Geographic Disparities in Children's Mental Health Care

Roland Sturm, PhD; Jeanne S. Ringel, PhD; and Tatiana Andreyeva, MA

ABSTRACT. *Objective.* It is widely believed that only a minority of vulnerable children and adolescents receive any mental health services. Although health care disparities associated with sociodemographic characteristics are well known, almost no information exists about another potentially important source of disparity for children: How does state of residence affect mental health service use?

Methods. Observational analysis was conducted using the 1997 and 1999 waves of the National Survey of America's Families ($N = 45\,247$ children aged 6–17), a population survey fielded in 13 states and a smaller geographically dispersed sample. We studied 4 dependent variables: 1) use of any mental health services and number of visits among users; 2) need for mental health care, based on 6 items from the Child Behavior Checklist; 3) unmet need (no services among children with identified need); and 4) need among users of mental health services.

Results. Use of any mental health care differs >2-fold across states, ranging from 5% in California and Texas to >10% in Colorado and Massachusetts. The variation across states in service use and unmet need exceeds the differences across racial/ethnic groups or family income. For example, the odds ratio of unmet need in California versus Massachusetts is 3.04, compared with 2.33 between Hispanic and white children. Differences in population characteristics across states do not explain much of the observed geographic variation in mental health related outcomes for children. Perhaps the most disconcerting finding is that the differences in use are not paralleled by differences in need. Overall, there is no apparent relationship between levels of need and use of services across states. As a general rule, states with high rates of services do not have low levels of need or vice versa, although that situation exists. Alabama and Texas, for example, have higher rates of need and lower rates of use than the nation as a whole, whereas Washington state displays the opposite pattern. Even with the similar levels of need and service use, states differ in the effectiveness of their delivery system. Alabama and Mississippi have high rates of need and low levels of use, but rates of unmet need are not significantly higher in those 2 states than in the nation, whereas California, Florida, and Texas have the highest rates of unmet need. In California and Texas, children from high-income families are more likely to receive some mental health services than children from low-income families. In Alabama and Mississippi, as well as in the states with the lowest rates of unmet need (Colorado, Massachusetts, and Minnesota), the opposite is true: children from low-income families are much more likely to receive any mental health service than children from high-income families.

Conclusions. Large differences from the national average across states in service use and unmet need are the rule, rather than the exception. National averages obscure large differences that can exceed the effects of race/ethnicity or income. The differences in the rates of use or unmet need are not driven by differences in the racial/ethnic or socioeconomic makeup across states but more likely are the result of differences in state policies and health care market characteristics. These state policies and health care market characteristics can interact with sociodemographic characteristics and affect how effectively resources are used. For states such as California and Texas that have the lowest rates of mental health service use, it may be less important to raise the rates of service use than to deliver them to the children with the highest need, predominantly black and Hispanic children and children in low-income families. *Pediatrics* 2003;112:e308–e315. URL: http://www.pediatrics.org/cgi/content/full/112/4/e308; *unmet need, health disparities, behavioral health, state variations.*

ABBREVIATIONS. NSAF, National Survey of America's Families; MECA, Methods for the Epidemiology of Child and Adolescent Mental Disorders; OR, odds ratio.

Many children have mental health problems that interfere with normal development and functioning, a topic that has received increased publicity as a consequence of the recent Surgeon General's warning that the nation is facing a public crisis in mental health care for infants, children, and adolescents.[1] It is widely believed that only a minority of vulnerable children and adolescents receive any mental health services, and there is particular concern about disparities in access to services across socioeconomic and racial/ethnic groups.[2] Although health care disparities associated with sociodemographic characteristics are well known, almost no information exists about another potentially important source of disparity for children: How does state of residence affect mental health service use?

One study has reported variations in stimulant medication use among privately insured children across states.[3] The authors found large differences across states, and the highest use was among children who lived in the Midwest and South, as well as in areas with higher income and fewer minorities. That study used administrative insurance data and had no information on need, which made it impossible to rule out the possibility that variations in use reflect underlying differences in need. Insurance data do not contain information about a child's so-

ciodemographic characteristics (other than age and sex of the insured family members), and these are important factors regarding mental health care that we want to study. Earlier studies limited to smaller geographic areas (Maryland and Michigan) have established variation in psychotropic medication use across areas as well but also highlighted racial/ethnic disparities.[4–6] Among Medicaid children in Maryland, white children were twice as likely to receive psychotropic medication as black children; the effect of race was stronger for psychotropic than for nonpsychotropic medication.[5] Two studies provided national estimates of service use and need but did not analyze geographic variations.[7,8] Both studies found that the majority of children who need a mental health evaluation do not receive services and that unmet need varies across socioeconomic and racial/ethnic groups.

These findings raise several questions that we want to address in this article. First, could it be that geographic variations reflect differences in need? The medication studies had no information on need, but if state variations in service use parallel underlying differences in need, then there should be much less concern about geographic variations. Second, do geographic variations in service use reflect population characteristics (and therefore socioeconomic disparities in health care), or do they reflect state characteristics independent of population characteristics?

This article tries to answer these questions using data from 2 waves from the National Survey of America's Families (NSAF). The NSAF data are unique because the sampling strategy of this survey allows for both state-level estimates for 13 states and nationally representative estimates. The 13 focus states in the NSAF were chosen because they collectively accounted for more than one half of the US population and varied in terms of geographic location, size, demographics, and dominant political tradition.[9] No other databases that could generate similar estimates of mental health service need and use among children exist. Although there have been several large national studies on mental health care for adults, only a pilot project, the 1992 National Institute of Mental Health Methods for the Epidemiology of Child and Adolescent Mental Disorders (MECA) Study, has been fielded for children. The MECA study was limited to 4 locations, and the sample size was too small for site estimates (<1500 observations total) and was not nationally representative.[10,11] In addition, the data collection preceded the dramatic growth of carve-outs, the mental health parity debate, and the increased awareness in the general public that efficacious treatments for mental health

disorders are available. The National Health Interview Survey covers similar questions as the NSAF, but state- or site-level estimates are not possible because of the geographic dispersion and the absence of geographic identifiers in available data.

METHODS

The primary data used in this article are from the Urban Institute's NSAF.[12] The survey has 2 rounds, fielded in 1997 and 1999. We tested for changes in use of mental health services or need for services between the 2 time periods, but statistical tests showed no significant changes in use or need over time. We therefore pooled the 2 rounds of data in each survey to increase the sample size of children and adolescents using mental health services.

State-specific estimates are possible for 13 focus states; nationally representative numbers are based on weighted data from those 13 states plus the sample from the balance of the United States. (The focus states in the NSAF are Alabama, California, Colorado, Florida, Massachusetts, Michigan, Minnesota, Mississippi, New Jersey, New York, Texas, Washington, and Wisconsin.) After excluding observations with missing values, our analysis sample includes 45 247 children aged 6 to 17 with 40 112 of those children in the 13 focus states.

Use of Mental Health Services

We used 2 variables to measure the use of mental health services: an indicator of any use of services and the number of visits among children with at least 1 visit. Any use means that the parent reported that the child has received mental health services on 1 or more occasions. The exact wording of the question is as follows: "During the past 12 months, how many times has [child] received mental health services, including mental health services received from a doctor, mental health counselor, or therapist? (and do not include treatment for substance abuse or smoking cessation)

Need for Mental Health Services

For children aged 6 to 17, the NSAF provides a measure of mental health need that is based on parental responses to 6 items from the Child Behavior Checklist. The parent is asked to report how often the items in Table 1 are true about their child.

Each question is scored on a scale of 1 to 3, with 1 representing "often true," 2 representing "sometimes true," and 3 indicating that it is "never true" about their child. The negative behavior problem index is created in the NSAF by summing the scores for the 6 appropriate questions for each child. Thus, the values of the index range from a low of 6 to a high of 18, with higher values indicating fewer problems. A score of 12 or less is considered an indicator of high emotional and behavioral problems. The level of missing data for this measure is low, the spread around the mean for both age groups is sufficient, and the percentages of children with high levels of behavioral problems vary in the expected direction depending on families' socioeconomic circumstances.[13] The α on the 2 scales are moderately high, 0.73 for the scale used for the children aged 6 to 11 and 0.75 for the scale used for children aged 12 to 17.[13] More details about the selection of items, the choice of the cutpoint to dichotomize the scale, construct validity, and benchmarking against other surveys are available in the NSAF documentation.[13]

Two important limitations of this measure are that the scale is based on a reduced set of questions and therefore less reliable than the full Child Behavior Checklist and that only parent responses are available. The smaller number of items will miss more children with serious problems than the full set of questions but can also

TABLE 1. Questions in the NSAF Used To Measure Mental Health Need

I am going to read a list of items that sometimes describe children. For each item, please tell me if it has been often true, sometimes true, or never true for the child during the past month.

All Children	Only 6- to 11-Year-Olds	Only 12- to 17-Year-Olds
Does not get along with other kids	Feels worthless or inferior	Has trouble sleeping
Cannot concentrate or pay attention for long	Has been nervous high-strung, or tense	Lies or cheats
Has been unhappy, sad, or depressed	Acts too young for his/her age	Does poorly at schoolwork

incorrectly classify some children as having need. This would be a problem for clinical studies, but a reliable assessment of the clinical status of a particular child is not as important for an epidemiologic comparison. In general, assessments of mental health problems are more sensitive when they include both parent and child information.[14] In particular, research has shown that parents and children often disagree on the presence of diagnostic conditions.[15] Having only parental reports suggests that the measure of mental health need in the NSAF will be better able to detect externalizing conditions, which are more reliably detected by parent report, than internalizing conditions, such as depression, that tend to be more dependent on interviews of children for diagnosis.

Choosing how to dichotomize a continuous scale is always somewhat arbitrary. Ideally, one would choose a cutpoint to match the prevalence based on a "gold standard" measure of need, but no such measure or national estimate exists: in the National Institute of Mental Health MECA study, prevalence estimates ranged from 5% to 50%, and there is no agreement on the "true" number.[10] Prevalence estimates based on pediatric primary care diagnosis tend to be in the 5% range and lower than estimates based on parent interview.[16] The recommended cutpoint for the NSAF will result in a prevalence at the lower end of that range (7.1%), which is advantageous because we will identify only children who are more symptomatic and likely to benefit from receiving some care.[13] With a higher cutpoint (fewer behavioral problems), more children with minor symptoms would be classified as needing care, yet many of those children would not benefit from care and are not receiving any. A recent article created a separate scale that uses only 4 of the 6 items in the NSAF, and a less stringent cutpoint reports a much higher prevalence of need (20.8%).[7]

Unmet Need for Mental Health Services

We generate a measure of unmet need for mental health services by combining the indicators of any use and need. Although this variable at face value seems to be of major policy interest, the limitations of the need measure are likely to bias its absolute level. For example, as long as the assessment of need is not perfectly specific, children without need are incorrectly classified as having need, but because they are healthy, those children will not use services and therefore are misclassified as having "unmet need." This will inflate the estimates of unmet need, although the relatively stringent cutpoint in the NSAF reduces this problem. Given the limitations of the measures, the rate of "unmet need" is probably best interpreted as shorthand for "percentage of children who are sufficiently symptomatic to warrant at least a psychological evaluation but who have not received either an evaluation or mental health care in past 12 months."

Need Among Users of Mental Health Services

Another way to examine need is to focus only on those children who used mental health services. Together with unmet need (which focuses only on children with need), it will provide a picture of how well resources are targeted to the most needy children. States could have exactly the same levels of need and utilization of services per capita but nevertheless could differ on rates of unmet need and need among users. We would consider the state with lower unmet need and higher need among users to have the more efficient system. To calculate need among users, we want to change the definition of use and consider only children who have had at least 3 visits for mental health reasons. The reason to exclude children with just 1 or 2 visits is that more widespread screening of children for mental health problems may be a good idea and in fact help to target resources better. Most of those children would not be expected to have substantial symptoms. In contrast, children who receive a more meaningful amount of mental health services should have substantial symptoms, especially when there are much more symptomatic children who receive no services at all. This measure has similar limitations to those associated with the measure of unmet need. Some children receiving care may have serious problems not captured by the need items in the survey, especially internalizing problems of which parents may not be aware, so we do not want to interpret this as an estimate of overuse. However, in combination of unmet need estimates, it provides an idea of how states are comparing in their ability to target resources to more vulnerable children.

The results reported here are primarily descriptive. For accounting for oversampling and to adjust for differences as a result of nonresponse, a sampling weight, calculated as the inverse of the probability of selection and response, is used to make inferences representative of the particular group of interest (eg, state, nation). Also, t tests are used to compare state estimates with the national average.

When adjusting for demographic and socioeconomic population differences to test the robustness of the results and determine the role of individual characteristics, we use logistic and linear regression models. Explanatory variables include race/ethnicity of the child, age group, insurance status, and family income at the individual level and state dummy variables (fixed effects). The tests for differences across states in models that control for individual characteristics are based on logistic models when the dependent variable is dichotomous (report z statistic) and linear models when the dependent variable is continuous (report t statistic). We discuss the adjusted results and highlight in the text when controlling for such characteristics changes the descriptive results but show no separate regression results.

RESULTS

Use of Mental Health Services

There are large differences across states that are not explained by sociodemographic characteristics. State effects on utilization exceed the effect of race/ethnicity or income. Figure 1 shows how the use of any mental health care differs across states, ranging from 5.1% in California to 11.6% in Massachusetts.

Fig 1. Geographic variation in use of mental health services for school-age children in the NSAF states.
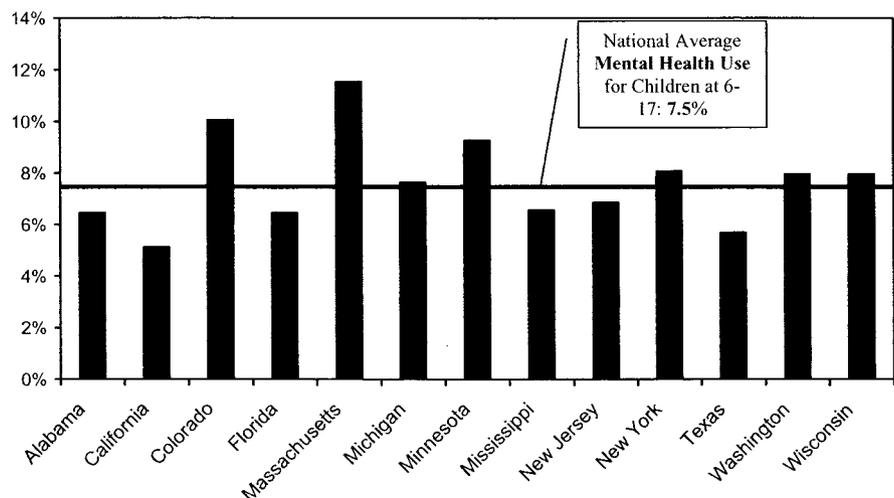
Five of the 13 states (California, Colorado, Massachusetts, Minnesota, and Texas) are significantly different from the national average of 7.5% at conventional levels ($P \leq .05$), and 2 additional states (Alabama and Florida) are significantly different at $P < .10$. Thus, large differences from the national average across states are the rule, rather than the exception, and focusing on national averages obscures large differences across states. Additional details from this analysis are presented in Table 2. The third column of estimates in Table 2 provides the intensity of use among children and adolescents receiving any service (no graphic representation). One would expect that, as the percentage of children receiving services increases, less symptomatic children receive some care (possibly just an evaluation), and therefore the intensity of services among users declines in areas with higher rates of any service use, but this is not the case—if anything, intensity tends to move more in parallel with rates of any service use. Several states with the highest rates of children accessing care also have the highest intensity of care (eg, 15.7 contacts in Massachusetts), and some states with the lowest rates of any use also have the lowest intensity of care among users (eg, 9 contacts in Alabama). Statistically, the differences across states in intensity of care among users are reduced relative to any care, although that is as much a consequence of the much smaller sample sizes ($<1/10$) than of reduced relative differences. Only 3 states have the average number of visits that is statistically different from the national average (Massachusetts, Colorado, and New York).

The variation in service use across states is noticeably wider than the variation across racial/ethnic groups (Table 3), which ranges from 5.3% among Hispanic children to 8.4% among black children. Only Hispanic children are significantly different from the national average. In terms of intensity of care (visits among users), there is little difference among white, black, and Hispanic children, although children in other racial groups have significantly fewer visits when they use any services.

Although utilization follows a clear (and statistically significant) gradient with lower use among children in higher income families, the absolute change between the lowest and highest income groups is smaller than among the top and bottom third of the states (Table 4). There are no noticeable differences in intensity of care by income group.

We tested whether the observed state differences in mental health-related outcomes are generated by demographic differences across states. Adjusting for age, race/ethnicity, insurance status, and family income (based on a logistic regression for any use and a linear regression with log visits as the dependent variable for intensity) does not change the ranking of the states or reduce the magnitudes of differences across states very much (data not shown). One of the largest changes after adjustment can be seen in the odds ratio (OR) for any use comparing Massachusetts with California. The OR based on the descriptive results in Table 2 is 2.41 and falls to 2.06 when the estimates are adjusted for individual characteristics. Other ORs are even less sensitive to adjustments for compositional differences. For example, the OR of any use of services in Massachusetts relative to Alabama is 1.89 based on the descriptive statistics in Table 2 falls only slightly to 1.79 after adjusting for sociodemographics. The adjusted differences in service use between states remain noticeably larger than the biggest race/ethnicity differences. The OR for the comparison of white, non-Hispanic and Hispanic children is 1.51 in the descriptive statistics and rises to 1.64 after adjusting for other individual characteristics and state of residence.

Mental Health Need

Need does not parallel mental health service use variation across states. Although state effects on utilization are stronger than race/ethnicity or family income effects, the opposite is true for need. Differences in service use are of little concern if there are corresponding differences in need, but this is not the case. The pattern in Fig 2, which displays need estimates, has no relationship with the state patterns in

TABLE 2. Use of Mental Health Services and Need

	No. of Observations	Any Service	No. of Visits Among Users	Need	Unmet Need	Need Among Users
Alabama	2554	6.47*	9.02	8.26*	69.34	47.07*
California	2432	5.13†	11.68	6.34	80.57†	31.28
Colorado	3012	10.06†	14.92*	6.65	55.23†	32.13
Florida	2601	6.47*	12.27	8.09	73.73†	38.33
Massachusetts	3139	11.55†	15.71†	7.05	51.27†	31.78
Michigan	2799	7.65	11.85	7.14	66.67	40.43
Minnesota	3179	9.27†	13.51	7.50	54.83†	36.06
Mississippi	2424	6.58	14.19	9.43†	70.37	50.07*
New Jersey	3538	6.87	11.99	5.58†	62.17	30.34
New York	2852	8.07	13.56*	6.69	57.29*	40.96
Texas	2786	5.69†	10.14	7.92	76.39†	37.58
Washington	3153	7.97	10.89	5.92†	64.74	35.74
Wisconsin	5643	7.96	10.33	7.93*	64.53	40.14
Rest of US	5135	8.05	10.18	7.09	59.67	37.52
National average		7.45	11.15	7.09	64.71	37.11
Sample size	45 247	45 247	3777	45 247	3470	2642

* Significantly different from national average at $P < .10$.
† Significantly different from national average at $P < .05$.

TABLE 3. Use of Mental Health Services and Need by Race/Ethnicity

	No. of Observations	Any Service	No. of Visits Among Users	Need	Unmet Need	Need Among Users
White	31 240	7.77	11.34	6.09*	59.18*	35.66
Black	6371	8.44	10.22	10.59*	69.23	42.79
Hispanic	6022	5.29*	12.77	7.82	77.16*	38.83
Other	1614	6.19	7.72*	7.14	67.07	35.27
National average	45 247	7.45	11.15	7.09	64.71	37.11

* Significantly different from national average at $P < .05$.

TABLE 4. Use of Mental Health Services and Need by Income Group

	No. of Observations	Any Service	No. of Visits Among Users	Need	Unmet Need	Need Among Users
Low income (<150% poverty line)	13 240	8.97*	11.86	11.52*	66.60	48.56*
Middle income (150%–300% poverty line)	14 388	7.47	11.58	6.22*	62.97	34.04
High income (>300% poverty line)	17 619	6.34*	10.02	4.55*	63.05	29.20*
National average	45 247	7.45	11.15	7.09	64.71	37.11

* Significantly different from national average at $P < .05$.

Fig 2. Geographic variation in need for mental health services for school-age children in the NSAF states.
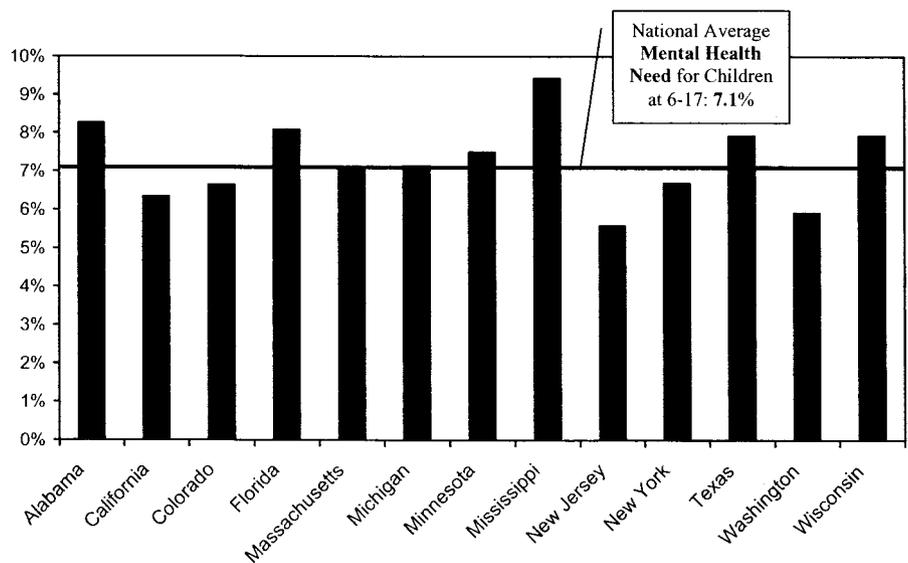
Fig 1. Massachusetts had the highest rate of mental health service use at nearly 12%, but the estimated need for mental health services among children in Massachusetts is slightly below the national average at 7.1%. The opposite is true in Alabama and Mississippi, which have lower rates of any mental health care than the national average yet higher estimated rates of need (significant at $P < .05$ for Mississippi, $P < .10$ for Alabama). In contrast to the >2-fold differences in any services use, mental health need varies less across states, ranging from 5.6% in New Jersey to a high of 9.4% in Mississippi (Table 2). Although the national average rates of mental health need and service use are relatively similar (7.5% with any use vs 7.1% with need, based on the chosen indicator), the geographic variations in use ensure that the mismatch is much larger in almost all states.

In comparison with the national average estimate, we observe large and statistically significant differences in need for black (10.6%) and white children (6.1%; $P < .01$; Table 3), although they become statistically insignificant when adjusting for family income, insurance status, and state of residence. The descriptive black/white OR is 1.8 (1.3 in a multivariate model), which is similar to the OR of 1.8 for the need rates of Mississippi versus New Jersey (1.4 in a multivariate logistic model). Descriptively, the largest disparities in need are across families with different income levels (Table 4). The OR of children in low-income families versus those in high-income families in need is 2.73, exceeding any differences across states or racial/ethnic groups.

Unmet Need for Mental Health Care

Hispanic children have the highest unmet need, but geographic disparities in unmet need can exceed the effect of race/ethnicity. The odds of having unmet need for a child in California are 3 times the odds of unmet need for a similar child in Massachusetts. The percentage of children identified as having some need but receiving no services combines the 2 dimensions of use and need. Figure 3 shows the descriptive rates for unmet need. At the individual level, the rates of mismatch between (measured) need and service use are much higher than at the aggregate, reflecting both a true effect (services are

Fig 3. Geographic variation in unmet need for mental health services for school-age children in the NSAF states.
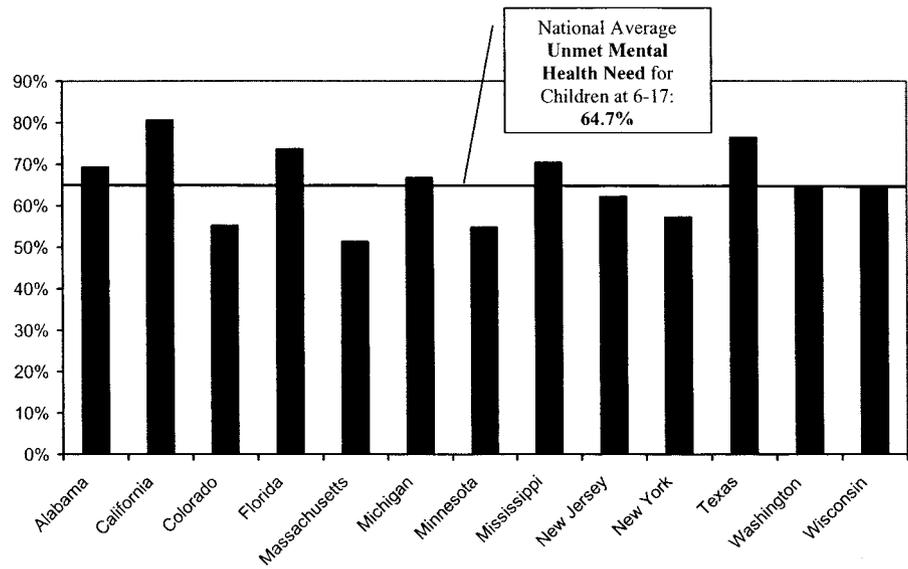
not always delivered to individuals who need them most) and a spurious methods effect (a crude measure of need will incorrectly classify some children). Across states, the rate of unmet need ranges from a low of 51.3% in Massachusetts to a high of 80.6% in California (Table 2). Six of the 13 NSAF states have rates of unmet need that are statistically different from the national average at $P < .05$ (California, Florida, and Texas with above-average unmet need; Colorado, Massachusetts, and Minnesota with below-average unmet need). A surprising finding is that Mississippi and Alabama, states with high need and low service use, are not in this group, suggesting that those 2 states may be more successful in targeting available services to children in need than other states.

There are no significant differences in unmet need by income group, although there are significant differences in unmet need across racial/ethnic groups, especially between Hispanic and white children (OR: 2.33; $P < .01$; see Table 2 for absolute rates). There are also large state variations. For example, the OR for unmet need in California versus Massachusetts is 3.04 ($P < .01$). Multivariate regression analysis reduces the variation across racial/ethnic groups and states somewhat but does not change the rankings.

Mental Health Need Among Service Users

There is little variation across states or by race/ethnicity in need among users. However, there is a very strong income effect: children from high-income families receiving mental health care are much less likely to have substantial symptoms. There is little variation across states in need among users, and we therefore do not show a graph for this variable (numbers are provided in Table 2). However, 2 states, Alabama and Mississippi, have rates that are noticeably higher than the national average of 37.1% (borderline statistically significant, $P < .10$). Although we should not overinterpret these findings because of the limitations of assessed need, we tend to interpret this as an indicator that services in Mis-

sissippi and Alabama are indeed more targeted to children who are more symptomatic than in other states. This may be not unexpected given the lower resources for mental health services in those states, combined with similar or even higher need. However, it is not an automatic outcome either, and we think that these tentative results are a positive and encouraging finding. At the other extreme is California, the state where the highest rates of unmet need coexist with the second lowest rate of need among users. Therefore, state differences exist not only in the overall rates of service use but also in how effectively services are delivered to the most needy children.

Need among users does not differ across racial/ethnic groups, but there are big effects of family income. Children in high-income families receiving treatment (defined as at least 3 contacts) are much less likely to display mental health problems than children in low-income families (OR: 0.44; $P < .05$; Table 4).

DISCUSSION

This study compares mental health need and service use among children and adolescents across 13 US states. It reinforces the growing concern about health and health care disparities but highlights a different source of inequity, namely the role of geographic differences. This source of inequity has generally gone unnoticed until now as a result of the absence of consistent data across a large number of states.

Regarding the use of any services, the effect of state of residence exceeds the effects of either race/ethnicity or income. In contrast, the differences in need across states are relatively small, especially after adjusting for sociodemographic differences (the largest OR, Mississippi vs New Jersey, is 1.4). For need, sociodemographics play a larger role. For example, there are large differences by family income, with the highest level of need among children in the poor families.

Perhaps the most disconcerting finding is that the differences in use across states are not paralleled by differences in need. Overall, there is no apparent relationship between levels of need and use of services across states. As a general rule, states with high rates of services do not have low levels of need or vice versa, although that situation exists. Alabama and Texas, for example, have higher rates of need and lower rates of use than the nation as a whole, whereas Washington state displays the opposite pattern.

We constructed 2 variables to study how well resources are targeted to the most needy children. Even with the same levels of need and service use, states can differ in the effectiveness of their delivery system, and we see noticeable differences across states. Alabama and Mississippi have high rates of need and low levels of use, but rates of unmet need are not significantly higher in those 2 states than in the nation. Instead, rates of unmet need are highest in California, Florida, and Texas. Why do these differences exist? Much of that can be attributed to how service within state varies by income or race/ethnicity (data not shown). In California and Texas, children from high-income families are more likely to receive some mental health services than children from low-income families. In Alabama and Mississippi, as well as in the states with the lowest rates of unmet need (Colorado, Massachusetts, and Minnesota), the opposite is true: children from low-income families are much more likely to receive any mental health services than children from high-income families. Unfortunately, we need much larger sample sizes to analyze interactions between state of residence and sociodemographic characteristics in more detail.

States obviously differ substantially in the sociodemographic characteristics of their population, and such differences are a possible source of the disparities in access to care across states. However, the compositional differences by themselves do not explain much of the observed geographic variation in mental health-related outcomes for children. In other words, the difference in the rates of use in California and Massachusetts are not driven by differences in the racial/ethnic makeup of the 2 states. Disparities across states are more likely to be a consequence of state policies and health care market characteristics. These state policies and health care market characteristics can interact with sociodemographic characteristics and affect how effectively resources are used. For example, we observed relatively higher rates of use for children from high-income families than for children in low-income families in California and Texas. For such states, it may be less important to raise the rates of service use than to improve the delivery of services to children with the highest need, predominantly black and Hispanic children and children in low-income families.

That the disparities in service use and unmet need across states seem to be driven by state-level factors rather than by demographics may be good news. After all, there is a greater ability to alter state policies and market characteristics than population char-acteristics. However, research is needed to identify which state characteristics are the important drivers of the observed inequities. Likely candidates to explore in future research are insurance mandates for mental health care, managed care penetration, the supply of mental health specialists, and the role of primary care. We noticed that the income gradient in service use differed substantially across states, and Medicaid/State Children's Health Insurance Program state policies are likely to be prime factors to alter access to mental health care for the poor. The design of Medicaid programs affects the willingness of private primary care pediatricians to accept more Medicaid patients.[17] Pediatric primary care, not mental health specialty, is the main delivery setting for pediatric mental health care. Most visits for depression or attention-deficit/hyperactivity disorder, as well as psychopharmacologic treatments, are in primary care.[18,19]

CONCLUSIONS

We found large geographic variations in service use and unmet need across states. Demonstrating the existence of such variations is only a first step toward eliminating them, but even simple descriptive statistics can inform the public debate by providing a gauge for measuring where a state stands in relation to others. This information may help states that find themselves at the low end of the spectrum to focus attention on access issues and potential barriers to care.

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