Use of Mental Health Services by Youth in Contact with Social Services

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This article compares mental health service need and use among three groups of children: those with a history of foster care placement, those in contact with departments of social services but never in placement, and those from impoverished families who have not been in contact with social services. Data come from a longitudinal epidemiologic study of mental health problems and service use. All three groups show very high rates of mental health problems, but children in foster care or in contact with social services are significantly more likely than children living in poverty to receive mental health services.

Research on rates of mental health problems among young people who are involved with social service departments focuses primarily on youth
in foster care. However, social service systems may also be involved in children’s lives in a variety of other ways, such as to provide support services to stabilize families threatened by financial hardships, to prevent the need for removing children from their homes, or, where appropriate, to reunite parents and children separated because of child maltreatment. Research consistently documents relatively high rates of emotional and behavioral problems and use of public mental health services by youth in foster care, but little is known about rates of mental health problems or mental health service use among young people who are in contact with social services for other reasons. There is also little known about the degree to which contact with social services (via foster care or other services) influences rates of mental health service use among youth. This article thus uses a general population sample to compare mental health problems and service use among three groups of young people: those with a history of foster care placement, those who have been in contact with social services but not in placement, and a comparison group of young people living in poverty but who have not been in appreciable contact with social services. We also examine some correlates of service use.

Literature Review

Studies of youth in foster care report rates of behavior problems, developmental delays, and need for psychological intervention ranging from 39 to 80 percent (Hochstadt et al. 1987; Simms 1989; Halfon, Medonca, and Berkowitz 1995; Garland and Besinger 1997; Clausen et al. 1998; Landsverk and Garland 1999; Zima et al. 2000). Retrospective and longitudinal studies show that individuals who were in foster care during childhood continue to experience difficulties in a variety of domains into adulthood (Buehler et al. 2000). Mental health problems identified among youth in foster care include conduct, anxiety, attention deficit, and posttraumatic stress disorders (McIntyre and Keesler 1986; Hochstadt et al. 1987; Helfinger, Berkowitz, and Klee 1992; Takayama, Bergman, and Connell 1994; Reddy and Pfeiffer 1997; Dubner and Motta 1999; Heffling, Simpkins, and Combs-Orme 2000). Elevated rates of aggressive, delinquent, and withdrawn behavior are also observed (Helfinger et al. 2000). Significant associations are found between rates of mental health problems and the number of foster care placements children experience, the age they enter care, and placement with nonrelative versus relative foster parents (Helfinger et al. 1992, 1995; Helfinger et al. 2000; Leslie et al. 2000).

Community studies in North Carolina and Connecticut show that, compared with other systems providing mental health services, the social service system itself provides mental health services to relatively few young people (Burns et al. 1995; Zahner and Daskalakis 1997). However,
many young people involved with social services receive services from mental health specialists. Contact with social service departments thus may open the door to the public mental health system via access to financial coverage (Schneider and Fennel 1999; Burns et al. 2000). In San Diego County, for example, 17.4 percent of children age 16 or younger receive services from the mental health system while in foster care, but fewer than one in five of the served children received services before entering care (Blumberg et al. 1996).

Most of what is known about the use of mental health services by young people who are involved with social service departments also is limited to studies of the use of public mental health services. However, studies of youth with serious emotional disturbance (SED) and recent work with general population samples show that children commonly receive help for mental health problems outside of specialty mental health settings (Cohen et al. 1991; Burchard et al. 1993; Stroul 1993; Burns et al. 1995; Staghezza-Jaramillo et al. 1995; Greenbaum et al. 1996). Studies limited to the use of publicly funded specialty mental health services may underestimate the overall use of mental health services.

Several factors predict mental health service use by youth in foster care. First, young people with more emotional and behavioral problems are more likely to receive mental health services than those with fewer problems (Garland et al. 1996; Leslie et al. 2000). Second, rates of mental health service may vary across racial and ethnic groups. Ann Garland and Bridgett Besinger (1997) find that, compared to Hispanic and African-American children, a significantly higher proportion of Caucasian children receive counseling and psychotherapy while in care. David Kolko, Jorgene Selelyo, and Elissa Brown (1999) also find that Caucasian children are more likely to receive services than African-American children. In contrast, Laurel Leslie et al. (2000) find comparable rates of service use among Caucasian and African-American children but significantly lower numbers of outpatient visits for those who are Latino or Asian. Finally, after controlling for the need for services, Leslie et al. (2000) find that rates of service use are lower among young people placed with family members than among those placed with nonfamily members.

Some research suggests that youth in foster care use proportionately more public mental health services than young people living in poverty. In Washington state, 25 percent of children under age 7 in foster care use mental health services compared with 3 percent of children receiving Aid to Families with Dependent Children (Takayama et al. 1994). In California, youth in foster care account for 41 percent of all users of mental health services but represent less than 4 percent of the eligible population (Halfon et al. 1992). It is not clear whether rates of need are similar in these groups.
It also is not clear how much of the increased need for and use of services is a direct relationship with placement in foster care and how much is attributable to factors that increase the risks for both mental health problems and out-of-home placements. The majority of children in foster care or in contact with departments of social services for other reasons come from families confronting multiple problems and often from families living in poverty. Children from such families and circumstances are at risk for a variety of negative outcomes, including mental health problems (Duncan and Hoffman 1988; Farmer 1993; Conger and Elder 1994; Conger, Conger, and Elder 1997; McLoyd 1998; Chase-Lansdale 1999).

Children and families may be involved with social services for a wide range of reasons and interventions (e.g., abuse, neglect, entitlements) besides foster care. Such contacts create an opportunity for case workers to become acquainted with families in ways that may facilitate access to services for observed emotional or behavioral problems (e.g., via referral, parenting contracts, enrollment in Medicaid). Previous research does not explore either the mental health needs or service use of children with this type of social services involvement.

This article extends knowledge by using a general population sample to examine various types of contact with social services and associated need for and use of mental health services. It compares rates of mental health problems and service use among youth in foster care, those who are in contact with social services but not in foster care, and those who live in poverty and have not had contact with social services.

Method

Data come from the Great Smoky Mountains Study (GSMS), a longitudinal epidemiologic study of mental health problems and service use within a predominantly rural region of the southeastern United States (Costello et al. 1996). The region is regarded as having a comparatively well-developed mental health system for youth with mental health problems. As in many areas throughout the nation, service agencies in the participating counties (e.g., social services, mental health, juvenile justice, education, general medicine) have been working steadily in the past decade to improve communication among agencies and coordination of services for youth (Morrissey, Johnsen, and Calloway 1997).

For the GSMS, children ages 9, 11, and 13 were randomly selected from all public school districts in 11 participating counties (n = 4,500). Two-stage sampling was employed to assure adequate numbers of children with psychiatric problems and service use. A screening questionnaire based on externalizing items from the Child Behavior Checklist (Achenbach and Edelbrock 1983) was used to oversample children with behavior problems. Parents completed the screen via telephone
(or in person if the family did not have a phone). Of the 4,500 selected families, 9.6 percent were found to be ineligible (e.g., the child’s date of birth was incorrect in the school data, the family no longer resided in the area). Of the 4,067 eligible families, 95.8 percent completed the screen. All children who scored above the predetermined cutoff point were recruited into the study, as was a 10 percent sample of children with lower scores. This process resulted in a sample of 1,346 children, of which 1,073 (80 percent) participated in the study.

The target geographic region includes the Qualla Boundary, home to the Eastern Band of the Cherokee Nation. Because many of the American Indian children attend reservation schools, they are not included in the sampling frame for the main study. Therefore, a parallel study in the same geographic region includes all 9-, 11-, and 13-year-old American Indians in the area. This identified 431 American Indian children, 347 (80 percent) of whom participated in the study.

The GSMS data are weighted so that the two samples (American Indian and other children) and two-stage sampling approach (oversampling of children with a strong likelihood of having behavior problems and 10 percent of other children) can be combined to represent the general population (Costello et al. 1996). Weights are inversely proportional to the sampling probability for young people selected via the two-stage sampling and reflect the known population proportion of American Indians in the 11-county region. Throughout this article, frequencies refer to the actual number of interviewed families, and percentages are weighted to reflect the population from which the sample was selected.

Combining the above samples results in a total sample of 1,420 children who entered the study when they were ages 9, 11, or 13 years. Each child and a parent (the biological mother in 84 percent of cases) were interviewed in person at baseline and annually thereafter. Interviews were conducted with parent and child separately by different interviewers. In addition, parents were contacted every 3 months between annual waves to provide updated information on service use. These interim interviews were conducted by telephone (or in person for families without a phone).

For the present discussion, analyses focus on three subgroups: (1) children who had ever been in foster care \( (n = 142) \), (2) children who had been in contact with county-level departments of social services but who had never been placed in care \( (n = 218) \), and (3) children living in poverty with no known contact with social services or foster care \( (n = 419) \). The category of children in foster care encompasses all children who have been in foster care at some point during their lives. This includes relatively few children who remained in foster care during the study period (i.e., between ages 9 and 16, \( n = 13 \)) and a larger group who were placed in foster care at some prior point during their lives.
For the second group, children who have been in contact with social services, there is limited information about the nature of this contact. This group includes young people who were in contact with social services for a variety of reasons (e.g., entitlements, protective services, intervention). However, we do not include young people who have public health insurance benefits but no other reported contact. The comparison group of youth in poverty is defined as young people whose reported family income was below the federal poverty level in at least one of the annual waves of GSMS data but who have no reports of contact with social services or foster care placements. The subsample for these analyses includes the 779 children who met criteria for these subsets.

**Measures**

*Mental health problems.*—The Child and Adolescent Psychiatric Assessment (CAPA) is used to assess psychiatric symptomatology and associated functional impairment (Angold et al. 1995). The CAPA is an interviewer-based structured psychiatric interview that collects data on the onset, duration, frequency, and intensity of symptoms of a wide range of psychiatric diagnoses (Angold and Costello 1995, 2000; Angold et al. 1995). Psychosocial impairment secondary to psychiatric symptomatology is rated in 19 domains of functioning related to life at home, school, and elsewhere. One-week test-retest reliability with young people from inpatient and outpatient settings is 1.0 for substance abuse or dependence, above .80 for depression and dysthymia, .65 to .75 for anxiety disorders, and .55 for conduct disorder (Angold and Costello 1995). Lower reliability on conduct disorder is accounted for in part by attenuated reports at time 2 by children who admitted to lying during the first interview.

Computerized algorithms have been written to use data from the CAPA to generate diagnoses for DSM-III-R, DSM-IV, and ICD-10 as well as measures of functional impairment. To simplify data on diagnoses and functional impairment for the current analyses, we combine parent and youth data and classify children at each annual interview into one of three categories of mental health status: diagnosis plus impairment (also referred to as serious emotional disturbance [SED]), impairment (without diagnosis) or diagnosis (without impairment), and neither diagnosis nor impairment. Children classified as SED meet DSM-III-R criteria for a well-defined emotional or behavioral disorder and also have reports of functional impairment. Both diagnosis and impairment must be evident at the same wave to be classified in this category. Children in the impairment or diagnosis category display functional impairment but do not meet DSM-III-R criteria for a disorder, or they meet diagnostic criteria but do not report significant additional impairment. These categories are combined because preliminary analyses showed
them to be similar in their relationships to service use, and there are too few individuals with diagnosis only (i.e., without impairment) to treat them as a separate group. The final category is children who have neither a DSM-III-R diagnosis nor substantial functional impairment. Children in this final category may display no symptoms of disorder or impairment, or they may display symptoms of psychiatric disorders that are below the threshold required to meet DSM-III-R criteria or that are scattered across disorders so that criteria are not met for any specific diagnosis. A child’s classification in subsequent analyses reflects the most severe classification that was met in any of the waves.

**Mental health service use.**—The Child and Adolescent Services Assessment (CASA) gathers information from parents and children about service use from a wide range of service providers (including agencies, private practitioners, and informal sources) to address behavioral and emotional problems. The main portion of the CASA asks about more than 30 different types of services young people might use (Farmer et al. 1994; Ascher et al. 1996). For each type of service, the respondent indicates whether the child has ever used that service, and if so, whether he or she used the service during the 3 months preceding the interview. For the current analyses, we focus on lifetime reports. Services are categorized into three sectors: (1) specialty mental health (including inpatient and outpatient services), (2) mental health services received through schools, and (3) mental health services provided by general medical providers. Additional services that do not fall into any of these three categories are excluded from analyses (e.g., juvenile justice, informal sources) because too few young people used such services to allow the full range of analyses. Test-retest reliability for the CASA is good to excellent (kappa = 0.4–0.6 for school services; kappa = 0.5–0.8 for outpatient services; kappa = 0.6–1.0 for inpatient, out of home, and juvenile justice services) (Farmer et al. 1994; Ascher et al. 1996). Comparisons with provider records show 90 percent agreement on whether services were received (Ascher et al. 1996).

**Service use not related to mental health problems.**—The CASA also includes questions about any contact with various types of services and whether the service was related to a mental health problem or not. This section was added to provide a better sense of how many young people have been in contact with various types of services (e.g., social services, general medicine, special education) for any reason and covers services in the past year. Therefore, information on contact with social services (but not foster care) covers the 3-year period of the GSMS study.

**Poverty.**—Total income from all sources for the previous year was reported by the parent at each annual interview. This information, in conjunction with data on family composition, is used to calculate whether the family was living in poverty according to the federal poverty definition for the relevant year. Data from each wave are used to de-
termine whether the family was living in poverty during any of the study years.

**Foster care.**—The interview includes a number of questions that are used to determine whether a child has ever been in foster care. Parents and children are asked whether the child has ever been in foster care and, if so, when he or she was first placed in care and how many foster care homes he or she has lived in. In addition, data from the household roster are used to make certain that children in foster care at the time of the interview are correctly identified. With these data we can check whether one of the adults in the household is identified as a foster parent for the target child. If any of these responses indicates foster care placement at some point in the child’s life, the child is classified as a member of the foster care group.

### Analysis

The first portion of the analysis presents descriptive information on characteristics of young people in the three groups (i.e., foster care, social service contact, poverty) on mental health problems and service use. Chi-square analyses are used to examine whether the groups differ significantly on these dimensions. The second portion of the analysis uses logistic regression to model the relationship between a child’s involvement with social services and the likelihood of receiving services from each of the three included service sectors (i.e., specialty mental health, education, general medicine). These models also include race, sex, severity of mental health problems, and public insurance coverage to examine whether foster care or social service contact continued to be related to service use once other factors that may affect such use have been taken into account.

Analyses were run using SAS. All analyses were run using “sandwich estimators” to properly account for the weighted data to produce accurate estimates of standard errors and statistical significance (Binder 1983).

Data used in the current analyses include four waves of annual data and the quarterly follow-ups between annual waves. Hence, data cover a 3-year period. Data from all four waves are available for 71.9 percent of families. An additional 17.8 percent provided data for three of the four waves, while 5 percent provided data at two waves, and 5.5 percent were interviewed at only one wave. A comparison across the three primary groups of interest shows that children in contact with social services (but not foster care) are more likely to have complete data than the other two groups: 82 percent vs. 64–68 percent; $\chi^2(6) = 45.2$, $p < .001$. Because of this, analyses were rerun with a variable to indicate number of missing waves of data. This variable does not attain statistical
significance or change the results substantially. Therefore, the reported results do not include this variable.

It should be remembered throughout that these analyses do not make it possible to examine causal relationships among the factors. Rather, the analyses examine differences in mental health problems and service among the three groups. This article is one of the first opportunities to examine rates of need and use among all three groups (particularly among young people who have had contact with social services but have not been placed in foster care). Establishing such differences may suggest implications for practitioners who serve youth and should provide essential background for causal modeling.

Results

Sample Characteristics

The sample includes 779 young people who were 9, 11, or 13 years old at baseline and who meet criteria for one of the included groups (foster care, social services contact, poverty). Approximately half of the sample is male. The sample is predominantly white (82 percent), as is the population of the participating counties. Seventeen percent of this subsample has been in foster care. An additional 30 percent has been in contact with social services at some point in their lives but has never been placed in foster care. The remaining 53 percent lived in poverty during the period of the GSMS but reported no contact with social services.

Seventy-six percent of children in this subsample showed some type of mental health problem during the 3 years of data collection: 30 percent met criteria for both diagnosis and significant functional impairment (i.e., SED); 42 percent had significant functional impairment, even though they did not have the number of symptoms required to meet diagnostic criteria; and 5 percent met criteria for a psychiatric diagnosis but did not display substantial functional impairment.

Most of the young people in this subsample (80 percent) received some type of service to address a mental health problem at some point in their lives. They were most likely to receive services through their schools (68 percent). Nearly half (47 percent) reported using specialty mental health services, and 29 percent received mental health services through a primary medical care provider. (See table 1 for sample characteristics.)

To put these rates of need and service use in perspective, we compare the observed rates of mental health problems and service use for the target subsample with the rest of the general population (i.e., young people who were not living in poverty and who have never been in foster care or in contact with social services). Among this group of children not in the target subsample, rates of mental health need and service
Table 1

SAMPLE CHARACTERISTICS

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Weighted Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender (% male)</td>
<td>50.77</td>
</tr>
<tr>
<td>Race:</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>82.82</td>
</tr>
<tr>
<td>African American</td>
<td>10.61</td>
</tr>
<tr>
<td>American Indian</td>
<td>6.57</td>
</tr>
<tr>
<td>Mental health status:</td>
<td></td>
</tr>
<tr>
<td>No diagnosis or impairment</td>
<td>23.24</td>
</tr>
<tr>
<td>Diagnosis</td>
<td>4.97</td>
</tr>
<tr>
<td>Impairment</td>
<td>41.59</td>
</tr>
<tr>
<td>Serious emotional disturbance</td>
<td>30.20</td>
</tr>
<tr>
<td>Lifetime mental health service use:*</td>
<td></td>
</tr>
<tr>
<td>Specialty mental health provider</td>
<td>46.50</td>
</tr>
<tr>
<td>Mental health service through education</td>
<td>67.80</td>
</tr>
<tr>
<td>Mental health service through medical provider</td>
<td>29.38</td>
</tr>
</tbody>
</table>

* Children could use multiple types of services. Therefore percentages sum to more than 100%.

use were substantially lower. In this group, 37.5 percent met criteria for diagnosis or impairment (but not both), and 11.0 percent were classified as SED using the same measures and time frame as that used for the focal subsample. Twenty-seven percent used some type of mental health service, with 18 percent receiving services through school and 9.4 percent served via specialty mental health. As expected, then, the target subsample for the current analyses shows considerably elevated rates of both need and service use.

Bivariate Relationships

We first examine demographic differences among young people in the three groups. Boys, who are slightly more likely than girls to be living in poverty, are less likely to have had contact with social services, \( \chi^2(1) = 5.82, p < .01 \). Fifty-six percent of the poverty group is male, while only 44 percent of the social services contact group is male. African Americans are overrepresented in foster care, \( \chi^2(1) = 13.82, p < .001 \). Eight percent of the poverty group is African American, while 22 percent of youth in foster care are African American.

We next compare mental health problems among the three groups. The most striking aspect of these figures is the high rate of mental health problems in all three groups. Diagnosis, impairment, or both
### Table 2

**Bivariate Associations**

<table>
<thead>
<tr>
<th>Mental health problems:</th>
<th>Poverty</th>
<th>Social Service Contact</th>
<th>Foster Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>No diagnosis or impairment</td>
<td>25.80</td>
<td>19.70</td>
<td>21.50</td>
</tr>
<tr>
<td>Diagnosis</td>
<td>6.57</td>
<td>1.79</td>
<td>5.60</td>
</tr>
<tr>
<td>Impairment</td>
<td>43.60</td>
<td>41.66</td>
<td>35.40</td>
</tr>
<tr>
<td>SED</td>
<td>24.00*†</td>
<td>36.9‡</td>
<td>37.5‡</td>
</tr>
</tbody>
</table>

- * Significantly different from Social Service group \( (p < .01) \).
- † Significantly different from Foster Care group \( (p < .01) \).
- ‡ Significantly different from Poverty group \( (p < .01) \).

Lifetime service use:

<table>
<thead>
<tr>
<th></th>
<th>Poverty</th>
<th>Social Service Contact</th>
<th>Foster Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>No service use</td>
<td>29.4*†</td>
<td>8.3‡</td>
<td>8.4‡</td>
</tr>
<tr>
<td>Any service use</td>
<td>70.6*†</td>
<td>91.7‡</td>
<td>91.6‡</td>
</tr>
</tbody>
</table>

Type of service use:

<table>
<thead>
<tr>
<th></th>
<th>Poverty</th>
<th>Social Service Contact</th>
<th>Foster Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialty MH</td>
<td>29.81*†</td>
<td>63.86‡</td>
<td>67.08‡</td>
</tr>
<tr>
<td>Education</td>
<td>55.67*†</td>
<td>81.59‡</td>
<td>80.85‡</td>
</tr>
<tr>
<td>Medical provider</td>
<td>19.33*†</td>
<td>36.49‡</td>
<td>47.64‡</td>
</tr>
</tbody>
</table>

(SED) is evident in 78 percent of children who have been in foster care, 80 percent of children who have been in contact with departments of social services, and 74 percent of children in poverty. While overall rates of some type of mental health problem are similar across all groups, children who have been in contact with social services (with or without foster care) are more likely to meet criteria for SED than children living in poverty who have not had contact with social services (social service contact vs. poverty: \( \chi^2(1) = 6.97, p < .01 \); foster care vs. poverty: \( \chi^2(1) = 9.12, p < .01 \)).

The bottom section of table 2 reports lifetime rates of mental health services use. The first comparison examines whether children have received any type of service from any provider. The following rows examine rates of service use from different sectors (specialty mental health providers, education, general medical providers). The majority of young people in these subsamples reportedly received some services aimed at a mental health problem. Over 70 percent of children who live in poverty have received such services, while more than 90 percent who have been in contact with social services or who have lived in foster care receive such services (social service contact vs. poverty: \( \chi^2(1) = 36.0, p < .0001 \); foster care vs. poverty: \( \chi^2(1) = 21.9, p < .0001 \)). Children who have been in contact with social services or in foster care are more likely to receive services from each of the focal sectors (specialty mental health, education, general medical providers) than are children in poverty.

To further explore the extent to which children in contact with social services or foster care receive services, we examine rates of service use...
by young people who meet criteria for a psychiatric diagnosis, impairment, or both. Nearly all who have been in contact with social services (whether in foster care or not) and who have a mental health problem (as defined by diagnosis, impairment, or both [SED]) have received some type of mental health service. Among those who have been in foster care, 97 percent have received such services, as have 93 percent of those who have been in contact with social services. Among youth in poverty, 77 percent with a mental health problem received some service, many via schools. Among children with a mental health problem, 84 percent who have been in foster care, 73 percent who have been in contact with social services, but only 37 percent in poverty have received services from specialty mental health (e.g., community mental health centers, clinicians in private practice) (social service contact vs. poverty: \( \chi^2(1) = 43.4, p < .0001 \); foster care vs. poverty: \( \chi^2(1) = 42.6, p < .0001 \)). Young people who have been in foster care and those who have been in contact with social services are equally likely to receive such services, \( \chi^2(1) = 3.1, p = .08 \). This pattern of increased service use for children in contact with social services or foster care is also replicated among the subset of children who display the most severe mental health problems, those with SED (social service contact vs. poverty: \( \chi^2(1) = 4.2, p < .001 \); foster care vs. poverty: \( \chi^2(1) = 4.2, p < .001 \)).

Logistics Regression Results

The bivariate results suggest that contact with social services (with or without foster care placement) is associated with substantially higher rates of service use for mental health problems. It is possible that such bivariate results occur because contact with social services and foster care serve as proxy variables for other factors that may be associated with service use. We performed logistic regression analyses to examine whether contact with social services (with or without foster care) remains significantly associated with service use once other factors are included in a model. Table 3 summarizes these findings.

The first set of models for each service sector includes race, sex, and severity of mental health problems (as indicated by meeting criteria for SED). Controlling for these factors, children who have been in foster care are more than five times as likely as children in poverty to receive specialty mental health services (odds ratio [OR] = 5.42, \( p < .001 \)). They are also more likely to receive mental health services at school (OR = 3.47, \( p < .01 \)) and from a primary care provider (OR = 4.09, \( p < .001 \)) than the comparison group of children living in poverty. Children who have contact with social services but who were not in foster care are also more likely to receive services from all three sectors than are children living in poverty (OR = 4.17, \( p < .001 \) for specialty mental
Table 3

**Logistic Regression Results for Services through Each Service Sector**

<table>
<thead>
<tr>
<th></th>
<th>Specialty Mental Health</th>
<th></th>
<th>Education</th>
<th></th>
<th>Primary Medical Care</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 2</td>
<td>Model 1</td>
<td>Model 2</td>
<td>Model 1</td>
<td>Model 2</td>
</tr>
<tr>
<td>Social services: foster care</td>
<td>5.42*** (1.69, .41)</td>
<td>5.58*** (1.72, .45)</td>
<td>3.47** (1.24, .43)</td>
<td>3.37** (1.22, .45)</td>
<td>4.09*** (1.41, .40)</td>
<td>6.29*** (1.84, .45)</td>
</tr>
<tr>
<td>Social services: contact</td>
<td>4.17*** (1.43, .34)</td>
<td>5.32*** (1.67, .38)</td>
<td>3.65*** (1.30, .38)</td>
<td>4.88*** (1.58, .42)</td>
<td>2.33** (0.84, .32)</td>
<td>3.72*** (1.31, .37)</td>
</tr>
<tr>
<td>Sex: male</td>
<td>1.03 (.03, .29)</td>
<td>.97 (.03, .33)</td>
<td>1.94 (.66, .32)</td>
<td>1.77 (.57, .36)</td>
<td>1.60 (.47, .29)</td>
<td>1.67 (.51, .34)</td>
</tr>
<tr>
<td>Race: American Indian</td>
<td>.59* (-.51, .23)</td>
<td>.60 (-.51, .32)</td>
<td>.84 (-.08, .27)</td>
<td>.50* (-.70, .32)</td>
<td>.84 (-.17, .23)</td>
<td>.63 (-.45, .32)</td>
</tr>
<tr>
<td>Race: African American</td>
<td>.48 (-.72, .48)</td>
<td>.61 (-.56, .35)</td>
<td>.72 (.03, .45)</td>
<td>.56 (-.58, .50)</td>
<td>.5.3 (-.63, .43)</td>
<td>.50 (-.70, .49)</td>
</tr>
<tr>
<td>Severely emotionally disturbed</td>
<td>6.63*** (1.89, .30)</td>
<td>5.88*** (1.77, .35)</td>
<td>3.36*** (1.21, .37)</td>
<td>2.31* (.84, .42)</td>
<td>3.52** (.92, .29)</td>
<td>2.17* (.78, .33)</td>
</tr>
<tr>
<td>Public health insurance</td>
<td>1.25 (.22, .18)</td>
<td>1.53* (.43, .18)</td>
<td>1.53* (.43, .18)</td>
<td>1.53* (.43, .18)</td>
<td>1.53* (.43, .18)</td>
<td>1.53* (.43, .18)</td>
</tr>
</tbody>
</table>

**Note.**—Numbers in table are odds ratios. Numbers in parentheses are parameter estimate and standard error.

* p < .05.
** p < .01.
*** p < .001.
health services, OR = 3.65, \( p < .001 \) for school-based services, OR = 2.33, \( p < .01 \) for primary medical provider).

The Role of Public Health Insurance

These results suggest very high rates of mental health problems among all three groups of children but significantly higher rates of service use among those who have been in contact with social services (with or without a foster care placement). We are interested in whether this increased use of services might result from higher rates of public health insurance enrollment for children who have been in contact with social services. For most young people, such coverage is Medicaid. However, the sample also includes American Indians who are covered by Indian Health Insurance. Both types of insurance are included here as public health insurance. (Rerunning all analyses after excluding the American Indians did not significantly change any results or conclusions.) Data are available on insurance status only during the 3 years of GSMS data collection. We examined bivariate relationships between public health insurance coverage and service use and reran all logistic regression models after including variables indicating whether the child was covered by such insurance at any point during the GSMS period.

Overall, rates of public health insurance enrollment during the GSMS period do not differ for the three groups. For 17 percent of the sample, insurance status is missing. All analyses for this section were completed using listwise deletion of these missing cases. Among those with available data, 61 percent of children in poverty, 56 percent of children who had contact with social services, and 63 percent of children with a history of foster care placement are enrolled in public health insurance, \( \chi^2(2) = 3.02, \ p = .22 \).

Bivariate results show that public health insurance enrollment is associated with increased lifetime service use from all examined sectors (specialty mental health: \( \chi^2(1) = 9.34, \ p < .01 \); education: \( \chi^2(1) = 20.38, \ p < .0001 \); general medicine: \( \chi^2(1) = 8.47, \ p < .01 \)). For specialty mental health services, the effect of public insurance is statistically significant only for children living in poverty, where 32 percent of those with coverage receive services compared with 2.3 percent of children without coverage, \( \chi^2(1) = 18.82, \ p < .0001 \). For young people who have been in contact with social services or in foster care, rates of service use are similar for youth with and without public health insurance during the GSMS period. For educational services and services from general medical providers, public health insurance is associated with increased rates of service use among those in poverty as well as those who have been in foster care. (See table 4.)

The second set of models for each sector in table 3 includes public health insurance. Including this variable in the logistic regression mod-
Table 4

Rates of Service Use by Public Health Insurance Status (%)

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Mental Health</th>
<th>Education</th>
<th>Primary Medical Care</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Public Insurance</td>
<td>Private/No Insurance</td>
<td>Public Insurance</td>
</tr>
<tr>
<td>Poverty</td>
<td>31.4</td>
<td>2.3****</td>
<td>65.6</td>
</tr>
<tr>
<td>Social services contact</td>
<td>67.6</td>
<td>61.4</td>
<td>86.9</td>
</tr>
<tr>
<td>Foster care</td>
<td>71.0</td>
<td>50.9</td>
<td>89.6</td>
</tr>
</tbody>
</table>

* $p < .05$
** $p < .01$
*** $p < .001$

els does not significantly change the results for foster care or social services contact. If access to public insurance were the driving force behind the observed relationships, we would expect the coefficients for these two variables to decrease substantially in the second set of models. This does not occur. The conspicuous difference between the two models is the effect of race (American Indian) on school service use. When public insurance is included, American Indians are significantly less likely to receive school services than are white children with similar social services experiences, sex, and mental health problems.

Discussion

Summary

This article reports on use of mental health services by children who have been placed in foster care, those who have had contact with departments of social services but without foster care placements, and a comparison group of children living in poverty. The results show very high rates of mental health problems among all three groups. They suggest that contact with social services (with or without foster care placement) is associated with increased use of services, particularly services provided by the specialty mental health sector. This increased use is evident even after race, sex, severity of mental health problems, and public health insurance are included in the model.

Limitations

This article reports on a population-based sample that provides adequate sample size and data on contact with social services, foster care, mental health problems, and service use. Therefore, it permits analyses that are
not possible in other studies. However, it does have a number of limitations that should be kept in mind.

The group of children designated as “having been in contact with social services, but not in foster care” is not as precise as would be ideal. Departments of social services can be in contact with children and families for a wide range of reasons (e.g., entitlements, child maltreatment). We do not know, from the available data, why the designated families had such contact. Therefore, this category is likely to be a heterogeneous group.

Data on key variables do not cover the same time frames. Data on foster care and service use cover the child’s entire life. Data on mental health problems and poverty reflect conditions only during the 3 years of data collection. Data on contact with social services without foster care placement is a combination of lifetime and 3-year periods. If social services were involved with the family because of the child’s problematic behavior, such reports cover the child’s entire life. If they were in contact for other reasons, such data are available only for the data collection period. These issues make it important to emphasize that we are reporting observed associations, and we do not, with the current analyses, examine causal or temporal relationships.

This article focuses on a subsample of young people who are variously disadvantaged. Many lived in poverty during the study period (100 percent of those in the poverty group, 31 percent of those in contact with social services, and 37 percent of those placed in foster care). Hence, it is important to remember that the effects of poverty and related family and social issues cannot be fully disentangled within these analyses.

This sample provides a unique opportunity to include American Indians in the analyses. It should be remembered, though, that a distinct service system is available through the Bureau of Indian Affairs that is not available to other children and families in the area. Logistic regression suggests some differences between white and American Indian youth on school services. These analyses cannot explain what accounts for these differences.

**Implications**

This article provides a number of points that are potentially important for providing services to meet the mental health needs of youth. First, these results suggest that mental health problems are pervasive among all three groups examined here. Over three-quarters of the young people in each of these subgroups meet criteria for a psychiatric diagnosis, functional impairment, or both at some point across four annual assessments. Those living in poverty are slightly, but not significantly, less likely to display such problems than are those who have been in contact with social services. Young people living in poverty are significantly less
likely to display SED (the combination of diagnosis and impairment). Children who have been in contact with social services but not in foster care are clinically indistinguishable from those who have been in foster care.

In terms of service use, though, children who have been in contact with social services (with or without foster care) are substantially and significantly more likely to have received mental health services than are youth living in poverty. This suggests that departments of social services may be acting as de facto gatekeepers of mental health services for young people. It is possible that this merely reflects very brief screening and assessment of young people who have contact with social services or foster care at the point of initial contact. It may also reflect use of social services as a means of gaining services, either indirectly via funding streams (e.g., Medicaid) or directly by transferring custody as a prerequisite for accessing services. It is also possible that having a professional aware of the child’s problems and needs serves an advocacy function that may allow children and families to negotiate a mental health system that is otherwise confusing and difficult to use. More detailed data on youth and families in all three subgroups would be necessary to explain the processes underlying these patterns.

Lower levels of service use among young people who have not had contact with social services or foster care suggest the need for mechanisms to identify need and facilitate service access and delivery for this high-need group. Schools are the most common provider of services to all young people to meet mental health needs. In the current analyses, 56 percent of young people in the poverty group received some type of services via schools. Therefore, school services are reaching many more children than any other sector. Given schools’ central and ubiquitous presence in children’s lives, this suggests the importance of providing both screening and services via schools.

The findings related to public health insurance may suggest that increased enrollment of eligible youth in public insurance would be related to increased use of services by young people with mental health problems. This relationship is particularly striking for specialty mental health services. Virtually no poor child without public insurance receives such specialty services, but nearly one-third of poor children with coverage had received them. Additional work is needed to analyze temporal relationships between public health insurance coverage and service use.

The relatively high rates of exposure to mental health services among youth who have had contact with social services or foster care should be viewed cautiously. As noted above, such contact may be minimal (e.g., one visit for screening or assessment). For example, policies that require a mental health evaluation for youth entering foster care would be picked up as mental health service use here. Such contact, however, should not be interpreted as representing adequate or appropriate treat-
ment for the serious problems that many of these youth display. Current analyses have not examined volume, continuity, or effectiveness of services. The very high rates of disorder displayed by these youth as they enter adolescence suggest the need for intensive ongoing intervention. Further detailed longitudinal analyses on patterns of service use, treatment, and contact with social services/foster care are necessary to fully determine the degree to which “appropriate” services have been provided and the degree to which the relationships among the variables can be viewed as causal.

These results suggest the need to explore more fully the role of social services in accessing care for mental health problems and the tremendous need to provide access for children whose families are not in contact with social services. Additional research is needed on all three of these groups to understand the processes and barriers that might explain the observed patterns of service use and to use these findings to develop and support services that could more adequately meet the needs of these very high-risk youth.

References
Chase-Lansdale, P. Lindsay. 1999. “Effects of Poverty on Children and Families.” In Families,


Notes

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1. In this article we use the term “American Indian” rather than Native American because the Eastern Band of the Cherokee Nation prefers this designation.