
Diagnoses (% of Any)			
Attention Deficit Disorders			64%
Bi-polar Disorder			4%
Other Depression			7%
Anxiety Disorders			2%
Conduct Disorders			2%
Schizophrenia			2%
Personality Disorders			2%
Post-Traumatic Stress Disorder			1%
Medically-Related Psychiatric Disorders			-
Other Psychoses			1%
Adjustment Disorders			-
Substance Use Disorders			<1%
Other Conditions			32%
Number in Weighted Sample (Children with any Diagnosis)			11,659

*Difference significant at $p \leq .01$.

Of these diagnoses, by far the most prevalent was some form of Attention Deficit Disorder, which was named for 64% of the Weighted Total group whose parents knew of any diagnoses. The next most frequently named diagnosis was depression and bi-polar disorder or conduct disorder. No other diagnosis was reported for as many as 5% of the total youth with a diagnosis.

Diagnoses from Medicaid Administrative Data

A second source of information available about the mental health diagnoses given to these children were the diagnoses used on the encounter/claims data during FY1996. The numbers of children who appeared in the FY1996 Medicaid data with a mental health diagnosis and the types of diagnoses are shown in Table 2-7. Only one quarter (29%) of the children with SED at the time of the interview had a mental health diagnosis in the FY1996 Medicaid data. As noted earlier, the interviews were held approximately two years after the FY1996 time period.

⁷¹ Flisher *et al.* (1997).

Table 2-7. Diagnosis from Medicaid FY1996 Administrative Data
by Weighted Federal SED Status and Weighted Total

	Weighted Federal SED Status		Weighted
	Not SED	SED	Total
Any MH Diagnosis	5%	29%	11%
Number of Children with Diagnosis (Interviewed/Weighted Sample)			
Number of Interviewed Respondents	225	258	
Number in Weighted Sample	101,550	29,033	130,583
Diagnosis (% of Any)			
Attention Deficit Disorders			55%
Conduct Disorders			32%
Schizophrenia			1%
Bi-polar Disorders			1%
Other Depression			17%
Anxiety Disorders			7%
Post-Traumatic Stress Disorder			1%
Adjustment Disorders			3%
Substance Disorders			<1%
Other Psychoses			3%
Personality Disorders			<1%
Other Conditions			13%
Number in Weighted Sample with Any Diagnosis			14,512

*Differences significant at $p < .01$.

- ◆ Less than half (47%) of the parents/caregivers in the interview sample whose child actually had a mental health diagnosis in the FY1996 Medicaid data were aware that their child had any mental health diagnosis.

Although only 164 of the parents/caregivers in the interview sample (483 children) reported that they were aware that their children had ever received a formal mental health diagnosis, the FY1996 Medicaid data showed that more than twice that many of the children in the interview sample (347 children) had actually received a service with a mental health diagnosis during just that one year period. Since it is likely that even more than 347 of the children in the interview sample had received mental health services in other years of Medicaid data had been examined, the proportion of parents who were aware of their child's diagnosis – when one actually appeared in the Medicaid data – would appear to be even less.

Attention deficit disorder was the diagnosis given in the Medicaid administrative data for approximately half of the of children with any mental health diagnosis in the interview sample as well as the Medicaid Weighted Total. The next most frequent diagnosis reported was

some form of conduct disorder, very different from the parent report. Depression was the next most frequent diagnosis in the FY1996 Medicaid claims data.

Whether using parent-reported diagnoses or those recorded by professionals in the Medicaid data, the most frequently mentioned diagnosis was some form of attention deficit disorder. In the Medicaid weighted total, of the children with any diagnosis, it was reported for 64% of the children by the parents/caregivers and for 55% of the children in the Medicaid administrative data. This corresponds to an overall prevalence rate for the Medicaid weighted population of 5.8% and 6.1%, respectively.⁷²

- ◆ Parents and the Medicaid administrative data agreed on some form of Attention Deficit Disorder being the most prevalent mental health diagnosis given to Mississippi Medicaid children. However, the Medicaid data showed that many more children had received a service with a mental health diagnosis, even during the one year reported, than parents were aware of any diagnosis.

Comparison to Studies of Attention Deficit Disorder Prevalence

The prevalence rates of attention deficit disorder reported by parents and claims data for this Mississippi Medicaid population were 5.8% and 6.1%, respectively. This prevalence rate falls within the range for ADHD found in a recent report⁷³ about the 1992 MECA study, where prevalence of ADHD averaged 5.1% but ranged from 1.3% to 9.4% depending on community.

Use of Alcohol and Other Drugs

Growing attention has been paid to the issue of co-occurring mental and substance use disorders among adults and adolescents.⁷⁴ In this study, children age 11 years and older who participated in the interview were asked about their use of alcohol or other drugs. Alcohol or drug use was strong for youth over 12 years old (Table 2-8) when reporting use ever in their lifetime, but relatively minor for more recent use. Proportions of youth who report alcohol or drug use were similar for those with or without SED.

Tables 2-8 and 2-9 show the use of alcohol and other drugs reported by the youth themselves.⁷⁵

⁷² Calculated by multiplying the proportion of the Weighted Total by the proportion of the ADD diagnoses.

⁷³ Jensen *et al.* (1999).

⁷⁴ Hasin & Nunes (1998); Kranzler & Rounsaville (1998); SAMHSA (1999).

⁷⁵ Almost all of the items used to form the alcohol or drug use variable were from the youth protocol. The only item included in both the youth and adult protocols was the CBCL-YSR item (105), asking about use of alcohol or drugs for non-medical purposes. The youth reported significantly more alcohol or drug use on this one item than did the parents. The parent and youth versions of this item were compared for the 206 children over 12 years old for whom the child interview data was available. Almost two-thirds (62%) agreed that the statement was not true (no use), and an additional 2% were in agreement that the statement was sometimes or often true. Two percent of the parents said the statement was true when the child said it was false, but 35% of the children said the statement was true when their parent had said it was false. More than 9 in ten (97%) parents said the statement was false, while only 64% of the children said it was false. A "true" response on either the parent or child report for this item was included as a yes (ever) for the global alcohol and drug item (Table 2-8).

- ◆ Relatively few (5%) of the youth with SED could be said to have a co-occurring substance abuse disorder based on use within the past 6 months.

Table 2-8. Alcohol or Drug Use by Weighted Federal SED Status and Weighted Total

	Weighted Federal SED Status		Weighted Total
	Not SED	SED	
Alcohol or Drug Use*			
Yes, Ever used	55%	53%	54%
Yes, Past 6 mos.	7%	5%	6%
Yes, Past month	<1%	3%	1%
Number of Interviewed Youth Age 12+ Years	84	131	
Number in Weighed Sample	26,500	13,585	40.085

*Differences significant at $p < .01$.

Based on this estimate, however, approximately 2,300 Mississippi Medicaid adolescents would need assessment or treatment for alcohol or drug use and 600 of those youth would need screening for co-occurring mental disorders.⁷⁶ Further analyses on the amounts of substances used and the resulting consequences is being conducted and more information on co-occurring mental and substance disorders will be the subject of a forthcoming paper.

Table 2-9 presents the types of substances reported used by Mississippi Medicaid adolescents who participated in the interview. These rates, in general, are lower than those reported for Mississippi youth in the Mississippi In-School Adolescents Survey⁷⁷ and likely reflects the greater proportion of younger adolescents in the interview sample. It may also indicate reluctance to disclose current use to the interviewer.

Tobacco is an illegal substance for children and youth under age 18 and a health risk, so its use was included in the interview (although not included in Table 2-8). One in 6 of the SED (16%) and one quarter of the high mental health use (23%) youth (see Appendix 2-9) reported ever using tobacco, although many fewer reported current use. Alcohol and cannabis were the substances most frequently reported by Mississippi Medicaid youth overall, as well as by youth with SED.

Alcohol use ever was reported by 16% of youth with SED, but only 1% reported use within the past month. Cannabis was the most frequent drug used, with 13% of SED youth reporting use ever and 1% within the past month. Similar to the findings of the Mississippi substance abuse needs assessment,⁷⁸ the use of “gateway” drugs was the most prevalent. Other drug use was rarely reported by this group of Mississippi

⁷⁶ Further assessment could differentiate between substance use, abuse, and dependence.

⁷⁷ Bureau of Educational Research and Evaluation (1998), see Appendix II.

⁷⁸ Howell, Johnson, Works, & Wells (1998).

Medicaid children between the ages of 12 and 17. Again, these rates were lower than those reported in the Mississippi In-School Adolescents Survey (see Appendix II).

Table 2-9. Substances Used by Youth Age 12+ Years by Weighted Federal SED Status and Weighted Total

	Weighted Federal SED Status		Weighted Total
	Not SED	SED	
Tobacco**			
Ever used	1%	16%	6%
Used past 6 mos	<1%	4%	2%
Used past month	<1%	3%	1%
OTC Drugs			
Ever used	1%	-	<1%
Used past 6 mos	-	-	-
Alcohol			
Ever used	9%	16%	11%
Used past 6 mos	6%	3%	5%
Used past month	1%	1%	1%
Cannabis			
Ever used	7%	13%	9%
Used past 6 mos	-	2%	1%
Used past month	-	1%	<1%
Cocaine			
Ever used	-	<1%	<1%
Heroin			
Ever used	-	-	-
Uppers			
Ever used	-	<1%	<1%
Downers			
Ever used	-	-	-
Inhalants			
Ever used	<1%	-	<1%
Hallucinogens			
Ever used	-	<1%	<1%
Number of Interviewed Youth	84	131	
Number in Weighted Sample	26,500	13,586	40,086

**Note that tobacco use is included in this table for information, but it was not included in the calculation of substance use rates presented in Table 2 -8.

Similar to the Mississippi In-School Adolescents Survey, this group of youth reported essentially no abuse of over-the-counter (OTC) drugs and little use of cocaine, uppers, inhalants, or hallucinogens (see Table 2-9).

Most (79%) of the youth who reported using any of the substances listed in Table 2-9 within the past 6 months reported using two or more of them. The most frequent combinations were: 1) tobacco and alcohol, 2) tobacco and cannabis, and 3) alcohol and cannabis. Several youth reported using all three substances.

What Other Needs Were Demonstrated by Mississippi Medicaid Children?

In addition to the behavioral health needs of this population, described above in Chapter 2, it is important to examine all areas of child functioning to understand the overall context of service needs and use. In this chapter, several other domains that are essential to understanding overall child service needs are described: physical health, education, and legal status.

Physical Health Status

Parents/caregivers were asked to provide information on several issues related to physical health status. First, a global question about current health status – one that is typically included in all health surveys – was used. Next, information on limitations of daily activities due to health problems was included. Finally, parents/caregivers were asked about their children's chronic illnesses.

Current Health Status

Parents were first asked to provide a rating of global health status for their children, similar to the global health question asked in almost every health questionnaire (see Table 3-1).

These findings show consistently poorer health status for this group of children than other samples of American children. The 1995 National Health Interview Survey found that American parents, in general, rated their children as being in excellent or very good health 81% of the time and in poor or fair health only 3%. Poor children in the NHIS, more similar in socioeconomic status to the Mississippi Medicaid children, were rated in excellent or good status 65%. In this Mississippi sample, however, the rates reported by parents for excellent or very good health ranged from a high of 60% (for Study Group 1, see Appendix 3-1) to a low of 43% (for children with SED) (see Table 3-1). The Medicaid Weighted Total was 60% of children rated in excellent or very good health and 19% rated in fair or poor health.

- ◆ Overall 60% of Mississippi Medicaid children were rated as being in excellent or very good health, in contrast to a national sample of similar socioeconomic status with 65%. Children with SED were rated with significantly poorer health status (only 43% rated excellent or very good) than the general Mississippi Medicaid population.

Table 3-1. Child Health Status Reported by Parent/Caregiver
by Weighted Federal SED Status and Weighted Total

	Weighted Federal SED Status		Weighted Total
	Not SED	SED	
Excellent	23%*	13%	21%
Very Good	41%*	30%	39%
Good	23%*	18%	22%
Fair	12%	35%*	17%
Poor	1%	4%*	2%
Number of Interviewed Respondents	210	237	
Number in Weighted Sample	100,700	27,794	128,494

* Differences in proportions were tested by χ^2 for study group and Federal SED status. Both were found statistically significant at $p < .01$. Statistically significant higher ratings are indicated.

Limitations Due to Health Problems

Respondents were also asked about limitations in the child's activity due to health problems using the Physical Activities subscale of the CHQ -50. Limitations are considered a rating of impairment similar to psychosocial functioning described in Chapter 2. Health limitations that were reported are shown in Table 3-2. The more energy required by an activity, the greater the proportion of children who had limitations.

Table 3-2. Activity Limitations Due to Health Problems Reported by Parent/Caregiver
by Weighted Federal SED Status and Weighted Total

Limited Some/ A Lot	Weighted Federal SED Status		Weighted Total
	Not SED	SED	
Any Limitation	23%	50%*	29%
Number of Interviewed Respondents	222	252	
Number in Weighted Sample	101,550	29,033	130,583
Type of Limitation			
Activity Requiring a Lot of Energy			14%
Activity Requiring Some Energy			15%
Getting Around Neighborhood			14%
Walking One Block			12%
Bending/ Lifting			10%
Taking Care of Self			9%

*Differences were significant at $p < .01$.

- ◆ Children with SED were significantly more likely to be reported as having limitations in activities due to health problems than other Mississippi Medicaid children. Half (50%) were rated as having some type of limitation.

Chronic Illnesses and Conditions

Another indication of health status is the presence of a chronic health condition (see Table 3-3). Parents and caregivers were asked if they had ever been told that their child had a chronic medical illness or condition.

- ◆ Half (49%) of the children with SED were reported to have co-occurring chronic health illnesses. Children with SED were significantly more likely to have a chronic illness reported than other Mississippi Medicaid children.

The most frequent types of chronic illnesses reported were asthma and severe allergies, and speech and language and vision problems. Although not statistically significant, children with SED were more likely than other children to have the following chronic conditions: asthma, epilepsy, and hypertension. Overall, the Medicaid Weighted Total showed a rate of 30% for presence of at least one chronic illness or chronic health condition (see Table 3-3).

Table 3-3. Chronic Conditions by Weighted Federal SED Status and Weighted Total

	Weighted Federal SED Status		Weighted Total
	Not SED	SED	
% Any Chronic Condition	24%	49%*	30%
Number of Interviewed Respondents with Any	80	139	
Number in Weighted Sample with Any	24,458	14,102	38,560
Chronic Condition (% of any)			
Asthma			54%
Allergies/sinus			36%
Speech/language			20%
Vision			14%
Otitis media			12%
Mental Retardation			3%
Orthopedic/bone			13%
Gastrointestinal			9%
Respiratory			11%
Epilepsy			10%
Muscle disorder			5%
Hearing Impairment			8%
Hypertension			12%
Leukemia or cancer			<1%
Autism & pervasive DD			<1%
Other disorder			12%

*Differences statistically significant at $p < .01$.

Relationship Between SED and Health Problems

As was shown in Tables 3-1, 3-2, and 3-3 above, children with SED were reported as having less positive health status overall, more limitations due to health, and more chronic illnesses than children with no or lesser emotional/behavioral problems. The relationship between SED and these health status variables was examined in more detail using a series of statistical techniques.⁷⁹ After controlling for demographic factors (age, gender, race) and past use of mental health services,⁸⁰ it was confirmed that children with SED had less positive health status, more limitations, and more chronic illnesses. In addition, it was found that even after controlling for the presence of chronic illnesses, children with SED had less positive health status and more activity limitations due to health problems.

Educational Status

Three aspects of educational status were examined for Medicaid children: school attendance and type, special education assistance, and grade placement.

School Attendance and Type

This study focused on school-aged children⁸¹ and their school attendance and type of school was examined (see Table 3-4).

Most children were in school (99%). The children not in school had been expelled, dropped out, or had medical reasons, and the caregiver of one child said that the public schools would not take the child.⁸² While most children were attending a local public school, (95%), two percent (2%) were schooled at some type of overnight treatment facility, and less than one percent (<1%) were attending each of a local private school, an alternative public school (usually for behavioral problems), and home schooling.

⁷⁹ See Combs-Orme, Heflinger, & Simpkins (1999) for more details on analyses related to health variables.

⁸⁰ Past use of mental health services was included in the analyses to control for potential differences. Use of past mental health services, for instance, may also indicate use of more Medicaid services in general and a greater opportunity for diagnosis of a chronic illness.

⁸¹ Although 11 children were age 4, 98% of the children were ages 5-18.

⁸² Note that children who were too young to attend kindergarten were excluded from these analyses.

Table 3-4. Youth in School and Type of School
by Weighted Federal SED Status and Weighted Total

	Weighted Federal SED Status		Weighted Total
	Not SED	SED	
Currently in School	99%	99%	99%
Number of Interviewed Respondents	206	250	
Number in Weighted Sample	90,464	28,653	121,093
Type of School			
Local Public			95%
Local Private			3%
Alternative Public			<1%
Home School			<1%
Overnight Facility			2%
Day Treatment Facility			<1%
Juvenile Justice Sys			<1%
Other			<1%
Number of Children in School with Type Indicated	191	221	108,785

Note:- indicates no occurrence.

*Differences in type of school child attended were significant at $p < .01$.

Special Education Services

Parent reports of placement in special education classes or the availability of a special aide in the classroom related to the child's emotional/ behavioral problems is shown in Table 3-5.

Table 3-5. Special Education Class and Special Classroom Aide by Federal SED Status

	Federal SED Status	
	Not SED	SED
Special Class	13%	34%*
Not in Special Class but has Aide	2%	7%*
Number of Children	203	246

*Differences in proportions significant at $p < .01$

The likelihood that a child was in a special education class or had a special aide differed significantly by study group (see Appendix 3-5) and federal SED status (see Table 3-5 for unweighted interview sample). Children with a history of mental health service use were significantly more likely to receive special educational services. Similarly, children with SED (34%) were significantly more likely than those with lesser or no problems (13%) to receive special educational services. Approximately one third (34%) of children with SED were being placed in a special education classroom or program, according to parent report.

Grade Placement

Approximately half of the children were placed in a school grade level that was commensurate with their age (see Table 3-6). Several children were placed one to two grades higher than would be expected for their age, and one-third of the children were placed one to two grades behind that expected for their age. There were no significant differences in grade-level placement between children with SED or those without.

Table 3-6. On Grade Level by Federal SED Status

	Federal SED Status	
	Not SED	SED
Working at Grade Level		
No, 2 yrs above	1%	-
No, 1 year above	12%	7%
Yes, On Grade level	57%	57%
No, 1 year below	25%	31%
No, 2 years below	6%	5%
Number of Children	205	240

Legal Status

Parents were asked to provide information on a variety of questions related to their children's legal status. First, a series of questions about the child's arrest and court-related contact history was examined. Next, parents were asked about the custody status of their children.

Arrests and Court-Related Contacts

Overall, fewer than 2% of the Medicaid weighted total (see Appendix 3-7) had ever had any arrests or court-related contacts, and within the past six months, the number of children was less than half that (1%). Children with a history of high levels of mental health service use were more likely to have been arrested or been to court (see Appendix 3-7). Twelve percent of high users had been arrested, 6% in the past 6 months.

- ◆ One in ten (10%) of the children with SED in the interview sample had been arrested, 5% in the past 6 months, compared with 3% of the children without SED.

Children with SED (see Table 3-7 for the unweighted interview sample) were also more likely to have had any of the types of legal contact, ever or in the past six months than other children. These differences were statistically significant for Arrested (ever and past 6 months) for both study group and SED status.

Table 3-7. Legal Involvement by Federal SED Status

	Federal SED Status	
	Not SED	SED
Arrested-Ever	3%	10%*
-Past 6 mos.	2%	5%*
Court –Ever^p	1%	5%
-Past 6 mos.	1%	2%
Probation - Ever^p	2%	4%
-Past 6 mos.	1%	2%
Jail/Detention–Ever	2%	5%
-Past 6 mos.	2%	3%
Secure State-Run Facility – Ever	1%	2%
-Past 6 mos.	1%	1%
Number of children	219	252

Note: – indicates no occurrence, 0% indicates a frequency of less than one-half of 1 percent.

* Differences significant at $p < .01$.

State Custody

Parents/guardians were also asked about the custody status of their children (see Table 3-8).

⁸³ Overall, 6% of the children had been in state custody at some point in their lives. Two percent (2%) of the parents/caregivers had been advised to put their children in state custody to get needed services. Parents/caregivers of children with SED in the interview sample were twice as likely to have been told to put their child in custody to get needed services than children without SED.

Table 3-8. Custody Status by Weighted Total

	Weighted Total
Ever in State Custody	
Yes	6%
Told should be in state custody	
Yes	2%
Number of children	132,534

Note: – indicates no occurrence, 0% indicates a frequency of less than one-half of 1 percent.

The proportions shown in Table 3-8 were tested by χ^2 . No significant differences were found.

⁸³ As discussed in the description of the study sample (p. 3), children who were in state custody or foster care at the time of the Wave 1 interview were excluded.

How Did the Service System Address These Needs?

The Mississippi Medicaid program is designed to provide all of the behavioral health services needed by Medicaid children and adolescents. This chapter examines several issues related to behavioral health and physical health services. First, the behavioral health services received by the children are described. Next, other services related to their children's emotional and behavioral problems are shown, as is the use of psychotropic medication for these children.

Also included is a section on health care service use by this population. Just as this group of children exhibited many behavioral health needs (Chapter 2), they also were reported to have many physical health needs (Chapter 3). The Medicaid program was available to all children who participated in this study as they were all beneficiaries at the time of their baseline interview, as well as during the FY1996 period when the sample was selected (see Chapter 1).

Use of Behavioral Health Services

Table 4-1 shows the proportion of children, by study group and SED status, who had used some type of formal behavioral health service within the past 6 months. Formal behavioral health services were those that were potentially reimbursable by Medicaid. Children in the high user group with a history of mental health service use and children with SED were significantly more likely to have used a behavioral health service than the other children.

- ◆ Approximately half (45%) of the children with SED had used at least one behavioral health service in the past six months.

As can be seen in Table 4-1 children with SED were much more likely to have received a formal behavioral health service (45%) than those with lesser problems (2%).

However, half (55%) of the children with SED had not received any formal behavioral health services during the past 6 months.⁸⁴

⁸⁴ Reasons given by parents/caregivers for their children not receiving services is discussed below in Chapter 5.

It should also be noted that many of the children who had been identified as mental health service users during FY1996 continued to use formal behavioral health services at the time of the interview, approximately two years later (see Appendix 4-1). Almost three-quarters (72%) of the past high-user children and half (51%) of the low-user group used formal behavioral health services during the past 6 months. Few (6%) of children without a history of past mental health service use had received any formal behavioral health services in the past 6 months.

Table 4-1. Formal Behavioral Health Services by Weighted Federal SED Status and Weighted Total

	Federal SED Status		Weighted Total
	Not SED	SED ⁸⁵	
Any Behavioral Health Services	2%	45%*	12%
Number of Interviewed Respondents with any BH Service	60	188	
Number of Interviewed Respondents	219	255	
Number in Weighted Sample with any BH Service	2,245	13,067	15,312
Number in Weighted Sample	101,550	29,033	130,583

*Differences significant at $p < .01$.

The Weighted Medicaid Total estimate of 15,312 Medicaid children and adolescents with a behavioral health service during a 6-month time period corresponds roughly with Mississippi Department of Mental Health Reports that approximately 19,000 children were served through community mental health centers (CMHCs) during the 12-month period in FY1999.

Comparison to Other Estimates of Behavioral Health Service Use

The 12% overall service rate for the Medicaid population reflects the use of a specialty mental health service and falls within the range of other studies of mental health service use. Other studies of specialty mental health service use have ranged from a low of 2-8% of the eligible population⁸⁶ to a high of 11.1%⁸⁷ If parent responses about any type of mental health service (versus use of only specialty mental health services) use is included, the range increases to 15-16%.⁸⁸ It is difficult to make direct comparisons due to the variations in data collection methods and time frames examined.

⁸⁵ Note that the SED rating was derived for the time of the interview, and the service use reported was for the six month period prior to the interview. Therefore, it is possible that there were significant changes in some children's SED status over these 6 months, and that children in the Not SED column who received services may have been more impaired at the start of that period. The relationship of SED status to future service use is being addressed in the follow-up report.

⁸⁶ Bickman *et al.* (1995), Burns *et al.* (1995).

⁸⁷ Leaf *et al.* (1996), based on non-school mental health services.

⁸⁸ Burns *et al.* (1995), Leaf *et al.* (1996), Offord *et al.* (1987).

The rate of 45% service use by children and adolescents with SED (see Table 4-1) appears to exceed the findings of other studies. The MECA study reported a range of mental health service use from 9.2% to 25% depending on community. However the Great Smokey Mountain Study in North Carolina⁸⁹ found that 40%-44% of the children and adolescents with public insurance accessed some type of mental health care over a 2 year time period, with 22% using specialty services within a 3-month period. Others have also reported that children of poverty were more often referred to and more likely used mental health services.⁹⁰

Types and Amounts of Behavioral Health Service Use

The types and amounts of different behavioral health services used that were reported by parents/caregivers are shown in Table 4-2 for those children who had used any type of service. While most children had used only one type of behavioral health service over the past six months, 20% of those with SED had used three or more of the different types of behavioral health services listed in Table 4-2.

Table 4-2. Type of Behavioral Health Services for Children with Any Service by Weighted Federal SED Status and Weighted Total

Number of Different Types of BH Services	Weighted Federal SED Status		Weighted Total
	Not SED	SED	
1			49%
2			43%
3			5%
4			2%
5-6			<1%
Type of Service Used			
Psychiatric Hospital or Unit	7%	10%*	10%
Residential Treatment Center	7%	5%	6%
CMHC	70%	74%	73%
Day Treatment/ Partial Hospital	21%	18%	18%
Other Professional	12%	28%*	25%
Emergency Room	-	1%	1%
Respite Care	-	<1%	<1%
In home Therapist	16%	35%	32%

Note :- indicates no occurrence, 0% indicates a frequency of less than one-half of 1 percent.

*Differences are significant at $p < .05$

Children were most likely to have been seen at a community mental health center (CMHC) (73% of those with any service use in the past 6 months), regardless of their study group (see Appendix 4-2) or SED status (see Table 4-2). Next most frequent was a professional (e.g., psychiatrist, psychologist, or social worker) who the parent did not think was affiliated with a CMHC.

⁸⁹ Burns *et al.* (1995, 1996).

⁹⁰ John, Offord, Boyle, & Racine (1995).

- ◆ Three quarters (74%) of children with SED who had received any formal behavioral health service within the past six months had been seen at a community mental health center.

It is likely this proportion is even higher since much of the day treatment, in-home counseling and school therapy (see Table 4-4) reported by parents may also be taking place through CMHC staff. This issue is being examined through the use of the Medicaid claims data and will be the subject of a future report.

One tenth of the children who had received any service had been placed in a psychiatric hospital within the past 6 months, and 6% had been placed in a residential treatment center. One fourth of the children were reported as being treated by a psychiatrist, psychologist, or social worker not affiliated with a community mental health center. One out of five children with any treatment had participated in a day treatment program.

The majority (71%) of children in the interview sample who had been admitted to a psychiatric hospital during the 6-month time period had also been seen at a community mental health center, indicating an opportunity for coordination of community-based services once the child returned home.

The number of visits (or days of use if a psychiatric hospital or residential treatment center) was also examined (see Table 4-3). CMHCs were the most frequently used service setting, and children who were served there had typically been seen 14 times in the past 6 months, or about 2 times per month, according to parent/caregiver reports. Mississippi Medicaid children in the Weighted Total had typically spent 71 days in a psychiatric hospital in the past 6 months if they had been admitted, or 100 days in a residential treatment center.

Table 4-3. Number of Visits/Days by Type of Formal Behavioral Health Service (for Those with Any Days or Visits) by Weighted Federal SED Status and Weighted Total

	Weighted Federal SED Status		Weighted Total
	Not SED	SED	
Average Days of care or Visits			
Psychiatric Hospital or Unit	142 days* (1.0 average admissions)	62 days (1.3 average admissions)	71 days
Residential Treatment Center	145 days* (1.1 average admissions)	91 days (1.0 average admissions)	100 days
CMHC	16 visits	13visits	14 visits
Day Treatment/ Partial Hospital	65 visits*	39 visits	43 visits
Other Professional	4 visits	6 visits*	6 visits
Emergency Room	-	2 visits	2 visits
Respite Care	-	72 visits*	72 visits
In home Therapist	7 visits	10 visits	9 visits

Note :- indicates no occurrence. *Difference significant at p <.01.

Study Group 3 children, those with a history of high levels of mental health service use, were much more likely to receive any day treatment services and to use many more days when admitted (see Appendix 4-3). The SED children in the weighted sample had typically participated in day treatment for 8 weeks out of the 6-month period prior to the interview.

It should be noted that children with SED at the time of the interview were the only children to have accessed the emergency room or respite care due to emotional or behavioral problems over the past 6 months.

Use of Other Services for Emotional/Behavioral Problems

Tables 4-2 and 4-3 above show the use of formal behavioral health services. However, children can use a wide variety of community services for the emotional or behavioral problems. These may include those in the primary medical sector, the schools, courts, or other specialized programs. Table 4-4 shows the proportion of the interviewed sample who used other services for emotional/behavioral problems, according to their parents/caregivers. The table is divided in two sections showing the group of children who did use formal behavioral health services (see above) and those that did not. These two groups of children differed in their use of other services. Those children who *did* use formal behavioral health services were more likely to use another type of service for emotional/behavioral problems and to use more types of services.

Overall, twenty-one percent (21%) of the children in the interviewed sample with SED who had *not* used a formal behavioral health service *did* access at least one other type of service for emotional/behavioral problems (see Table 4-4). The most often used was a pediatrician or other physician, and almost all of the parents/caregivers reported taking their child to their physician at least once during the past 6 months due to emotional or behavioral problems. School therapists were also widely used (13%) by children who had not used other formal behavioral health services.

The children with SED who HAD used a formal behavioral health service were more likely to have also used another service for emotional or behavioral problems. Almost one-fifth (18%) used another type of service. An equal proportion of children had been taken to see their physician for emotional or behavioral problems (15%), but the most frequently used was a school therapist (see discussion below).

The use of pediatricians or physicians is also evident in the next section below, where the high use of medication for emotional/behavioral problems is discussed.

Table 4-4. Other Services Used by Federal SED Status for Those Who Did or Did Not Receive BH Services by Federal SED Status

	Federal SED Status	
	Not SED	SED
Not Receiving BH Services, Other Services Received	9%	21%
Number of Children Not Receiving BH Service	159	67
Type of Other Service Received:		
Foster Care	-	2%
Jail or Detention	1%	2%
Pediatrician/family MD	8%	15%
School Therapist	6%	13%
Number Receiving Other Services	14	14
Receiving BH Services, Other Services Received	17%	18%
Number of Children Receiving BH Service	60	188
Type of Other Service Received		
Group Home	3%	1%
Foster Care	-	1%
Jail or Detention	3%	3%
Pediatrician or Family MD	10%	15%
School Therapist	27%	44%
Number of Children Receiving Other Services	10	35

Note: - indicates no occurrence.

Many parents/caregivers indicated that their children were seeing a school therapist for emotional/behavioral problems. It is unknown whether parents were describing a school staff member or another professional when they reported that their child was seen by a school therapist. Many of the schools offered therapy through community mental health center personnel who provided services at the school. However, for some of the children with a school therapist, their parent/caregiver had not endorsed that they were being served by a community mental health center and were apparently unaware of the connection.⁹¹

Use of Medication for Emotional/Behavioral Problems

Parents/caregivers were asked whether or not their child had been prescribed medication for emotional/behavioral problems over the past six months (see Table 4-5) and, if yes, the type(s) prescribed (see Table 4-6).

⁹¹ More in depth examination of school-based services would be needed to further clarify which children were actually receiving school-based services from CMHCS versus from other resources.

- ◆ One out of every 12 (8%) of Mississippi Medicaid children were reported to be prescribed medication for emotional or behavioral problems.

Over one quarter (28%) of children with SED were reported to be prescribed medication for emotional/behavioral problems. The average number of medications prescribed was 1.5, with 30% of the children on medication being prescribed two or more medications.

Table 4-5. Use of Medication for Emotional/Behavioral Problems by Weighted Federal SED Status and Weighted Total

	Weighted Federal SED Status		Weighted Total
	Not SED	SED	
Medication for emotional/behavioral Problems Past 6 months	3%	28%*	8%
Number in Weighted Sample on Medication	2,536	8,234	10,770
Number in Weighted Sample	101,550	29,033	130,583
Mean Number of Medications (for those with any)	1.36	1.53*	1.49
Number of Medications (% of any)			
1			70%
2			22%
3+			8%

*Differences significant at $p < .01$.

The types of medications prescribed for emotional or behavioral problems are listed in Table 4-6.

- ◆ The most frequently prescribed medication (48% of children taking any medication) was Ritalin, a CNS stimulant associated with Attention Deficit Disorder, and corresponding to the frequent ADD diagnosis given to these children (see Tables 2-6 and 2-7).

The high rate of Ritalin prescription is a current controversy nationally.⁹²

One third (34%) of the Mississippi Medicaid children who were taking a medication for emotional or behavioral problems were prescribed an antidepressant. A wide variety of sedatives, anti-anxiety, anti-psychotic, antidepressant, stimulant, and other medication had been prescribed (see Table 4-6).

⁹² See Jensen *et al.* (1999).

Table 4-6. Types of Medication for Emotional/Behavioral Problems for Children with Any Medication by Weighted Federal SED Status and Weighted Total

	Weighted Federal SED Status		Weighted Total
	Not SED	SED	
Type of Medication (% of Any)			
Sedatives & Hypnotics	1%	<1%	<1%
Benadryl	1%	<1%	1%
Anti Anxiety Agents	7%	3%	4%
Clorazepate	5%	-	1%
Corgard	-	<1%	<1%
Hydroxyzine (Vistaril)	1%	1%	1%
Trazodon (Desyrel)	-	2%	1%
Anti Psychotic Drugs	12%	14%	14%
Chlompromazine (Thorazine)	-	<1%	<1%
Haldol-d	-	<1%	<1%
Haloperidol (Haldol)	6%	1%	2%
Lithium	1%	1%	1%
Luvox	-	1%	1%
Mellaril	3%	1%	2%
Mesoridiazine (Serentil)	-	<1%	<1%
Moban	-	<1%	<1%
Resperdal	4%	6%	5%
Zyprexa	-	5%	4%
Anti Depressants	9%	41%	34%
Amitriptyline	-	2%	2%
Clomipramine	-	<1%	<1%
Desipramine (Norpramin)	-	1%	1%
Fluoxetine (Prozac)	1%	6%	5%
Imipramine (Tofranil)	3%	20%	16%
Nortriptyline	-	2%	2%
Paxil	-	1%	1%
Remoran	-	1%	<1%
Serzone	1%	1%	1%
Wellbutrin	4%	5%	4%
Zoloft	-	6%	5%
CNS Stimulants	71%	55%	59%
Adderall	4%	6%	6%
Cylert	7%	1%	2%
Dexedrine / dextroamphetamine	1%	7%	6%
Methylphenidate (Ritalin)	59%	44%	48%

Table 4-6 continued

	Federal SED Status		Weighted Total
	Not SED	SED	
Type of Medication (% of Any)			
Anti Hypertensive Agents	22%	12%	12%
Clonidine	22%	12%	14%
Tenex	-	<1%	<1%
Anti Convulsants	12%	12%	12%
Carbamazepine (Tegretol)	1%	3%	3%
Valproic acid (Depakote)	10%	9%	9%
Tranquilizers	2%	5%	5%
Buspar	2%	5%	4%
Stelazin	-	<1%	<1%
Other	1%	4%	3%
Benzotropine (Cogentin)	1%	2%	2%
Melatonin	-	<1%	<1%
Neurontin	-	1%	1%
Number of Children Receiving Any Medication in the Interview Sample	52	148	
Number in Weighted Sample Receiving Any Medication	2,297	4,222	10,604

Notes: Percentages for types of medications are based on the total with any medication, and may add to more than 100% due to multiple medications (up to 5) per child. Also, – indicates no occurrence, 0% indicates a frequency of less than one-half of 1 percent.

Use of Health Services

Parents/caregivers were also asked to provide information on health services for physical health needs during the past 6 months. The types and amounts of health services used is summarized in Table 4-7, as is information on physical health screenings and usual place of care.

Over half of the children (57%) were reported to have had at least one physician office visit in the past six months. Apparently these office visits were primarily for illness, since only 7% were reported to have had a preventive health care screening during that time period. The Medicaid EPSDT program⁹³ mandates that for school-aged children, these visits should take place at least once a year and the goal for states is at least 80% compliance, so for a 6-month period you would expect approximately 40% of the children to have received such a screen.

Despite high contact with a physician, approximately one-quarter of the children also used an emergency room at least once during the 6-month period for a physical health

⁹³ Early and Periodic Screening, Diagnosis, and Treatment Program (HCFA, 1995).

problem. Children with SED were significantly more likely than other Mississippi Medicaid children to have had an emergency room visit for either physical health (Table 4-7) or emotional/behavioral problems (Table 4-3). They were also four times more likely to have been hospitalized for a physical health problem than other Medicaid children.

Table 4-7. Use of Health Services for Physical Health Problems by Weighted Federal SED Status and Weighted Total

	Weighted Federal SED Status		Weighted Total
	Not SED	SED	
Emergency Room			
Any Visits Past 6 Months	22%	37%	25%
Mean Number of Visits	1.6	2.2*	1.8
Hospital-overnight			
Any Overnight Stays Past 6 Months	3%	12%	5%
Mean Number of Visits	1.4	3.2	2.4
Clinic or Physician's Office			
Any Visit Past 6 Months	52%	70%	57%
Mean Number of Visits	2.6	3.5	2.9
Usual Place for Child Health Need—Yes	99%	99%	99%
Type of Place			
Doctor's Office	48%	49%	48%
Hospital/Clinic	16%	11%	15%
Emergency Dept.	3%	<1%	2%
Neighborhood Clinic	31%	39%	33%
Urgent Care Center	<1%	<1%	<1%
Other	2%	<1%	2%
Physical Health Screening			
Yes, Ever	77%	79%	77%
Yes, Past 6 Months	7%	10%	7%
Number of Interviewed Respondents	219	252	
Number in Weighted Sample	101,551	290,033	130,584

*Differences in means significant at $p < .05$.

Almost all (99%) of the parents/caregivers named a specific source of care and most were individual physicians or clinics, which corresponds with Medicaid's goal to link each beneficiary with a primary care provider. These are similar to findings in the National Health Interview Study (NHIS)⁹⁴ that 94% of U.S. children with public insurance report a usual source of care. For this group of Mississippi Medicaid children, the usual source of care was most likely to be a doctor's office (48%) or a neighborhood clinic (33%). Again, this was similar to the NHIS findings for children with public insurance where 62% used a private doctor's office and 30% used a clinic.

⁹⁴ The NHIS is conducted annually. These findings were published for 1993 and later.

How Did Parents and Other Caregivers Perceive Their Children’s Behavioral Health Care Services and the Medicaid Program?

Parents/caregivers provided several types of information on their perceptions of their children’s behavioral health care services and the Medicaid program. First, parents whose children received behavioral health services during the past 6 months were asked to provide ratings of their satisfaction with their children’s providers. Parents whose children did *not* receive any behavioral health services provided information on barriers to care. Next, all parent/caregivers were asked to rate a variety of items about the Mississippi Medicaid program and aspects relating to the benefits package, access, and other types of satisfaction.

Satisfaction with Child’s Behavioral Health Provider

If a child had used a formal behavioral health service during the past six months, their parent/caregiver was asked to answer a series of questions on their satisfaction with the child’s primary behavioral healthcare provider and their services. Table 5-1 presents this provider satisfaction information for those who had used a behavioral health service for the total population and includes the reports for children with serious emotional disorders (SED) and those with lesser problems who received services.

On a series of items about family-friendliness of staff, Mississippi behavioral health providers were rated at or above 85% satisfaction by parents/caregivers of children with SED for:

- ◆ Explaining things and listening carefully to children and their parents;
- ◆ Involving the parent in decisions about the child’s treatment;
- ◆ Treating the parent and child with respect and dignity;
- ◆ Showing respect for the family’s beliefs.

Table 5-1. Parents' Perceptions of Children's Behavioral Health Providers
by Weighted Federal SED Status And Weighted Total for Those Who Received BH Services

How often did you:(usually or always)	Weighted Federal SED Status		Weighted
	Not SED	SED	Total
Get appointment as soon as wanted	92%	93%	93%
Get needed help or advice	56%	62%*	61%
Agency explained things well	96%	92%*	92%
Agency knew what they should about child's problems or services that he/she has received (yes)	93%	92%	92%
Agency listened carefully	95%	94%	94%
Involved as much as wanted in decisions	91%	93%*	93%
Gave hope that child can grow and change	79%	80%	80%
Treated with respect and dignity	99%	95%*	96%
Staff showed respect for family beliefs, customs, etc.	99%	95%*	96%
Worked with staff of same racial or cultural group when important to parent	81%	69%*	70%
Felt that staff discriminated against parent or child because of race or cultural group (no)	96%	96%	96%
Told about different kinds of treatments available for child's condition (yes)	61%	80%*	77%
Staff showed respect for religious choices (yes)	100%	72%*	76%
Asked about including religious leaders in discussions or planning for child (yes) when child was active in religious activities	36%	26%*	27%
Child helped by the treatment he/she received (quite a bit or a great deal)	81%	60%*	63%
Would recommend agency to a friend (yes)	100%	93%*	94%
Overall rating of provider (mean on 0-10 scale)	8.3	8.7*	8.6
Number of Respondents	2,171	12,926	15,098

* Differences were significant at $p < .01$.

Parents/caregivers of children with SED were significantly more satisfied with activities of their children's behavioral health providers regarding sharing of information: getting needed help or advice, being told about different types of treatment available.

Parents/caregivers of children with SED were significantly less satisfied with their child's recent behavioral health provider than other parents on several competence issues, including: working with staff of same cultural group when important, showing respect for religious choices, and including religious leaders in treatment planning when child is active in religious activities.

- ◆ Only 60% of parents/caregivers of children with SED thought their children were being helped quite a bit by the treatment they were receiving.

Despite these concerns, however, parents/caregivers of children with SED gave an overall rating of 8.7 out of 10 to their children's behavioral health provider (see Table 5-1).

Barriers to Treatment for Emotional/Behavioral Problems

When a parent/caregiver reported that a child with SED had *not* used any formal behavioral health services in the past six months, barriers to treatment were examined. For this table, only those children with SED who had *not* received any behavioral health services during the 6 months prior to the interview were included (see Table 5-2). The middle column shows the proportion of parents who reported that the specific barrier was a problem in trying to get needed services, and the right column shows the proportion who reported that the barrier actually prevented their child from accessing the needed service.

Table 5-2 Barriers to Treatment for Parents Whose Children had SED but did not Receive any Behavioral Health Services Within the Past 6 Months

	Problem Getting Needed Treatment	Prevented Treatment
Transportation problems	19%	7%
Medicaid would not pay	9%	7%
Did not have the money	16%	12%
Location not convenient	15%	12%
Appointment times not convenient	10%	6%
Not space available	9%	6%
Had to wait for services	7%	4%
Did not know where to go	21%	18%
Afraid of what family or friends would think	5%	2%
Afraid child would be labeled	15%	6%
Child refused to go	15%	3%
Thought problem not serious	23%	10%
Thought treatment would not help	6%	3%
Other barrier	6%	3%
Number of Children	68	

The most frequently mentioned barrier to obtaining behavioral health services for a child with SED was the parent or caregiver not perceiving the child's problem was serious enough (23%), despite their detailed descriptions of symptoms and psychosocial impairment that led to the child being classified as SED. Similarly, parents/caregivers were concerned about stigma and labeling of their children. Parents also reported that children's refusal to go to services sometimes interfered with or prevented their access to services.

The most frequently mentioned service-related barrier was parents' lack of understanding about the service system – 21% reported that they did not know where to take their child for needed behavioral health services.

The next most frequently mentioned service-related barrier was transportation problems, mentioned by one parent in five whose child with SED had not received any mental health services. There were also concerns that parents/caregivers could not afford to pay for the services themselves – and they had been told that Medicaid would not pay for a service their child needed. Inconvenience of location and appointment times were also mentioned.

Plan Satisfaction: Medicaid Behavioral Health Plan

Parents/caregivers were asked to provide information on their perceptions of their behavioral health plan or benefits under the Medicaid program. These questions were asked of all parents/caregivers whose child had ever received behavioral health services and are included in Table 5-3 below.

Table 5-3. Parents' Perceptions of Medicaid Behavioral Health Plan by Weighted Federal SED Status and Weighted Total

	Weighted Federal SED Status		Weighted Total
	Not SED	SED	
How truthful was written information about benefits? (pretty or very truthful)	100%	99%	99%
Was the amount of forms to fill out reasonable? (usually or always)	33%	36%	35%
Did you get information or decisions needed about services/providers available to you? (usually or always)	36%	28%	31%
How would you rate the following?			
Quality of mental health care (A or B)	68%	70%*	69%
Ease of transportation (A or B)	88%*	47%	61%
Range of covered services (A or B)	93%*	60%	69%
Number of providers to choose (A or B)	76%*	59%	64%
Location of providers (A or B)	88%*	62%	69%
Did Medicaid refuse to pay for any mental health services? (yes, any)	<1%	5%	1%
Inpatient or Residential Care	1%	1%	1%
Prescription Drug	3%	8%	6%
Outpatient Therapy	1%	2%	1%
Other MH Service	1%	1%	1%
Were any visits to a MH or SA provider not covered by Medicaid? (yes)	1%	5%	4%
Would you recommend plan to a friend? (yes)	91%*	89%	90%
Overall Rating of Plan (A or B)	90%*	56%	65%
Overall Rating of Plan (mean on 0-10 scale)	7.9	8.0	8.1
Number of Interviewed Respondents	92	213	
Number in Weighted Sample	7,311	19,920	27,231

*Differences significant at $p < .05$.

Overall, two-thirds (65%) of the parents/caregivers gave the Medicaid behavioral health program an A or B on their report card, and averaged an 8.1 on a 10 point scale. Although there were quite a few respondents who gave grades of C, D, or F and low ratings, most

(90%) said they would recommend their Medicaid behavioral health program to a friend. The general comment by these parents was that the Medicaid program was their only access to behavioral health (or physical health, as will be discussed below), and they were very concerned about losing this coverage.

- ◆ The ratings of parents/caregivers of children with SED differed significantly from those whose children had lesser or no problems on several of the satisfaction items. In all cases, these ratings were lower and indicated significantly less satisfaction with their behavioral health plan under the Medicaid program.

Physical Health Plan Satisfaction: Medicaid

All parents/caregivers were asked to rate their Medicaid physical health plan. Table 5-4 shows the proportions of parents/caregivers who rated various aspects of the program as good or excellent, using a report card system with letter grades.

Table 5-4. Parents' Perceptions of Medicaid Physical Health Plan by Weighted Federal SED Status and Weighted Total

How would you rate the following?	Weighted Federal SED Status		Weighted Total
	Not SED	SED	
Quality of health care (A or B)	93%*	84%	90%
Ease of getting health care (A or B)	95%*	82%	91%
Ease of specialty care (A or B)	84%*	64%	82%
Ease of hospital care (A or B)	95%	95%	95%
Ease of choosing personal dr. (A or B)	68%*	53%	66%
Coverage for preventive care (A or B)	83%*	71%	80%
Coverage for illness visits (A or B)	98%*	96%	98%
Location of doctors' offices (A or B)	81%*	72%	79%
Overall Rating of Plan (A or B)	85%*	61%	80%
Overall Rating of Plan (mean on 0-10 scale)	8.4*	7.9	8.5
Number of Interviewed Respondents	211	241	
Number in Weighted Sample	100,163	28,765	128,928

* Differences significant at $p < .05$.

Overall, the physical health plan and benefits under the Mississippi Medicaid program was given high satisfaction ratings (at or above 90%) for: quality of health care, ease of getting health care and hospital care, and coverage for illness visits.

Almost two-thirds (61%) of the parents/caregivers of children with SED gave the Mississippi Medicaid program a grade of A or B for the physical health plan overall. The aspects rated most highly by this group of parents/caregivers, with satisfaction ratings over 85%, was the coverage for illness visits and the ease of hospital care for physical health problems. The ease of choosing a personal doctor for their child under the Medicaid program received the lowest rating of satisfaction, given a grade of A or B by only half (53%) of the parents/caregivers of children with SED.

Similar to their ratings of the Medicaid behavioral health plan, parents/caregivers of children with SED were significantly less satisfied overall and with several aspects of their Medicaid physical health plan than parents of children with lesser or no problems.

- ◆ Parents/caregivers of children with SED were significantly less satisfied with almost all aspects of their Medicaid physical health plan and benefits than parents of other Mississippi Medicaid children.

Overall, parents/caregivers of children with SED gave poorer letter grades than others for both behavioral and physical health plans under the Mississippi Medicaid program.

Comparison of Satisfaction with Medicaid Physical Health Plan vs. Medicaid Behavioral Health Plan for Parents/Caregivers of Children with SED

Table 5-5 summarizes the satisfaction ratings by parents/caregivers of children with SED with the Medicaid physical and behavioral health plans for children with SED.

Table 5-5. Parents of Children with SED (Weighted Sample) and Their Perceptions of Medicaid Behavioral Health vs. Physical Health Plan

How would you rate the following?	Type of Plan	
	Behavioral Health	Physical Health
Quality of care (A or B)	70%	84%
Ease of choosing provider/doctor (A or B)	59%	53%
Location of doctors' offices (A or B)	62%	72%
Overall Rating of Plan (A or B)	56%	61%
Overall Rating of Plan (mean on 0-10 scale)	8.0	7.9
Number of Interviewed Respondents	213	236
Number in Weighted Sample	19,920	28,765

Parents/caregivers of children with SED generally rated their physical health plan under the Mississippi Medicaid program more positively than their behavioral health plan. They were most satisfied with the quality of care and least satisfied with the ease of choosing a behavioral health provider or doctor for their child.

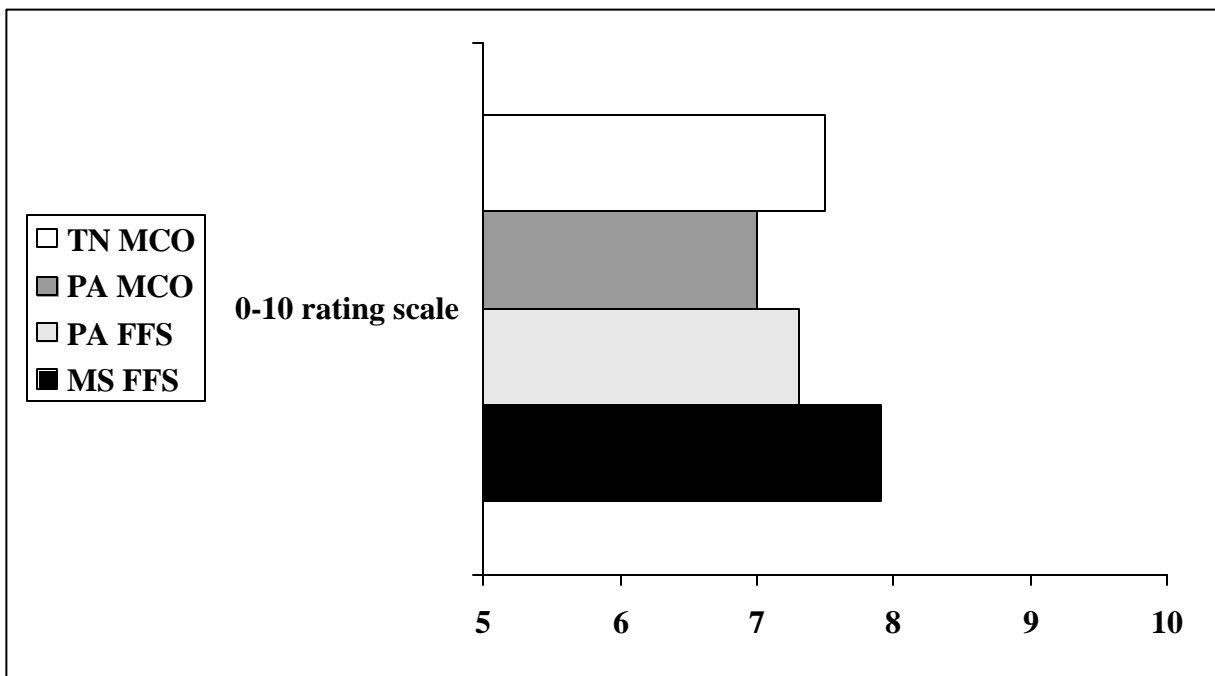


Differences in Parent/Caregiver Satisfaction Across Three States

In a study of parents/caregivers of children with SED across three states who all had Medicaid plans, satisfaction with behavioral health provider, behavioral health plan, and physical health plan was examined.⁹⁵ Three states in the national study collaborated to compare information on Medicaid fee-for-service plans and Medicaid managed care plans. Mississippi's program is fee-for-service for behavioral health services and almost all physical health services (there are a few counties that are starting managed health care plans). In Pennsylvania, there were two groups of children studied – those in the traditional fee-for-service plan and those in a voluntary managed care plan for behavioral health services. Tennessee's TennCare Medicaid plan is managed care for both physical and behavioral health.

Parent satisfaction with their children's behavioral health provider was similar across all three states and did not differ significantly between those children in Medicaid managed care plans and those in Medicaid managed care plans (see Figure 5-1 below).

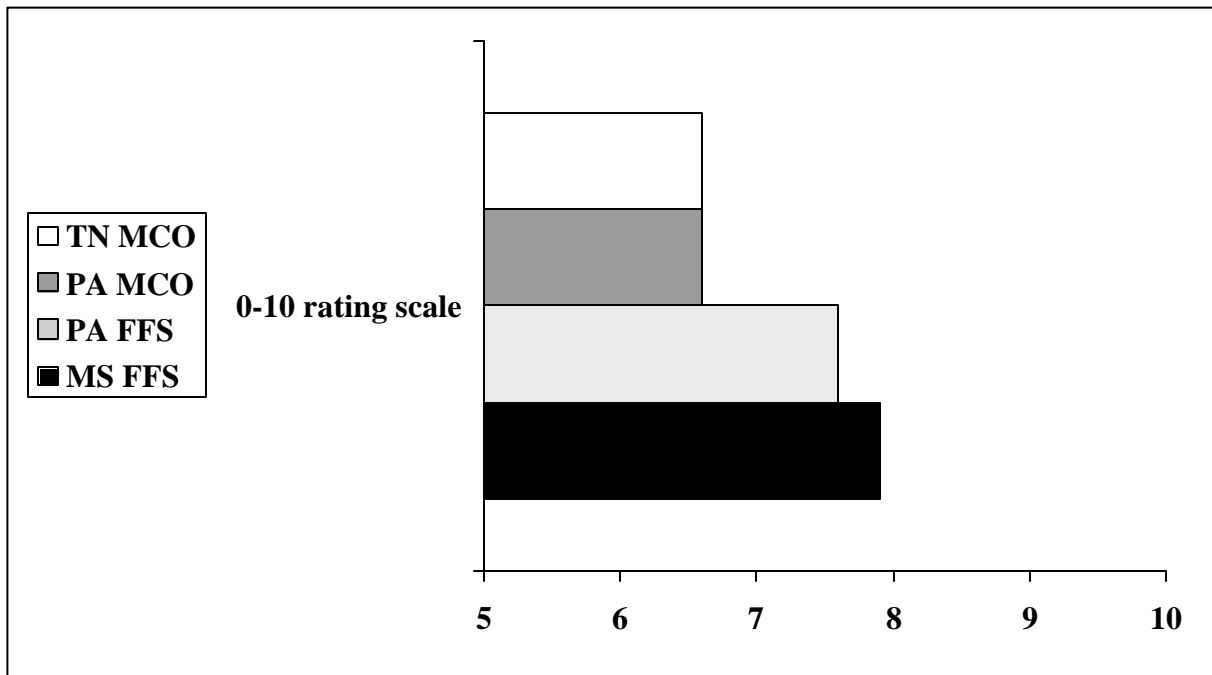
Figure 5-1: Parent/Caregiver Satisfaction with Their Child's Behavioral Health Provider



⁹⁵ Heflinger, Scholle, Simpkins, & Orten (1999).

Next, the study examined satisfaction ratings for the Medicaid behavioral health plans between parents whose children were in managed care versus fee-for-service Medicaid programs. Parent satisfaction differed significantly for both physical and behavioral health Medicaid plans across states and between fee-for-service and managed care plans. In other words, managed care condition DID make a difference when rating Medicaid plans (from 0=as unhelpful as a plan could be, to 10=as helpful as a plan could be). There were significant differences in parent satisfaction with behavioral health care by condition (MC vs. FFS) and by state (PA vs. TN vs. MS) (see Figure 5-2). Satisfaction ratings for fee-for-service Medicaid programs were significantly better than managed care programs. The State where the child lived and received services also made a difference in the caregiver's ratings of satisfaction with behavioral health program -- parent satisfaction with their child's Medicaid plan in Mississippi was rated higher than managed Medicaid in Tennessee; or overall Medicaid plans in Pennsylvania.

Figure 5-2: Parent/Caregiver Satisfaction with Their Medicaid Behavioral Health Plan



Parents and Other Caregivers of Children with SED: Background and Needs⁹⁶

The parents and other caregivers who were interviewed as part of this study shared information about their own and their family resources and needs as well as those of the child who was the focus of the study. This chapter reviews family resources and needs that provide a context for serving the children with SED that have been described in the report above. Parent/caregiver education, income, and health insurance coverage are first discussed. The parent/caregiver's own physical and behavioral health status is described next. Information on family use of behavioral health services is also included. Finally, parent/caregiver reports of the strains they experience because of their child's emotional/behavioral problems are presented as are the resources that have been made available to them to cope with these problems.

Parent/Caregiver Educational Background

Approximately two-thirds (62%) of the parents/caregivers of children with SED had completed high school or some college. A small proportion (3%) had completed college or continued to graduate school. It should be noted that one-third (35%) of the parents/caregivers had not completed high school.

Table 6-1. Parent/Caregiver Educational Background by Study Group and Federal SED Status

Highest Grade Completed	Federal SED Status	
	Not SED	SED
Some High School	31%	35%
Completed High School	39%	34%
Some College or Tech School	24%	28%
Completed College+	6%	3%
Number of Interviewed Respondents	225	257

⁹⁶ Since this chapter focus is on the families of children with SED, only the SED vs. not comparisons will be presented. Since it was the children, not the parents/caregivers, who were representative of the Mississippi Medicaid population, that column has also been omitted from those tables.

Household Income

Table 6-2. Household Income by Federal SED Status

Monthly Income	Federal SED Status	
	Not SED	SED
≤ \$699	27%	20%
\$700-\$1,099	24%	25%
\$1,100-\$1,299	8%	16%
\$1,300-\$1,899	26%	22%
\$1,900+	15%	17%
Mean Monthly Income	\$2,621	\$1,344*
Mean Monthly Income Per Person	\$652	\$337*

*Differences significant at $p < .05$.

SED families had significantly lower total family income, and lower income per person than families of children with lesser problems. The mean monthly income for families with a child with SED was \$1,344, approximately half of what the non-SED families reported.

Table 6-3. Parent/Caregiver Health Insurance Resources

	Federal SED Status	
	Not SED	SED
No Insurance Coverage	40%	45%
Medicaid only	48%	43%
Private Insurance only	8%	10%
Medicaid & Private Insurance	4%	2%
Total Parents	225	258

*Differences were tested by χ^2 and no significant differences were found.

More than four of every 10 (43%) parents/caregivers reported they had no insurance coverage and about the same proportion (45%) had Medicaid coverage only. Only 12% of these parents/caregiver had private insurance coverage. There were no significant differences found in type of insurance coverage for parents/caregivers of children with SED versus those whose children had lesser or no problems.

Parent/Caregiver Health Status

Table 6-4 presents the physical health status and limitation of the parents/caregivers of children with SED and those with lesser problems. On their overall health rating, parents/caregivers of children with SED gave themselves significantly lower ratings. In addition, they reported significantly more problems in 4 of the 5 items in activity limitation.

Table 6-4. Caregiver Health Status by Study Group and Federal SED Status

	Federal SED Status	
	Not SED	SED
Health Rating		*
Excellent	11%	4%
Very good	17%	16%
Good	31%	28%
Fair	28%	35%
Poor	14%	19%
Activities Limited (Some or A Lot)		
Moderate activity	22%	25%
Climbing stairs	29%	39%*
Accomplished less because of physical health (yes)	45%	57%*
Limited in kinds of activities because of physical health (yes)	40%	52%*
Physical pain interfered with work (quite a bit or extremely)	27%	36%*
SF-12 Global Scores (Means)		
SF-12 Physical Functioning Score	64.50	55.98*
SF-12 General Health	46.15	37.50*
SF-12 Role Limitations due to Physical Problems	57.47	45.29*
SF-12 Bodily Pain	65.84	56.88*
SF-12 Social Functioning	74.78	61.14*
SF-12 Vitality	52.14	39.15*

*Differences significant at $p < .01$.

The SF-12 scale scores are formed so that each has a possible range of 0-100 with higher scores indicating better, more positive health.⁹⁷ The scales represent physical functioning, general health, role limitations due to physical condition, bodily pain, and social functioning. On each of these scales, the parents/caregivers of children with SED had scores indicating significantly poorer health status than parents/caregivers of children with lesser or no problems.

In general, these Mississippi parents and caregivers had scores that were comparable to those found in the literature.⁹⁸ However, the mean score on the SF-12 General Health was somewhat lower than the 47.6 and 51.3 in that study for depressed and non-depressed women, respectively in a medical outcomes study of 2,546 women. The Hays study population was not limited to low income participants, which might account for this Mississippi population being showing poorer health than the Hays population. These Mississippi caregivers also had poorer health than their Tennessee counterparts on general health (GH), physical functioning (PF), and role limitations due to physical (RLP) problems (Tennessee means = 47, 68, & 56 for GH, PF, & RLP).

⁹⁷ Ware, Kosinski, & Keller (1996).

⁹⁸ Hays, Sherbourne, & Mazel, 1993; Schofield & Mishra (1998).

Parent/Caregiver Behavioral Health Status

Overall Mental Health Status

The SF-12 also measures mental health status and role limitations due to emotional or mental problems. Similar to their ratings for physical health (above), parents/caregivers of children with SED reported significantly poorer mental health than parents/caregivers of children with lesser or no problems (Table 6-5).

Table 6-5. Caregiver Mental Health Status by Study Group and Federal SED Status

	Federal SED Status	
	Not SED	SED
SF-12 Mental Health	62.38	44.73*
SF-12 Role Limitations due to Emotional Problems	69.87	43.99*

*Differences significant at $p < .01$.

Parent/Caregiver Measure of Depression

One important aspect of parental behavioral health status is the presence of clinical depression or depressive feelings. Many studies of children with special needs have noted that one of the associated family burdens of caring for these children is that of parental distress.⁹⁹ In this section, findings are reported regarding parent's/caregiver's own feelings of depression. Below (see Table 6-9), parent/caregiver feelings of strain are reported specifically regarding their child's emotional/behavioral problems.

Parents/caregivers were asked to answer questions on the CES-D about their recent feelings. This scale measures depression (see Table 6-6). Overall, 26% of the parents reported feelings of depression that were at or above the clinical cutoff, indicating need for treatment. On all of the 11 items, parents of children with SED scored significantly higher (more depressed) than parents of children with no or lesser emotional/behavioral problems.

The Mississippi caregivers were much more depressed than other community populations. One study¹⁰⁰ found CES-D mean scores ranging from 10.9 for women with a medical problem (benign tumor) to 12.6 for mothers of 5-6 year old children (compared to the 16.1 for Mississippi caregivers). Only students and single teenaged mothers had higher CES-D scores (17.0 and 19.2, respectively), both of whom have traditionally been shown to be more depressed than general populations. Another study¹⁰¹ of 1,735 Hispanic women reported a mean score of 9.27, with 17% having scores of 16 or more. In the present study, the mean

⁹⁹ See Brannan & Heflinger, 1999.

¹⁰⁰ Carpenter *et al.* (1998).

¹⁰¹ Garcia and Marks (1989).

was 16.11 and 51% scored 16 or more. The cut-point of 16 was established¹⁰² as the point where approximately 20% of a community population would fall in the 'high' range, and was used as an indicator of 'depressed mood', not clinical depression. For clinical depression,¹⁰³ a cut-point of 22 identified more than 90% of depression cases. Obviously, this population of parents/caregivers of Mississippi Medicaid children has much more depressed mood (51%) than the 20% generally found, indeed, the proportion with clinical depression (26%) exceeds that generally found for depressed mood.

Table 6-6. Parent/Caregiver Depression on the CES-D by Federal SED Status

CES-D Problems Experiences Most of the Time	Federal SED Status	
	Not SED	SED
Poor appetite	13%	16%*
Depressed	16%	33%*
Everything was an effort	22%	36%*
Sleep was restless	22%	42%*
I was happy (hardly ever)	47%	23%*
I felt lonely	12%	21%*
People were unfriendly	5%	10%*
I enjoyed life (hardly ever)	11%	15%*
I felt sad	12%	16%*
I felt people dislike me	4%	17%*
I could not get going	13%	26%*
CES-D Score ¹⁰⁴ (Mean on scale 0-60)	12.84	18.95*
Percent Depression (scale > 21)	14%	36%*
Percent Depressed mood (scale > 16 and < 22)	22%	28%
Number of Interviewed Respondents	224	258

*Differences significant at $p < .01$.

Parent/Caregiver Use of Alcohol and Other Drugs

Parental use of alcohol and drugs was also examined. Table 6-7 summarizes parent/caregiver responses about their use of alcohol or illegal drugs or abuse of legal (prescription or over-the-counter) drugs. Approximately one quarter (27%) overall of the parents/caregivers reported some use, primarily of alcohol, less than 3% disclosed heavy use of alcohol. Four percent (4%) reported using illegal drugs and 4% reported abuse of prescription or over-the-counter drugs. Although parents/caregivers of children with SED reported significantly more use, there were no differences between groups for heavy alcohol use or any drug use.

¹⁰² See Weissman, Sholomskas, Pottenger *et al.* (1977).

¹⁰³ Shrout & Yager (1989).

¹⁰⁴ For Comparison with National norms, the total CES-D scale was transformed from the 11 item scale to the full scale using the transformations specified in Carpenter, Andrykowski, Wilson *et al.* (1998).

Table 6-7. Parent/Caregiver Use of Alcohol or Drugs by Federal SED Status

	Federal SED Status	
	Not SED	SED
Alcohol or Drugs (% any use)	23%	30%*
Heavy Alcohol Use ¹	2%	4%
Any Use of Illegal Drugs	4%	4%
Any Abuse Legal Drugs	2%	5%
Number of Respondents	225	258

¹ Alcohol use 5 or more days in past month with average use per day 3 or more drinks.

*Differences significant at $p < .01$.

Family Use of Behavioral Health Services

Table 6-8 presents the family use of mental health services and use of mental or substance abuse hospitals. Families of SED children had significantly more members who had used mental health services (61% vs 44%) than parents/caregivers of children with lesser or no problems. They also had significantly more members who had used mental health or substance abuse inpatient facilities. The parents/caregivers of SED children were themselves significantly more likely to have seen a mental health or substance abuse professional at any time, and within the past 6 months, and they were more likely to have a history of mental or substance abuse hospitalization than were parents/caregivers of children with lesser or no problems.

Table 6-8. Family Use of Behavioral Health Services by Federal SED Status for Total Sample

	Federal SED Status	
	Not SED	SED
Family Use of MH services¹		
Any	44%	61%*
One other ¹ member has used MH services- Ever	26%	29%
Two or more members have used MH services – Ever	18%	32%*
Parent/Caregiver Saw MH/ SA Professional-Ever	25%	45%*
Parent/Caregiver Saw MH/ SA Professional – Past 6 Months	10%	25%*
Family Use of MH/SA Hospital/ Residential		
None	83%	70%*
One other member has used MH/SA hospital- Ever	13%	21%*
Two or more member have used MH/SA hospital- Ever	4%	9%*
Parent/Caregiver Used MH/SA Hospital – Ever	13%	22%*
Parent/Caregiver Used MH/SA Hospital – Past 6 Months	1%	4%
Number of Families	224	258

¹ Excluding the target child.

* Differences significant at $p < .01$.

Parent/Caregiver Strain Related to their Child's Emotional/Behavioral Problems

There has been a growing recognition that parents and caregivers of children with emotional/behavioral problems experience strain related to those problems. Similar to groups of parents caring for children with disabilities or chronic illnesses, parents of children with SED have reported high levels of distress and depression (see Table 6-6). This study included two types of questions specifically related to the strain on the parent/caregiver and family because of children's emotional and behavioral problems. First, the results of the Caregiver Strain Questionnaire¹⁰⁵ are presented. Next, financial consequences of the child's emotional and behavioral problems are discussed.

Caregiver Strain Questionnaire

Table 6-9 shows the results of the Caregiver Strain Questionnaire.

Table 6-9 Parent/Caregiver Strain by Study Group and Federal SED Status for Total Sample

How Much of a Problem Were:(Quite a Bit or Very Much)	Federal SED Status	
	Not SED	SED
Interruptions of personal time	17%	45%*
Missing work or neglecting duties	10%	33%*
Disruptions of family routines	8%	33%*
Family members having do without things	4%	17%*
Family members suffering negative mental or physical effects	4%	19%*
Child getting into trouble with neighbors	1%	16%*
Financial strain for you family	4%	17%*
Less attention paid to any family member	5%	20%*
Disruption or upset of relationships within the family	4%	22%*
Disruption of social activities	3%	20%*
Felt socially isolated	7%	30%*
Felt sad or unhappy	22%	53%*
Felt embarrassed	5%	31%*
Related well with child	90%	89%
Felt angry toward child	7%	29%*
Felt worried about child's future	51%	82%*
Felt worried about family's future	23%	53%*
Felt guilty	20%	46%*
Felt resentful toward child	6%	10%
Felt tired or strained	19%	49%*
Overall toll of child's problems	12%	45%*
Objective Strain Score (Mean on Scale 0-3)	1.45	2.35*
Subjective External Strain Score (Mean on Scale 0-3)	1.52	2.09*
Subjective Internal Strain Score (Mean on Scale 0-3)	2.36	3.39*
Number of Interviewed Respondents	111	236

* Differences significant at $p < .01$.

¹⁰⁵ Brannan, Heflinger, & Bickman (1997).

On 19 of the 21 items related to caregiver strain, parents of children with SED reported significantly more problems than parents of children with lesser emotional/behavioral problems.

Parents reported the amount of problem they experienced due to their child's emotional and behavioral problems (see Table 6-9). The types of problems most frequently reported by parents/cargivers of children with SED were:

- ◆ Worried about the child's future (82%)
- ◆ Worried about family's future (53%)
- ◆ Feelings of sadness or unhappiness (53%)
- ◆ Feeling tired and strained (49%)
- ◆ Feeling guilty (46%)

The greatest overall area of caregiver strain reported was related to the parent's feelings of sadness, anxiety, and worry (Subjective Internal Strain).

Overall, these parents/caregivers reported similar concerns regarding the family impact of a child with SED as did parents of a group of treated children in the Fort Bragg Evaluation Project.¹⁰⁶ However, the Mississippi Medicaid parents/caregivers reported greater levels of objective strain, or problems in daily living. For instance, the difficulties that Mississippi parents/caregivers of children with SED reported at significantly higher levels included: in missing work or neglecting other duties, family members having to do without things, child having problems with neighbors or the law, financial strain. In addition, Mississippi parents/caregivers reported significantly more worry about the child's and family's future. These differences may be reflections of different family experiences due to their level of resources since the families in the Fort Bragg Evaluation, with less reported difficulties in daily activities, had substantially higher levels of employment and income.

Financial Consequences of Child's Emotional/Behavioral Problems

Parents were also asked about certain financial consequences of their children's emotional/behavioral problems (see Table 6-10).

Parents/caregivers of children with SED consistently reported more financial consequences as a result of their children's emotional/behavioral problems. Over half (63%) of the parents of children with SED reported missing some work, on average 13.8 days, because of their child's problems. Other financial consequences were also reported:

- ◆ Fourteen percent (14%) of the parents/caregivers had been fired from their job due to the child's problems;
- ◆ Parent/caregivers traveled an average of 546 miles and 32 hours to take their child to mental health appointments during the past 6 months;
- ◆ 48% reported items within their home had been damaged, with an average value of \$328;

¹⁰⁶ Brannan, Heflinger, & Bickman (1997).

- ◆ 24% reported that other items in the community had been damaged, with an average value of \$300;
- ◆ 33% reported that the child had injured himself or another person.

Table 6-10. Financial Consequences Past 6 Months of Child's Emotional/Behavioral Problems by Federal SED Status

	Federal SED Status	
	Not SED	SED
Missed work		
% yes	41%	63%*
Mean Days missed (% of yes)	3.73	13.80
Been fired because of something related to child (yes)	6%	14%
Any family member missed school to deal with child's problems (yes)	8%	19%*
Hours spent traveling (Past 6 months) (of # yes)		
Mean hours	16.69	32.07
Median hours	4	12
Miles traveled to see/take child to receive help		
Mean miles	222.8	545.9*
Median miles	30	180
Has child damaged family belongings as a result of emotional / behavioral problems (yes)	14%	48%*
Mean \$ value of damage	\$84.58	\$327.57
Median \$ value of damage	\$45	\$100
Has child damaged neighbors, friends belongings (yes)	7%	24%*
Mean \$ value	\$84.80	\$300.25
Median \$ value	\$30	\$100
Has child injured him/her self or hurt another person (yes)	10%	33%*
Did injuries require medical care (yes)	0%	26%
Number of Respondents	91	233

* Differences significant at $p < .01$.

Parent/Caregiver Services Received Related to their Child's Emotional/Behavioral Problems

Despite the documented needs of family members (above), where high levels of depression, caregiver strain, and financial consequences had been reported, relatively few of them had been offered any parent support services (see Table 6-11).

Although parents/caregivers of children with SED were more likely to receive some type of family services, relatively few of them had received any. Less than one-fifth of all the parents/caregivers of children with SED had been given written materials about their children’s problems, been offered parent classes or seminars, or been referred to a parent support or advocacy group during the past 6 months. It should be noted, however, that most of those who were referred to a parent support or advocacy group did not attend at least once. Essentially no parents/caregivers had received wraparound services such as sitters, household, or financial help.

Table 6-11. Parent/Caregiver Services Received Related to Their Child’s Emotional/Behavioral Problems

Parent Services Received	Federal SED Status	
	Not SED	SED
Written Materials About Child’s Problems	6%	17%*
Offered Classes or Seminars	8%	14%
Referred to Parent Support Group or Advocacy	5%	13%*
Attended Parent Support Group or Advocacy	5%	11%
Respite Care/Sitter Services in Your Home	-	1%
Help With Household Responsibilities	0%	0%
Money for Rent, Utilities, etc.	1%	3%
Number of Respondents	224	258

*Differences significant at $p < .05$.

Summary and Implications

This report is the first in a series of reports from the IMPACT Study and includes information from a baseline parent interview on the mental health status and the health status of children served under the Mississippi Medicaid program, their use of mental health and other services, parent satisfaction with services, and family issues that may impact service delivery. The focus of this project and this report was on children with serious emotional disorders, but information on a representative sample of Mississippi Medicaid children was also included.

Several themes emerged across Chapters 3 through 6 discussed in detail above and are summarized below. Implications for services and policy are also reported.

Mississippi Medicaid Children Demonstrated a High Level of Mental Health Needs

- ◆ Almost one-quarter (22%) of the representative Medicaid total population met the federal criteria for classification as having a serious emotional disorder (SED) at the time of the interview. The level of serious emotional disorders in this Medicaid population is slightly greater than those typically reported in other studies of community samples but within a reasonable range given the characteristics of this Medicaid population.
- ◆ The group of Mississippi Medicaid children and adolescents with SED includes a group who have demonstrated chronic and long-term mental health needs.

Implications for Services and Policy

Twenty-two percent (22%) of the Medicaid population is equivalent to over 29,000 children ages 4-17 across the state of Mississippi who likely meet the federal criteria for classification as SED. This is approximately double the stated current capacity of the Mississippi Department of Mental Health for publicly-funded community-based services.¹⁰⁷

¹⁰⁷ The objective for service delivery in the 1999 MDMH Block Grant plan was to provide community-based services for 14,000 – 16,000 children with SED.

- ◆ More resources are needed to screen, identify, and serve children and youth with SED across the state of Mississippi in order to meet the level of need demonstrated in this study.
- ◆ Three-quarters of the Mississippi Medicaid children and adolescents with SED appear to have chronic and long-term needs. Services for these youth and their families need to include a comprehensive array of services to work toward maximum functioning in a community-based setting. Long term planning efforts must include the other community service providers that are involved with these children as well as the children themselves and their family members and other caregivers.

Mississippi Medicaid Children Were Able to Access Behavioral Health Services More Often than Reported in Most Other National Reports

- ◆ Overall, 12% of the Mississippi Medicaid population of children and adolescents used some type of formal behavioral health service within the past 6 months.
- ◆ Almost half (45%) of children and adolescents with SED had accessed at least one type of behavioral health service.

Implications for Services and Policy

The rate of 45% service use by children and adolescents with SED appears to exceed the findings of other studies published to date, indicating that Mississippi Medicaid children with SED were able to access behavioral health services more often than children with SED in other parts of the country.

There appears to be a widespread base of behavioral health services in Mississippi that have identified and served almost half of the children and adolescents who met SED criteria in this study. The existing network of community-based and residential treatment options can be used to build a more extensive, coordinated system of care for children and adolescents with SED and their families across the state of Mississippi.

Mississippi Community Mental Health Centers were the Most Frequent Provider of Mental Health Services

Children were most likely to have been seen at a community mental health center (CMHC), regardless of their study group or SED status.

- ◆ Three quarters (74%) of children with SED who had received any formal behavioral health service within the past six months had been seen at a community mental health center.

It is likely this proportion is even higher since much of the day treatment, in-home counseling and school therapy reported by parents may also be provided through CMHC staff.

Implications for Services and Policy

The Mississippi CMHCs are serving the largest group of group of children and adolescents with SED, including those with chronic and long-term needs. CMHC staff need the resources to continue to serve this number and more since over half of the children with SED are not currently receiving any behavioral health services. CMHC staff also need training and incentives to develop long-term plans that address social, educational, vocational, and development strengths and needs of these children and the family members who support them.

Mississippi Medicaid Children Had Access to Medical Care

- ◆ 99% of the parents/caregivers named a specific source of care and most were individual physicians or clinics, which corresponds with Medicaid's goal to link each beneficiary with a primary care provider.¹⁰⁸

These are similar to findings in the National Health Interview Study (NHIS)¹⁰⁹ that 94% of U.S. children with public insurance report a usual source of care. For this group of Mississippi Medicaid children, the usual source of care was most likely to be a doctor's office (48%) or a neighborhood clinic (33%). Again, this was similar to the NHIS findings for children with public insurance where 62% used a private doctor's office and 30% used a clinic.

- ◆ Overall, the physical health plan and benefits under the Mississippi Medicaid program was given high satisfaction ratings (at or above 90%) for: quality of health care, ease of getting health care and hospital care, and coverage for illness visits.

Implications for Services and Policy

The Mississippi Medicaid program should continue to support a primary care provider model that provides each child with a "medical home." Resources and incentives should be provided to allow continuity of care for long-term health planning for these children, and to increase their access to preventive care, discussed below.

Parents/Caregivers of Mississippi Medicaid Children Were Satisfied with Many Aspects of their Behavioral and Physical Health Services and Plans

On a series of items about family-friendliness of staff, Mississippi behavioral health providers were rated at or above 85% satisfaction by parents/caregivers of children with SED for:

- ◆ Explaining things and listening carefully to children and their parents;
- ◆ Involving the parent in decisions about the child's treatment;

¹⁰⁸ Note that the study sample did not include children from the counties where the Mississippi Primary Care Case Management demonstration was being implemented.

¹⁰⁹ The NHIS is conducted annually. These findings were reported in 1993 and later.

- ◆ Treating the parent and child with respect and dignity;
- ◆ Showing respect for the family's beliefs.

Parents/caregivers of children with SED were significantly more satisfied than others with activities of their children's behavioral health providers regarding sharing of information: getting needed help or advice, and being told about different types of treatment available.

- ◆ Parents/caregivers of children with SED in Mississippi gave significantly higher satisfaction ratings for their Medicaid plan than did parents of similar children in two other states and those whose children were in Medicaid managed behavioral health programs.

Implications for Services and Policy

Mississippi Medicaid providers need the resources and incentives to continue to work toward family-friendly and effective behavioral health care, particularly for children and adolescents with SED.

Mississippi Medicaid Children Demonstrated a High Level of Health Problems

- ◆ Overall, 60% of Mississippi Medicaid children were rated as being in excellent or very good health, in contrast to a national sample of similar socioeconomic status with 65%. Children with SED were rated with significantly poorer health status (only 43% rated excellent or very good) than the general Mississippi Medicaid population.

Children with SED Had More Health Problems than Other Mississippi Medicaid Children

- ◆ Children and adolescents with SED displayed many physical health problems and at significantly higher levels than other Mississippi Medicaid children. They were:
 - ◆ reported to have co-occurring chronic health conditions (49%);
 - ◆ in substantially poorer health status overall;
 - ◆ significantly more likely than other children to be reported as having limitations in activities due to health problems;
 - ◆ more likely to be seen by a physician for an illness visit within the past 6 months;
 - ◆ more likely than other Mississippi Medicaid children to have been seen in an emergency room for physical and emotional/behavioral problems; and
 - ◆ four times more likely to have been admitted to a hospital for an overnight stay for physical illness or accidents.

Implications for Services and Policy

Mississippi Medicaid children and adolescents with SED are in poorer health status and use more services for illness and emergencies than other children. The ongoing availability of Medicaid services to address these health problems is critical.

- ◆ Physical and behavioral health services for children with SED must be coordinated and develop comprehensive long-term plans to work toward improved physical and behavioral health status and maximizing the ability of these children to lead productive lives in the community.
- ◆ Coordination at the child and family, services, and policy-planning level should take place to comprehensively address the physical and behavioral health needs of children and adolescents with SED and their families.

Many Children with SED Experienced Gaps in Service Delivery

Behavioral Health

Children who did not have a history of mental health service use¹¹⁰ but who were exhibiting high levels of emotional and behavioral problems were much less likely to have received any mental health services over the past 6 months (only 38%%) than children who were “known to the system” by their previous mental health service use (75% for those with some past mental health services, and 80% for those with a history of high levels of service use).¹¹¹

- ◆ Overall, half (55%) of the children with SED had not received any formal behavioral health services during the past 6 months.¹¹²
- ◆ Parents of 40% of the children with SED who HAD received a behavioral health service did not think that service was helping their child.

Parents/caregivers of children with SED generally rated their physical health plan under the Mississippi Medicaid program more positively than their behavioral health plan. They were most satisfied with the quality of care and least satisfied with the ease of choosing a behavioral health provider or doctor for their child.

Physical Health

Over half of the children (57%) were reported to have had at least one physician office visit in the past six months. Apparently these office visits were primarily for illness, since only 7% were reported to have had a preventive health care screening during that time period. The Medicaid EPSDT program¹¹³ mandates that for school-aged children, these visits should take place at least once a year and the goal for states is at least 80% compliance, so for a 6-

¹¹⁰ Based on 1995-1996 Medicaid claims data, see Chapter 1 for a description of the Study Groups included. Study Group 1 were children who did not access any mental health services during that FY1996 year.

¹¹¹ See Appendix 4-1A.

¹¹² Reasons given by parents/caregivers for their children not receiving services is discussed below in Chapter 5.

¹¹³ Early and Periodic Screening, Diagnosis, and Treatment Program (HCFA, 1995).

month period you would expect approximately 40% of the children to have received such a screen.

- ◆ Parents/caregivers of children with SED were significantly less satisfied with almost all aspects of their Medicaid physical health plan and benefits than parents of other Mississippi Medicaid children.

Implications for Services and Policy

Outreach and coordination is critical for all Mississippi Medicaid children, but particularly for children and adolescents with SED. In addition, monitoring of clinical outcomes is needed.

Outreach

Family outreach is critical with the Medicaid population. . Helping families identify their children's physical and behavioral health needs and the resources available to them to address those needs is a basic step not only in implementing the EPSDT program but in managing any health care system. The Medicaid population needs education in the use of primary health care, seeking of preventive care, and obtaining needed mental health and substance abuse services for their children and families so that they can actively participate in maintaining and improving the health and behavioral health status of their family members.

- ◆ Parents and adolescents also need information to recognize signs of mental health and substance abuse problems and the importance of early diagnosis and intervention.
- ◆ These efforts could be coordinated with other community initiatives such as the CHIP program or the school health program.
- ◆ Parents and adolescents need motivation to seek well-child care, for instance, physical health providers should take the opportunity at sick-child visits and behavioral health providers on at least an annual basis to explain the well-child program, strongly recommend a return visit, and provide other support for arranging a return visit.

Coordination of Behavioral and Physical Health

- ◆ At the child or patient level, health and behavioral health providers need to keep each other informed about their work with a specific child and coordinate referrals, medication monitoring, and other service delivery. At all contacts with health care providers where a behavioral health diagnosis is made, health providers should inquire about using behavioral health services and, if being used, should contact that behavioral health service provider. If there is no ongoing behavioral health care, all health care contacts requiring more than pharmacy, lab, or primary care provider (PCP) office visit should result in referral to behavioral health specialist and follow-up on the part of the health care provider. All behavioral health providers should seek consent at intake to share information with PCPs and other relevant health care providers and, subsequently, at a minimum provide ongoing written communication about the course of behavioral health care.
- ◆ At the family level, parents of Mississippi Medicaid children need information on the physical and behavioral benefits available under the plan and the network of providers

that are available in the community. Family members need support in coordinating their child's physical and behavioral health services .

- ◆ At the community level, health and behavioral health providers need information about the available service networks and opportunities to work together to conduct community needs assessment and to build provider networks to include the specialists needed for this population.
- ◆ Medicaid monitoring of the implementation of the EPSDT program should include the inclusion of behavioral health screening by PCPs and the communication between physical and behavioral health providers in coordinating services for this population.

Monitoring of Clinical Outcomes

Behavioral health providers and the Medicaid program should consider a system of monitoring of clinical outcomes that would describe the served population, gauge the effectiveness of services, and monitor the well-being of the children and adolescents being served. This system would be critical for policy planning, quality assurance and improvement, and other monitoring efforts. Providers and insurers across the country are developing and applying clinical outcome monitoring systems that should be considered for use with this population. Such a clinical outcomes monitoring system could be used with the Medicaid claims data to describe, for instance, patterns of service use and associated outcomes.

Children with SED Used a Greater Amount of Physical Health Services than Other Mississippi Medicaid Children

Despite high contact with a physician, approximately one-quarter of the children with SED also used an emergency room at least once during the 6-month period for a physical health problem. Children with SED were significantly more likely than other Mississippi Medicaid children to have had an emergency room visit for either physical health (Table 4-7) or emotional/behavioral problems (Table 4-3). They were also four times more likely to have been hospitalized for a physical health problem than other Medicaid children.

Implications for Services and Policy

As discussed above, outreach regarding well-child care and coordination of physical and behavioral health services must take place in order to promote the use of early intervention for problems instead of relying on emergency and inpatient care for crises.

Families of Children with Serious Emotional Disorders Demonstrated High Levels of Needs

Many Mississippi parents/caregivers did not perceive mental health services as being needed or helpful for their children:

- ◆ The most frequently mentioned barrier to obtaining behavioral health services for a child with SED was the parent or caregiver not perceiving the child's problem was serious enough, despite their detailed descriptions of symptoms and psychosocial functioning impairment that led to the child being classified as SED.
- ◆ 40% of the parents/caregivers of children with SED whose children WERE receiving services did not think the child was being substantially helped by that service.
- ◆ Parents/caregivers were concerned about stigma and labeling of their children.

Parents/caregivers of children with SED who were accessing behavioral health services were significantly more satisfied with activities of their children's providers regarding sharing of information: getting needed help or advice, being told about different types of treatment available. However, parents of children with SED also reported many information gaps:

- ◆ Over half of the parents/caregivers of children that had mental health diagnoses in the Medicaid claims data were under the impression that their child had never received any type of mental health diagnosis.
- ◆ The most frequently mentioned service-related barrier was parents' lack of understanding about the service system – 21% reported that they did not know where to take their child for needed behavioral health services.

Parents/caregivers of children with SED were less satisfied than parents of children with lesser problems with their providers and their Medicaid physical and behavioral health benefits and plans:

- ◆ Parents/caregivers of children with SED were significantly less satisfied with their child's recent behavioral health provider than parents of children with several items about cultural competence, including: working with staff of same cultural group when important, showing respect for religious choices, and including religious leaders in treatment planning when child is active in religious activities.
- ◆ Parents/caregivers of children with SED were significantly less satisfied with almost all aspects of their Medicaid physical health plan and benefits than parents of other Mississippi Medicaid children.


Parents/caregivers of children with SED also reported higher levels of personal and family difficulties than parents/caregivers of other Mississippi Medicaid children. They reported:

- ◆ Higher levels of personal health problems;
- ◆ Higher levels of depression themselves;
- ◆ More problems themselves in daily functioning due to physical and mental health concerns;
- ◆ High levels of strain associated with caring for their children with emotional and behavioral problems, including emotional stress and financial burden.

Despite these high levels of needs, parents/caregivers of children with SED reported that they had received few supports from the behavioral health system.

- ◆ Only one in six had been given written materials about their children's problems or treatment alternatives.
- ◆ Only one in seven had been referred to a parent support group or offered educational groups about their children's problems.
- ◆ Only 1% had been provided any respite care.

Implications for Services and Policy

- ◆ Parents and other caregivers of children with SED need to be involved in the assessment and treatment of their children on a regular basis. They need access to educational and training services to better understand and work with their children's problems at home and in the community.
 - ◆ Parents and other caregivers need access to support groups, respite care, and other support services to help them with the daily issues they face, living with a child with SED.
 - ◆ Parents and other caregivers of children with SED need access to services for themselves. Parent/caregiver and child physical and behavioral health services should be coordinated to insure that the family has a comprehensive long-term plan for maximizing the physical and behavioral health status of all family members.
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Appendix I

Tables by Study Group

These appendices present information parallel to the tables in the text, using the same numbers as the text, for those issues that one might want to examine in terms of the performance of the Study Groups (please note that not all tables from the report have corresponding tables in the appendices and therefore some appendix table numbers are non-consecutive). As described in Chapter 1, the children who are the focus of this study were selected as a stratified random sample of all categorically eligible Mississippi Medicaid children who would be ages 4 through 17 years at the time of the interview. Samples of Medicaid children were drawn using extracts of paid encounter/claims data and eligibility history information from the Mississippi Division of Medicaid. Three “study” groups of children were identified:

Study Group 3 (High past users of mental health services) was a group of children who had used a “high end” mental health Medicaid service or who had used a lot of Medicaid mental health services during FY1996. “High end” services were considered: psychiatric inpatient care, residential mental health treatment, day treatment or partial hospitalization, or mental health case management. Children who had at least three mental health services of any type within one week or who had received at least 10 mental health services during a four-month period were also considered to be in the high-user group. 274 Study Group 3 children with interview data represented 3.9% of the Mississippi Medicaid population. These children are shown in the column headed Study Group 3 in all the appendix tables.

Study Group 2 (Low-past users of mental health services) were children who had received at least one Medicaid mental health service during FY1996 but did not meet the criteria to be included in the high-user group. The 91 Study Group 2 children with interview data represented 4.4% of the Mississippi Medicaid population.

Study Group 1 (No past use of mental health services) were children who were categorically eligible for Medicaid during FY1996 but who had not used any mental health services during that time period. This group of 124 children with interview data in this study represents the greatest number of Mississippi Medicaid children. In other words, most (91.7%) of Mississippi Medicaid children (ages 2 to 15 in FY1996 so they would be the age to be interviewed in FY1998) did not use any mental health services during FY1996. However, this group of children is critical to include in the study in order to assess the mental health status and need for services of a group of children who is typically unknown to the system. Because they represented the largest group of Medicaid children, the data from Study Group 1 children were weighted the most and contributed the most to the Medicaid Weighted Total Score presented in each table.

For more information on sample selection and characteristics, please refer to Chapter 1.

The reader should remember that these study groups are based on **past** use of mental health services, during a time period (FY1996) approximately two years before the

interview. Whether these children had used any mental health services during the 6 months prior to the interview is discussed in Chapter 4 and appendices 4-1 to 4-7 below.

Appendix 2-2. Federal SED Status by Study Group

SED Status	Study Group 1	Study Group 2	Study Group 3
No Problems	70%	25%	14%
Any Problem	13%	21%	17%
SED	17%	54%	69%
Number of Children	122	87	265

See Chapter 2 and Tables 2-1 and 2-2 for a discussion of the criteria and methods used to classify children as seriously emotionally disturbed (SED). Classification as SED differed by study group. Study Group 3, children with high past service use, were most likely to be classified as SED (69%). This may be anticipated from their history of high levels of service use, but note that the Medicaid data used to classify them as high users was dated two years prior to these interview data. Their current classification as SED combined with a history of high service use indicates a chronic and high need group of children. Similarly, 54% of the low use group met SED criteria, two years after the service that identified them for this study, again indicating chronic needs.

- ◆ Over two thirds (69%) of children with a history of high levels of mental health services two years prior to the interview met the criteria to be classified as SED during the interview, indicating a chronic and high need group of children.

It should also be noted that 17% of the nonuser group of children met criteria to be classified as SED, despite their history of no service use during the target year. Some of the nonuser group of SED children, however, have used mental health services prior to or after the target year of FY1996 – this is discussed in the section on Diagnosis below.

Appendix 2-1 exhibits findings that appear to be a trend throughout the rest of the appendices. Study Group 3 children, those with a history of high levels of mental health service use, are significantly more likely to be exhibiting difficulties currently (at the time of the interview), than other Medicaid children. Overall, the trend appears to be children in Study Group 3 showing the highest level of problems, followed by those in Study Group 2, with children in Study Group 1, showing the least level of problems.

Appendix 2-3. CBCL Total, External, and Internal Standardized T-Scores by Study Group

	Study Group 1	Study Group 2	Study Group 3
Total Problem Score			*
Non-clinical	67%	29%	17%
Borderline	8%	9%	8%
Clinical	24%	62%	75%
Mean Score	50.8	65.8	70.1
Total Externalizing Score			*
Non-clinical	67%	36%	25%
Borderline	11%	14%	9%
Clinical	22%	51%	66%
Mean Score	51.8	63.1	67.6
Total Internalizing Score			*
Non-clinical	77%	44%	30%
Borderline	2%	9%	12%
Clinical	21%	47%	58%
Mean Score	49.6	61.9	65.3
Number of Children	122	87	265

*Group differences are significant at $p \leq .01$.

The CBCL scores differed significantly by study group, showing that children with the greatest history of past mental health service use continue to be those with the highest level of symptoms. The Total Problem, Internalizing and Externalizing scores were highest for the high user study group, and lowest for the non-user group (Appendix 2-3). Three quarters (75%) of the high user group were identified as in the clinical range on the Total CBCL problem score compared to 24% of the non-user group and 62% of the low mental health user group. The Externalizing score largely accounted for these differences where 66% of the high users, half of the low users (51%), and nearly one-fourth (22%) of the non-users scored in the clinical range. The Internalizing score, while following the same general pattern did not show as dramatic a difference between the three groups. On this score 58% of the high users were identified as in the clinical range, compared to 47% of the low users and 21% of the non-users. It should also be noted that a score of ≥ 64 indicates the clinical range, and the mean scores for Study Group 3 for Total, Externalizing, and Internalizing Problems exceed this cutoff.

- ◆ Three quarters (75%) of the children who had used many Medicaid mental health services during FY1996 were rated with significant behavioral and emotional problems during the interview, approximately two years later.

Appendix 2-4. Children with Standardized T-Scores

In the Borderline or Clinical Range on the CBCL Subscales

	Study Group 1	Study Group 2	Study Group 3
Withdrawn	6%	30%	41%*
Mean Score	54.81	61.98	63.92*
Anxious/depressed	9%	33%	42%*
Mean Score	54.76	62.16	64.74*
Social Problems	14%	24%	51%*
Mean Score	56.16	64.61	67.65*
Thought Problems	21%	52%	58%*
Mean Score	56.95	64.75	67.58*
Attention Problems	14%	54%	64%*
Mean Score	56.67	69.23	70.82*
Delinquency Problems	18%	28%	50%*
Mean Score	55.91	61.02	65.32*
Sexual Problems	6%	13%	26%*
Mean Score	51.76	55.43	58.61*
Somatic Problems	12%	37%	38%*
Mean Score	55.94	61.40	63.63*
Aggression	18%	45%	58%*
Mean Score	57.47	66.34	69.90*
% of children with 3 or more subscales in borderline or clinical	17%	50%	66%*
Number of Children	122	87	265

*Differences significant at $p \leq .01$.

Appendix 2-4 shows the specific types of emotional and behavioral problems reported by parents/ caregivers. As was seen for the global CBCL scores in Appendix 2-3 above, the groups of children who were past mental health service users were exhibiting more problems in all areas. The past high user group also scored significantly higher than the low user group, demonstrating continued poorer mental health status.

Appendix 2-5. Columbia Impairment Scale (CIS) us

	Study Group 1	Study Group 2	Study Group 3
CIS Rating			
Not impaired (0-15)	76%	33%	20%
Impaired (≥ 16)	24%	67%	80%*
Number of Children	124	91	275
Mean Score	10.32	20.32	24.74

*Differences significant at $p \leq .01$.

- ◆ The Columbia Impairment Scale was used to assess psychosocial functioning. The results differed significantly by study group. Study Group 3, children with history of use of high levels of mental health services, were rated with the greatest level of impairment, followed by Study Group 2, children with a history of some mental health service use. Over three-quarters (80%) of Study Group 3 and two-thirds (67%) of Study Group 2 children exhibited impaired functioning.
- ◆ 80% of the children who had used many Medicaid mental health services during FY1996 scored in the impaired range for psychosocial functioning at the time of the interviews, approximately two years later.

A score of ≥ 16 indicates that a child has met the cutoff to be classified as impaired in psychosocial functioning. It should be noted that the mean score for Study Groups 2 and 3 significantly exceeds this cutoff, indicating high levels of problems among these groups of children in functioning at home, school, and in the community.

Appendix 2-6. Parent-Reported Diagnosis by Study Group

	Study Group 1	Study Group 2	Study Group 3
Any MH diagnosis	4%	48%	49%*
Number of Children	89	91	275
Diagnoses (% of Any)			
ADD	40%	86%	79%
Other Depression	-	9%	15%
Bi-polar	-	5%	6%
Anxiety	-	2%	4%
Conduct	-	-	5%
Schizophrenia	-	2%	3%
Personality	-	-	6%
PTSD	-	-	3%
Medically-Related	-	-	-
Other Psychoses	-	-	4%
Adjustment Disorder	-	-	-
Other Conditions	67%*	11%	10%
Number of Children with any Diagnosis	3	44	135

*Difference at $p \leq .01$.

Parents of 182 children in the study reported their child had been given at least one mental health diagnosis in their lifetime (see Appendix 2-6). Presence of a mental health diagnosis was highly related to study group. Although the nonuser group had not used any mental health services during FY1996, 4% of them had received a mental health diagnosis at some time.¹¹⁴ The low user and high user groups were identified for this study because 100% of them had used some type of mental health service during FY1996 according to the Medicaid administrative data. However, only 48% of the parents of low users, and 49% of high users were aware that their child had ever received a mental health diagnosis.

- ◆ Only 49% of the parents whose children who had received many Medicaid mental health services in the past were able to name a formal mental health diagnosis for their child. In other words, half of the parents of children who were known to have received mental health services reported they were not aware their child had ever received a mental health diagnosis.

¹¹⁴ Most of the parents who named a mental health diagnosis for their child did report some type of service use for behavioral health problems during the child's life. This could have been prior to or after FY1996 when the study groups were chosen, or it could have been a service not paid by Medicaid and thus not showing up in those data from which the study groups were selected.

Appendix 2-7. Diagnosis from Medicaid FY1996 Administrative Data by Study

	Study Group 1	Study Group 2	Study Group 3
No MH diagnosis	100%	2%	1%
Any MH Diagnosis	-	98%	99%
Number of Children	124	91	275
Diagnosis (% of Any)			
ADD	-	67%	44%*
Conduct	-	20%	47%*
Schizophrenia	-	-	2%
Bi-polar	-	-	2%
Other Depression	-	12%	21%
Anxiety	-	7%	7%
PTSD	-	-	2%
Adjustment Disorders	-	2%	3%
Dementia	-	-	0%
Substance Disorders	-	-	1%
Other Psychoses	-	1%	5%
Personality Disorders	-	-	1%
Other Conditions	-	14%	12%
Number of Children with Any Diagnosis	-	89	271

* Differences significant at $p \leq .01$.

Parents and the Medicaid administrative data agreed on some form of Attention Deficit Disorder being the most prevalent mental health diagnosis given to Mississippi Medicaid children. However, the Medicaid data showed that many more children had received a service with a mental health diagnosis, even during the one year reported, than parents were aware of any diagnosis.

- ◆ Parents/caregivers and Medicaid administrative data reports agreed that some form of Attention Deficit Disorder was the most frequently given mental health diagnosis.

Appendix 2-8. Alcohol or Drug Use by Study Group¹

	Study Group 1	Study Group 2	Study Group 3
Alcohol or Drug Use			
Yes, -Ever used	55%	68%*	48%
Yes, Past 6 mos.	5%	5%	18%*
Yes, Past month	-	2%	8%*
AoD Use Consequences¹¹⁵	-	7%	3%
Number of Youth Age 12+ Years	22	44	149

*Differences significant at $p \leq .01$.

From one half to two thirds of the adolescents in the study reported that they had used alcohol or other drugs in the past.

- ◆ Youth with a history of high levels of mental health service use were significantly more likely to report they had used alcohol or drugs in the past 6 months.

¹¹⁵ The AOD Use Consequences variable was formed from items designed to measure the interference in daily living that have come about as a result of alcohol or drug use, for example, being fired from a job or expelled from school.

Appendix 2-9. Substances Used by Study Group for all Youth Age 12+ Years

	Study Group 1	Study Group 2	Study Group 3
Tobacco			
Ever used	5%	7%	23%
Used past 6 mos	-	2%	14%
Used past month	-	2%	10%
OTC Drugs			
Ever used	-	2%	1%
Used past 6 mos	-	-	1%
Alcohol			
Ever used	10%	16%	25%
Used past 6 mos	5%	5%	12%
Used past month	-	2%	7%
Cannabis			
Ever used	9%	11%	11%
Used past 6 mos	-	2%	6%
Used past month	-	-	3%
Cocaine			
Ever used	-	-	1%
Uppers			
Ever used	-	-	1%
Inhalants			
Ever used	-	2%	-
Hallucinogens			
Ever used	-	-	1%
Number of Youth Age 12+ Years	22	44	149

*Differences were tested, but none were found to be statistically significant, in part due to the small numbers of youth per cell.

Appendix 2-9 shows the types of substances reported by the youth who reported any use. [NOTE: Tobacco is included in this chart for information purposes, but was not used to calculate the rates of alcohol or other drug use in Appendix 2-8.]

Overall, alcohol and cannabis were the two substances most often reported by Mississippi Medicaid youth. Although not statistically significant with this relatively small sample size, there was a trend that use in all categories of substances was related to Study Group status: the greater the amount of past mental health service use, the higher the proportion of youth who were using alcohol or other drugs.

Appendix 3-1. Child Health Status Reported by Parent/Caregiver by Study Group

	Study Group 1	Study Group 2	Study Group 3
Excellent	22%	15%	12%
Very Good	38%	24%	27%
Good	22%	36%	30%
Fair	17%	15%	26%
Poor	1%	10%	6%
Number of Children	116	72	262

*Differences in proportions were tested by χ^2 for study group and Federal SED status. Both were found statistically significant at $p \leq .01$. Statistically significant more positive ratings are indicated.

There was a statistically significant trend that the greater the level and amount of past mental health service use, the poorer the reported health status of the Mississippi Medicaid children.

- ◆ Study Group 3 children, with a history of high levels of mental health service use, were significantly less likely to have their health status rated as excellent and much more likely to have it rated as fair or poor.

Appendix 3-2. Activity Limitations Due to Health Problems Reported by Parent/Caregiver
by Study Group

	Study Group 1	Study Group 2	Study Group 3
Limited Some/ A Lot			
Any Limitation	28%	41%	47%*
Activity Requiring a Lot of Energy	13%	23%	25%
Activity Requiring Some Energy	15%	15%	20%
Getting Around Neighborhood	14%	12%	14%
Walking One Block	11%	9%	14%
Bending/ Lifting	10%	9%	12%
Taking Care of Self	9%	12%	14%
Number of Children	124	90	273

*Differences were significant at $p \leq .01$. * indicates those cells with significantly highest proportion.

- ◆ Study Group 3 children, those with a history of high levels of mental health service use, were significantly more likely to be reported with some type of activity limitation due to poor health status.

One out of 5 of Study Group 3 children were rated as having activity limitations when some or a lot of energy was required, due to their poor health status.

Appendix 3-3. Chronic Conditions by Study Group

	Study Group 1	Study Group 2	Study Group 3
% Any Chronic Condition	27%	53%	49%*
Number with any	47	48	132
Chronic Condition (% of Any)			
Asthma	62%	33%	29%
Allergies/sinus	38%	23%	22%
Speech/language	20%	18%	16%
Vision	14%	20%	13%
Otitis media	16%%	9%	7%
Mental Retardation	14%	4%	3%
Orthopaedic/bone	14%	17%	9%
Gastrointestinal	9%	13%	8%
Respiratory	14%	11%	5%
Epilepsy	10%	9%	15%
Muscle disorder	5%	13%	4%
Hearing Impairment	10%	11%	5%
Hypertension	14%	9%	5%
Leukemia or cancer	-	-	4%
Autism & pervasive DD	2%	-	1%
Other disorder	13%	17%	11%
Number of Children With Any Chronic Condition	47	46	128

*Differences statistically significant at $p \leq .01$.

There were statistically significant differences related to study group in the proportion of children reported with any chronic illness. Overall, slightly less than one-third (30%) of Mississippi Medicaid children were reported to have a chronic health problem compared to half (49%) of the children with a history of past mental health service use.

- ◆ Children with a history of some type of past mental health service use were significantly more likely to have a chronic health illness.

Differences among the study groups in type of chronic illness were not found to be statistically significant for this sample size. Among all groups, the most frequently reported chronic health problems were asthma and chronic allergy/sinus problems.

Appendix 3-4. Youth in School and Type of School by Study Group

	Study Group 1	Study Group 2	Study Group 3
Currently in School	99%	99%	96%
Number of Children	112	91	271
Type of School*			
Local Public	95%	93%	90%
Local Private	3%	2%	1%
Alternative Public	-	-	1%
Alternative Private	-	-	<1%
Home School	-	-	2%
Overnight Facility	3%	3%	3%
Day Treatment Facility	-	1%	2%
Juvenile Justice Sys	-	-	<1%
Other	-	-	1%
Number of Children in School with Type Indicated	99	88	242

Note:- indicates no occurrence.

*Differences in type of school child attended were significant at $p \leq .01$.

Although there appears to be a trend for children with greater levels of past mental health service use to be less likely to be in public school, these findings were not statistically significant.

- ◆ Despite serious emotional and behavioral problems reported among all study groups (see Appendices 2-1 through 2-4), the only children who were currently placed in an alternative school were those with a history of high levels of mental health service use.

Appendix 3-5. Special Education Class and Special Classroom Aide by Study Group

	Study Group 1	Study Group 2	Study Group 3
Special Class	4%	20%	33%*
Not in Special Class but has Aide	-	3%	7%*
Number of Children	112	90	261

*Differences in proportions significant at $p \leq .01$

One third of Study Group 3 children were currently placed in special education classes, according to parent/caregiver report, with an additional 7% receiving services from a classroom aide because of their emotional or behavioral problems.

- ◆ Children with a history of high levels of mental health service use were significantly more likely to be placed in special education classrooms. This trend corresponds with greater proportions of children with SED among this group (see Appendix 2-1).

Appendix 3-6. On Grade Level by Study Group

	Study Group 1	Study Group 2	Study Group 3
Working at Grade Level	*		
No, 2 yrs above	1%	-	-
No, 1 year above	22%	7%	7%
Yes, On Grade level	56%	58%	56%
No, 1 year below	18%	33%	31%*
No, 2 years below	2%	2%	7%
Number of Children	112	88	261

*Differences between non-user and users of MH services were significant at $p \leq .01$.

The overall trend in grade level placement among Mississippi Medicaid children was statistically significant that children with no history of past mental health service use were more likely to be placed in a grade level above their age and less likely to have been retained.

- ◆ Children with a history of mental health service use were less likely to be placed in a grade level above that for their age and more likely to have been retained.

Appendix 3-7. Legal Involvement by Study Group

	Study Group 1	Study Group 2	Study Group 3
Arrested-Ever	1%	4%	12%*
-Past 6 mos.	-	-	6%
Court –Ever^p	-	-	4%
-Past 6 mos.	-	-	3%
Probation - Ever^p	1%	2%	5%
-Past 6 mos.	-	-	3%
Jail/Detention–Ever	1%	2%	7%
-Past 6 mos.	-	-	4%
Secure State-Run Facility - Ever	-	-	3%
-Past 6 mos.	-	-	1%
Number of children	124	91	275

Note:- indicates no occurrence.

*Differences significant at $p \leq .01$.

Although there were past contacts with the juvenile justice system reported for children in all study groups, only children in Study Group 3 were reported to have recent contact.

- Children with a history of high levels of mental health service use were the only children with juvenile justice contact within the past 6 months.

Appendix 3-8. Custody Status

	Study Group 1	Study Group 2	Study Group 3
Ever in State Custody			
Yes	6%	8%	11%
Told should be in state custody			
Yes	1%	5%	6%
Number of children	124	85	267

The proportions shown in Table 3-8 were tested by χ^2 . No significant differences were found.

Although there was a trend for children with a history of mental health service use to more frequently have been in state custody in the past or to have been told to go into custody to receive needed services, this trend was not statistically significant.

Appendix 4-1. Formal Behavioral Health Services by Study Group

	Study Group 1	Study Group 2	Study Group 3
Any Behavioral Health Services	6%	51%	72%*
Number of Children	88	91	275
Number of Children with any BH service	5	47	200

*Differences significant at $p \leq .01$.

Over one half of children with a history of past mental health service use were reported to have also used formal mental health services within the past 6 months.

- ◆ Children with a history of past mental health service use (in FY1996) were significantly more likely also to have used formal mental health services within the past 6 months. Almost three quarters (72%) of Study Group 3 children, those with a history of high levels of FY1996 service use, were reported to have used mental health services recently. One half (51%) of the children with low levels of mental health service use during FY1996 were also reported to have recent mental health service use.

Appendix 4-1A. Formal Behavioral Health Services for Children and Adolescents with SED by Study Group

	Study Group 1	Study Group 2	Study Group 3
Any Behavioral Health Services	28%*	75%	79%
Number of SED Children	25	47	183
Number of SED Children with any BH service	7	35	146

*Differences significant at $p \leq .01$.

The different patterns in behavioral health service access reported in Appendix 4-1 are also seen in Appendix 4-1A, that includes only children with SED. While three quarters or more of the children with SED in Study Groups 2 and 3, who have a history of mental health service use, accessed behavioral health services during the 6 months prior to their interview, only 28% of children with SED from Study Group 1, who did not use any mental health services during FY1996, accessed any services.

Appendix 4-2. Number and Type of Behavioral Health Services (for those with any services)

	Study Group 1 ¹¹⁶	Study Group 2	Study Group 3
Number of Different Types of BH Services			
1	45%	68%	51%
2	36%	28%	31%
3	18%	4%	12%
4	-	-	6%
5-6	-	-	1%
Type of Service Used			
Psychiatric Hospital or Unit	-	13%	17%
Residential Treatment Center	-	4%	10%
CMHC	100%	62%	74%
Day Treatment/ Partial Hospital	-	9%	26%*
Office of Professional	25%	36%	25%
Emergency Room	-	-	3%
Respite Care	-	-	1%
In home Therapist	50%*	13%	25%
Children with any BH service	11	60	188

Note:- indicates no occurrence.

*Differences are significant at $p < .05$.

Study Group 3 children, those with a history of high levels of mental health service use, were more likely to have received day treatment services during the past 6 months. Children receiving in-home counseling, however, were more likely to be those in Study Group 1, who had used no mental health services during FY1996.

¹¹⁶ In Appendices 4-2 to 4-6, Study Group 1 rates were not weighted since the sample size was so small. However, findings in the Weighted Total column continued to be weighted to represent the total Medicaid population.

Appendix 4.3. Number of Visits/Days by Type of Formal Behavioral Health Service (for those with any days or visits)

	Study Group 1	Study Group 2	Study Group 3
Average Days of care or Visits			
Psychiatric Hospital or Unit	42 days (1 child)	98 days (6 children)	45 days (29 children)
Residential Treatment Center	126 days (3 children)	26 days (2 children)	107 days (19 children)
CMHC	17 visits (8 children)	13 visits (26 children)	21 visits (137 children)
Day Treatment/ Partial Hospital	8.5 visits (2 children)	120 visits (1 child)	73 visits (242 children)
Professional	7 visits (3 children)	8 visits (17 children)	8 visits (28 children)
Emergency Room	-	-	2 visits (5 children)
Respite Care	-	-	72 visits (1 child)
In home Therapist	11 visits (2)	11 visits (5 children)	5 visits (45 children)

Note:-- indicates no occurrence.

Appendix 4-3 shows the average number of days or visits of different types of mental health services received during the past 6 months. Overall, Medicaid children who had been placed in a psychiatric hospital stayed over 2 months (73 days) total during the past 6 months. This average includes all the days whether there was only one or more than one admission. Approximately one-third of the children had a second hospital admission during this 6-month period, with an average number of hospital admissions being 1.3 during the past 6 months.

Children who were treated in a residential treatment center over the past 6 months stayed an average of over 3 months (100 days), with an average of 1.1 admissions.

When children had received a service from a community mental health center, they had received an average of 14 visits during the past 6 months, or approximately two per month.

Although the one child from Study Group 2 stayed in day treatment for the entire 6-month period, the average number of visits was 43 or 8½ weeks.

Only one child, who had a history of high levels of mental health services, received respite care on an outpatient basis.

Appendix 4-4. Other Services Used by Study Group for Those Who Did or Did Not Receive BH Services

	Study Group 1	Study Group 2	Study Group 3
Not Receiving BH Services, Other Services Received	5%	23%	16%
Number of Children Not Receiving BH Service	113	44	75
Type of Other Service Received			
Foster Care	-	-	1%
Jail or Detention	1%	2%	1%
Pediatrician/family MD	4%	21%	11%
School Therapist	3%	11%	14%
Number Receiving Other Services	6	10	12
Receiving BH Services, Other Services Received	18%	21%	18%
Number of Children Receiving BH Service	11	47	200
Type of Other Service Received			
Group Home	-	-	2%
Foster Care	-	-	1%
Jail or Detention	-	4%	4%
Pediatrician or Family MD	18%	19%	13%
School Therapist	27%	43%	39%
Number of Children Receiving Other Services	2	10	34

Note:- indicates no occurrence.

Appendix 4-4 shows the types of other services received during the past 6 months for emotional and behavioral problems that were not considered formal mental health services. The top half of the chart describes services to children who did NOT receive any formal mental health services. Overall, 4% of the children who did not receive any formal mental health services DID receive some type of related service.

Children who HAD received some formal mental health service (see the bottom half of the chart) were more likely also to have received some type of related service for emotional or behavioral problems, as well.

- ◆ Children who received a formal mental health service were also more likely to use another related community service for emotional/behavioral problems.

Appendix 4-5. Use of Medication for Emotional/Behavioral Problems by Study Group

	Study Group 1	Study Group 2	Study Group 3
Medication for emotional/behavioral Problems Past 6 months	8%	53%	52%
Total Number of Children	124	91	275
Number of children on medication	10	48	143
Number of Psychotropic Medications (for those with any)			
1	90%	63%	61%
2	-	29%	29%
3+	10%	8%	10%

Notes: – indicates no occurrence.

- ◆ Half of the children with a history of past mental health service use were using medication for emotional or behavioral problems at the time of the interview. Although most children were prescribed only one psychotropic medication, one third of them were prescribed two or more.

Appendix 4.6. Types of Medication for Emotional/Behavioral Problems for Children with Any Medication by Study Group

	Study Group 1	Study Group 2	Study Group 3
Sedatives & Hypnotics	-	-	1%
Benadryl	-	-	1%
Anti Anxiety agents	-	2%	6%
Clorazepam	-	2%	-
Corgard	-	-	1%
Hydroxyzine (Vistaril)	-	-	2%
Trazondon (Desyrel)	-	-	4%
Anti Psychotic drugs	20%	8%	28%
Chlopromazine (Thorazine)	-	-	1%
Haldol-d	-	-	1%
Haloperidol (Haldol)	-	2%	3%
Lithium	-	-	4%
Luvox	10%	-	2%
Mellaril	10%	2%	2%
Mesoridiazine (Serentil)	-	-	-
Moban	-	-	1%
Resperdol	-	2%	14%
Zyprexa	-	2%	8%
Anti Depressants	10%	23%	40%
Amitriptyline	-	4%	-
Clomipramine	-	-	1%
Desipramine (Norpramin)	-	-	1%
Fluoxetine (Prozac)	-	4%	8%
Imipramine (Tofranil)	10%	8%	7%
Nortriptyline	-	2%	1%
Paxil	-	-	2%
Remoran	-	-	1%
Serzone	-	-	1%
Wellbutrin	-	2%	11%
Zoloft	-	4%	8%
CNS Stimulants	70%	71%	50%
Adderall	-	8%	8%
Cylert	-	2%	4%
Dexedrine / dextroamphetamine	10%	10%	4%
Methylphenidate (Ritalin)	60%	54%	37%
Anti Hypertensive Agents	10%	23%	15%
Clonidine	-	23%	14%
Tenex	10%	-	1%

Appendix 4-6 continued

	Study Group 1	Study Group 2	Study Group 3
Anti Convulsants	10%	15%	15%
Carbamazepine (Tegretol)	-	4%	3%
Valproic acid (Depakote)	10%	10%	12%
Tranquilizers	10%	6%	5%
Buspar	10%	6%	4%
Stelazin	-	-	1%
Other	-	2%	7%
Benzotropine (Cogentin)	-	-	6%
Melatonin	-	-	1%
Neurontin	-	2%	1%
Number of Children Receiving Any Medication	10	48	143

Notes: Percentages for types of medications are based on the total with any medication, and may add to more than 100% due to multiple medications (up to 5) per child. Also, – indicates no occurrence.

Overall, the most frequently prescribed type of psychotropic medication for Mississippi Medicaid children and adolescents, regardless of study group, was CNS stimulants with the most prescribed medication being Ritalin. Use differed by study group, with Study Group 3, children with a history of high levels of mental health service use, being prescribed Ritalin less than the other study groups. Study Group 3 was prescribed antidepressant medication more than the other two study groups, with 40% of those in Study Group 3 who received any medication taking some type of antidepressant.

Appendix 4-7. Use of Health Services for Physical Health Problems by Study

	Study Group 1	Study Group 2	Study Group 3
Emergency Room			
Any Visits Past 6 Months	24%	20%	29%
Mean Number of Visits	1.3	1.6	2.0
Hospital-overnight			
Any Overnight Stays Past 6 Months	5%	6%	4%
Mean Number of Visits	2.2	1.8	9.7
Clinic or Physician's Office			
Any Visit Past 6 Months	66%	55%	58%
Mean Number of Visits	2.9	3.3	3.8
Usual Place for Child Health Need—Yes	99%	97%	95%
Type of Place			
Doctor's Office	47%	50%	50%
Hospital/Clinic	15%	16%	15%
Emergency Dept.	2%	1%	5%
Neighborhood Clinic	35%	27%	29%
Urgent Care Center	-	2%	-
Other	1%	4%	2%
Physical Health Screening			
Yes, Ever ^b	77%	68%	77%
Yes, Past 6 Months	8%	6%	5%
Number of Children	124	91	275

Note:- indicates no occurrence.

*Differences in means significant at $p < .05$.

Appendix 4-7 presents information of the use of health services by study group. Overall trends in health service use are discussed in Chapter 4 and Table 4-7. There were no significant differences in use of health services for Mississippi Medicaid children based on their past use of mental health services.

Appendix 5-3. Parents' Perceptions of Medicaid Behavioral Health Plan by Study Group

	Study Group		
	Group 1	Group 2	Group 3
How truthful was written information about benefits? (pretty or very truthful)	100%	100%	94%*
Was the amount of forms to fill out reasonable? (usually or always)	33%	36%	44%*
Did you get information or decisions needed about services/providers available to you? (usually or always)	25%	52%	29%*
How would you rate the following?			
Quality of mental health care (A or B)	64%	75%	76%*
Ease of transportation (A or B)	57%	67%	60%*
Range of covered services (A or B)	73%	66%	74%
Number of providers to choose (A or B)	75%	49%	56%*
Location of providers (A or B)	75%	65%	63%
Did Medicaid refuse to pay for any mental health services? (yes, any)**	<1%	<1%	15%*
Inpatient or Residential Care	<1%	<1%	5%
Prescription Drug	<1%	13%	16%
Outpatient Therapy	<1%	2%	4%
Other MH Service	<1%	2%	4%
Were any visits to a MH or SA provider not covered by Medicaid? (yes)	2%	10%	6%
Would you recommend plan to a friend? (yes)	91%	92%	96%*
Overall Rating of Plan (A or B)	62%	66%	69%
Overall Rating of Plan (mean on 0-10 scale)	8.5	7.6	7.8
Number of Respondents	12	71	242

*Differences among study groups different at $p \leq .01$.

**This question was asked of all respondents. The rest of the questions in Appendix 5-3 were asked only of those whose child had ever received some type of behavioral health service.

Appendix 5-3 shows the parent/caregiver satisfaction with the behavioral health plan and benefits under the Mississippi Medicaid program. There were mixed findings regarding the differences in satisfaction ratings by Study Group. Children in Study Group 3 were more likely to have been denied a service, and this was usually a prescription drug.

Appendix 5-4. Parents' Perceptions of Medicaid Physical Health Plan by Study Group

	Study Group 1	Study Group 2	Study Group 3
How would you rate the following?			
Quality of health care (A or B)	94%*	82%	81%
Ease of getting health care (A or B)	92%*	77%	77%
Ease of specialty care (A or B)	85%*	65%	65%
Ease of hospital care (A or B)	95%*	78%	83%
Ease of choosing personal dr. (A or B)	70%	59%	61%
Coverage for preventive care (A or B)	83%	82%	76%
Coverage for illness visits (A or B)	98%*	83%	86%
Location of doctors' offices (A or B)	82%	83%	74%
Overall Rating of Plan (A or B)	82%*	74%	64%
Overall Rating of Plan (mean on 0-10 scale)	8.7*	7.8	7.9
Number of Respondents	122	87	269

* Differences significant at $p < .05$.

Appendix 5-4 corresponds to Table 5-4 but shows the findings regarding satisfaction with physical health plan benefits under the Mississippi Medicaid program by Study Group. In general, parents/caregivers of children in Study Group 3 were less satisfied with various issues under the physical health plan.

Appendix II: Drug Use Prevalence: Mississippi Comparisons

Drug	Impact Study: Mississippi Data			Mississippi In-School Adolescents Survey ¹¹⁷		
	Lifetime Use	Past 6 Months	Past Month	Lifetime Use	Past 12 Months	Past Month
Tobacco (all types)	6%	2%	1%	/	/	/
Cigarettes	/	/	/	44.4%	27.0%	23.8%
Smokeless tobacco	/	/	/	17.1%	9.5%	9.1%
OTC/Prescription drugs for non-medical purposes	1%	-	-	/	/	/
Alcohol	11%	5%	1%	/	/	/
Beer	/	/	/	51.4%	39.7%	32.1%
Wine Coolers	/	/	/	52.7%	40.7%	33.4%
Wine	/	/	/	39.3%	30.6%	25.7%
Liquor	/	/	/	36.5%	27.3%	24.4%
Cannabis/Marijuana	9%	2%	1%	18.5%	11.9%	12.7%
Cocaine/Crack	<1%	-	-	/	/	/
Cocaine	/	/	/	1.3%	1.0%	1.0%
Crack	/	/	/	0.9%	0.7%	0.6%
Uppers (Amphetamines)	<1%	-	-	6.5%	4.6%	3.8%
Ice (crystal meth)	/	/	/	1.2%	0.8%	0.7%
Hallucinogens (LSD and others)	<1%	-	-	4.0%	2.3%	2.3%
Ecstasy	/	/	/	1.1%	2.0%	0.8%
Downers (Barbiturates/Sedatives)	-	-	-	2.1%	1.5%	1.5%
Roche	/	/	/	1.0%	0.8%	0.6%
Heroin/Methadone	-	-	-	0.7%	0.5%	0.3%
Inhalants	<1%	-	-	12.0%	8.1%	7.7%
Other	-	-	-	/	/	/
Steroids	/	/	/	1.4%	1.1%	1.4%

Note that in this report Ecstasy is being classified as a hallucinogen because that is its classification in the Impact Study; the Mississippi Survey, however, classified Ecstasy as a "Stimulant," which most closely corresponds to the Impact classification of Uppers/Amphetamines.

¹¹⁷ See the "Final Report of the Mississippi In-School Adolescents Survey (1996-97 Academic Year)" (Bureau of Educational Research and Evaluation, College of Education, Mississippi State University, March, 1998). This study was based on a total valid sample size of 10,570 students in grades 6 through 12 across the state of Mississippi.