

# Pediatricians' Role in Providing Mental Health Care for Children and Adolescents: Do Pediatricians and Child and Adolescent Psychiatrists Agree?

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**ABSTRACT:** *Background:* Many children who have a mental health disorder do not receive mental health services and are seen only in primary care settings. Perceptions of pediatricians and mental health specialists regarding the role that pediatricians should have in diagnosing and managing children's mental health problems have not been studied. *Objective:* To examine whether primary care pediatricians (PCPs) and child and adolescent psychiatrists (CAPs) agree about: (1) the pediatrician's role in identification, referral, and treatment of childhood mental health (MH) disorders; and (2) barriers to the identification, referral, and treatment of childhood MH disorders. *Methods:* Surveys were mailed in 2005 to 338 PCPs and 75 CAPs in 7 counties surrounding Cleveland, Ohio. Each group was asked whether they agreed that PCPs should be responsible for identifying, treating, or referring 7 prevalent childhood MH problems. Barriers that PCPs face in identification, referral, and treatment of MH problems were also assessed. Analyses were weighted for nonresponse; group differences were assessed via Rao-Scott  $\chi^2$  test and weighted regression analyses. *Results:* Approximately half of PCPs and CAPs returned the survey. With the exception of attention deficit hyperactivity disorder (ADHD), the majority of PCPs and CAPs agreed that pediatricians should be responsible for identifying and referring, but not treating child MH conditions. For ADHD, PCPs were more likely than CAPs to agree that pediatricians should identify and treat affected children. PCPs were more likely than CAPs to agree that pediatricians should be responsible for identifying child/adolescent depression and anxiety disorders; the majority of both groups agree that PCPs should be responsible for referring, but not treating these conditions. Both groups agree that lack of MH services is a barrier to identification, treatment, and referral of child MH problems for PCPs. CAPs were more likely to agree that pediatrician's lack of training in identifying child mental health problems was a barrier, whereas PCPs were more likely to endorse lack of confidence in their ability to treat child MH problems with counseling, long waiting periods to see MH providers, family failure to follow through on referrals, and billing/reimbursement issues as barriers. *Conclusions:* Most PCPs and CAPs believe it is pediatricians' responsibility to identify and refer, but not treat, the majority of children's mental health problems. Both groups agree that mental health services are not readily available. Future efforts are needed to support PCPs and CAPs in their combined effort to address the mental health needs of children.

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It is estimated that up to 20% of children have a diagnosable mental health disorder.<sup>1–5</sup> Even more alarming is the fact that half of adults with mental illness today had symptoms by 14 years of age, and three-quarters had symptoms by 24 years of age.<sup>6,7</sup> Although many children have mental health needs, relatively few receive services

for those needs, and those who do often are identified and treated entirely within primary health care settings.<sup>3,4,8–11</sup> A shortage of child and adolescent psychiatrists and other mental health professionals<sup>12,13</sup> has created the need for pediatricians to evaluate and treat more children with mental health problems.

Primary care pediatricians (PCPs), however, face numerous barriers when attempting to address childhood mental health problems. These barriers include limited training, time and insurance constraints, and lack of mental health professionals to whom patients can be referred once identified.<sup>10,11,14,15</sup> Furthermore, families may be reluctant to follow-up with further evaluation or treatment within the mental health system because of stigma.<sup>16,17</sup> Finally, despite a national focus on the early identification of mental health problems by primary health care providers,<sup>18,19</sup> successful interventions to modify the role of primary care providers so that mental health issues become a primary focus of care remain understudied.

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Ideally, primary care providers and mental health specialists should agree on their respective roles in treating children with mental health problems. This would lay the foundation to optimally support one another in those roles, and communicate effectively to ensure that children with mental health needs are identified and treated appropriately. However, even in the case of physical health problems, generalist-specialist roles and responsibilities are poorly delineated and communications inadequate, which often can lead to fragmented and poor care for children.<sup>20-24</sup> In essence, many children's health care needs fall through the cracks, despite their interactions with both specialists and generalists.

The generalist-specialist roles and responsibilities are even less well understood for children's mental health problems. Although previous studies suggest that pediatricians are concerned about the quality of communication with their mental health colleagues,<sup>25</sup> there is virtually no information about the perceptions mental health specialists have regarding the roles they believe PCP should play in delivering mental health care to children or the barriers they believe PCPs might encounter in delivering mental health care for children.

Given the paucity of information about the perceived roles of, and interactions between PCPs and mental health providers, we sought to conduct this exploratory study to examine the perceptions that pediatricians and child and adolescent psychiatrists have regarding the identification, referral, and treatment of childhood mental health disorders. Specifically, the purpose of this study was to examine whether primary care pediatricians (PCPs) and child and adolescent psychiatrists (CAPs) agree on the pediatrician's role in identification, referral, and treatment of childhood mental health disorders. Further, we sought to compare PCP's and CAP's views about barriers that pediatricians encounter in the delivery of mental health care for children.

## METHODS

### Study Population

All primary care pediatricians (PCPs) and child and adolescent psychiatrists (CAPs) licensed in the state of Ohio who practiced in the 7 counties most proximate to Cleveland, Ohio (i.e., Cuyahoga, Lorain, Geauga, Medina, Summit, Portage, Lake, and Ashtabula) were potentially eligible for participation. The Ohio State Medical board provided contact details, including gender and age, for 479 PCPs and 80 CAPs. Addresses were cross-referenced with all local hospital and practice databases, because the state medical board includes names of licensees who have moved to other locations. Thus, correct addresses were confirmed for 338 PCPs and 75 CAPs, who constituted the targeted sample who were eligible for the survey. The survey was mailed twice within a 3-month time period during early 2005. The study protocols and survey instruments were approved by the Institutional Review Board of University Hospitals of Cleveland.

## Survey Questions

Respondents were asked a broad range of questions on sociodemographic, practice, and patient characteristics that were used in the American Academy of Pediatrics (AAP) Periodic Survey #59.<sup>14</sup> Categorical questions were developed by the authors for use in this study. Sociodemographic questions were largely categorical and included gender, age, ethnicity of provider, and years in practice. Questions regarding practice characteristics were asked using categorical response choices from the AAP Periodic Survey #59<sup>14</sup> and included location of practice, number of ambulatory visits per week, insurance of patients, and practice setting. PCPs and CAPs practicing in a HMO staff model, multispecialty or other group practice, 2 physician practice or were self-employed practiced in a private setting, whereas those working for a nonprofit community health center, city/county/state government hospital or clinic, or United States government hospital or clinic practiced in a public setting. For 7 prevalent childhood mental health problems (attention deficit hyperactivity disorder [ADHD], depression, behavioral problems, learning disabilities, anxiety disorders, substance abuse, and eating disorders), PCPs and CAPs were asked to respond to 3 identical questions: "How strongly do you agree or disagree that pediatricians should be responsible for identifying this problem? How strongly do you agree or disagree that pediatricians should be responsible for treating or managing this problem? How strongly do you agree or disagree that pediatricians should be responsible for referring this problem?" Each response was scored on a 3-point Likert scale with the following response choices: disagree, neutral, agree. PCPs and CAPs were asked 13 questions about barriers for pediatricians in their identification, referral, and treatment of child mental health (MH) problems, which have been used in prior studies.<sup>14</sup> Barriers included organizational issues (e.g., lack of time to treat child mental health problems), physician issues for child psychosocial problems (e.g., lack of training in identifying child mental health problems), and patient issues (e.g., family failure to follow through on referrals). The barrier questions were asked on a 5-point Likert scale (strongly disagree, disagree, neutral, agree, strongly agree), with responses in the latter 2 categories indicating endorsement of the barrier (i.e., that the respondent agrees this is a barrier for them). Finally, both groups were asked their opinions about the availability of children's mental health services, time from referral to mental health evaluation, time from referral to mental health treatment, and frequency that PCPs consult with CAPs by phone. These questions were informed by in-depth interviews with CAPs and PCPs and pretested within a similar sample of PCPs and CAPs.

## Statistical Analyses

Bivariate comparisons of age and gender for responders and nonresponders were examined for each survey. To minimize potential bias created by differential nonresponse and to ensure that the respondents are representative of the population, poststratification sample weights

were created by fitting multivariable logistic regression models to estimate the probability of response. Age was dichotomized using the same cut-point as were used in data analyses conducted for the AAP survey #59 to allow comparisons with that sample.<sup>14</sup> Among PCPs, males <40 were less likely to respond, whereas females <40 were more likely to respond. The sample weights for the PCPs were males <40: 1.208; males ≥40: 1.014; females <40: 0.773, females ≥40: 1.085. For CAPs, neither age nor gender significantly differed between responders and nonresponders. Age was dichotomized at the unweighted sample mean for CAPs, and the sample weights were males <55: 1.014; males ≥55: 0.903; females <55: 1.360; females ≥55: 0.788.

Survey data were summarized using weighted means, weighted standard deviations, and weighted medians for continuous measures, and unweighted counts with weighted percentages for categorical variables. Between-group differences were assessed via the Rao-Scott  $\chi^2$  test from weighted contingency table analyses, the F test from weighted linear regression analyses, and the Wald  $\chi^2$  test from weighted logistic regression analyses. The “don’t know/no answer” category was not included in the calculation of *p* values unless the percentage exceeded 10% for either survey. The data were analyzed using procedures appropriate for survey data in SAS version 9.1.<sup>26</sup>

## RESULTS

Half of the primary care pediatricians (PCPs) (*n* = 170; 50.3%) and approximately half of the child and adolescent psychiatrists (CAPs) (*n* = 35; 46.7%) returned the survey. Among the 170 PCPs who responded, 38 (22.4%) surveys were excluded from the analyses because the respondent did not provide direct patient care (*n* = 25), was not practicing primary care pediatrics (*n* = 7) or was in residency (*n* = 1), or the questionnaire was returned, but very few or none of the questions were completed (*n* = 5). Among the 35 CAPs who responded, 4 (11.4%) surveys were excluded because they did not provide direct patient care (*n* = 1) or because the survey had few or no questions completed (*n* = 3). The analytical sample included 132 practicing PCPs and 31 CAPs.

Table 1 shows the physician and practice characteristics for both groups. Over 75% of respondents in both groups were white, and just over half of the respondents were female. CAPs were significantly older than PCPs, although their years in practice were similar. A significantly greater proportion of PCPs than CAPs reported practicing in a private setting, seeing patients in suburban practices, and having more ambulatory visits per week. The sample of PCPs in this study was similar to a national sample of pediatricians in gender, ethnicity, type of practice, and frequency of ambulatory visits.<sup>14</sup> Among the PCP sample, 2 completed a fellowship in behavioral/developmental pediatrics, 1 completed a fellowship in child psychiatry, and 1 completed a fellowship in behavioral sciences. When PCPs were asked about prior training, 30 had received training in child interviewing techniques during their fellowship, 22 had received training in DSM diagnostic criteria for child/adolescent depression during

their fellowship, 13 had received training in strategies for managing/treating child/adolescent depression during their fellowship, and 7 had received training in child/adolescent dosing with antidepressants during their fellowship.

Table 2 compares PCPs and CAPs opinions and activities about children’s mental health. Fewer than 10% of PCPs and CAPs believed that children’s mental health services were very available in their community. PCPs and CAPs had similar responses regarding the time elapsed between referral to a mental health provider and evaluation or treatment; approximately half of PCPs and nearly 40% of CAPs believed that the time from referral to evaluation or treatment was >4 weeks. The proportions of PCPs and CAPs who reported monthly contact with each other were similar (25.6% and 32.1%, respectively). Approximately one-fourth of CAPs reported that PCPs never consult with them by phone, whereas 11% of PCPs report that they never consult with CAPs by phone.

Table 3 shows the number and weighted percentage of PCPs and CAPs who agree that pediatricians should be responsible for identifying, referring, and/or treating the 7 childhood mental health problems. With the exception of attention deficit hyperactivity disorder (ADHD), the overall results show that the majority of PCPs and CAPs agree that pediatricians should be responsible for identifying and referring, but not treating child mental health conditions. Compared with the other 6 mental health problems, treating ADHD was perceived by the majority of both PCPs and CAPs as the pediatricians’ responsibility. For example, although fewer than 20% of PCPs and CAPs agreed that pediatricians should be responsible for treating the other 6 childhood mental health conditions, 85.6% of PCPs and 57.0% of CAPs agreed that pediatricians should be responsible for treating ADHD. However, there was considerable difference in the proportions of the 2 groups who thought this. Conversely, although approximately 80% of PCPs and CAPs believed that pediatricians should be responsible for referring the other 6 childhood conditions, only 35.6% of PCPs and 56.8% of CAPs agreed that pediatricians should refer for ADHD. Compared with CAPs, PCPs were more likely to agree that they should be responsible for identifying and treating ADHD, and less likely to agree that they should be responsible for referring for ADHD (*p* < .05). A significantly greater proportion of PCPs agreed that it should be their responsibility to identify child/adolescent depression (84.7% vs 62.6%, *p* < .01) and anxiety disorders (85.0% vs 68.2%, *p* < .05). Interestingly, the majority of PCPs and CAPs believe that PCPs should not be responsible for treating depression and anxiety, but rather should be responsible for referring children with these problems. For all other childhood mental health problems, PCPs and CAPs responded similarly with respect to identifying, treating, and referring.

Table 4 shows the proportion of PCPs and CAPs who endorse barriers to pediatricians identifying, referring, and treating children and adolescents with mental health problems. Over 70% of PCPs and CAPs agree that a lack of MH services were barriers for PCPs (e.g., lack of qualified

**Table 1.** Physician and Practice Characteristics

Physician and Practice Characteristics	PCPs (n = 132)		CAPs (n = 31)		p-Value
	N	Wtd %	N	Wtd %	
Gender					
Male	52	41.1%	15	45.1%	
Female	80	58.9%	16	54.9%	0.69
Age	48.2 ± 14.6 (47.0)		54.3 ± 11.2 (54.0)		0.005
Ethnicity					
White	100	75.6%	25	77.9%	
Asian	16	12.2%	3	11.6%	0.96
Other/unknown	16	12.2%	3	10.5%	
Years in practice	16.3 ± 14.6 (15.0)		17.1 ± 11.8 (14.0)		0.73
Location of practice					
Urban, inner city	30	22.6%	8	24.2%	
Urban, not inner city	10	7.5%	6	20.4%	0.01
Suburban	88	68.3%	13	45.8%	
Rural	2	1.6%	3	9.6%	
Number of ambulatory visits per week	91.5 ± 60.2 (90.0)		39.8 ± 33.1 (31.0)		<0.0001
Insurance of Patients					
≥80% private insurance	47	36.1%	12	39.7%	
<80% private insurance	54	41.1%	18	57.4%	0.03
Unknown	31	22.8%	1	2.9%	
Percentage of Caucasian patients					
0–24% Caucasian	25	19.2%	2	6.9%	0.05
25–49% Caucasian	14	10.4%	8	25.6%	
50–74% Caucasian	31	23.3%	10	32.5%	
75% Caucasian	61	47.1%	11	35.0%	
Practice setting					
Private	102	77.6%	13	43.0%	
Public	12	9.2%	8	25.3%	0.0004
Academic	16	11.8%	6	20.2%	
Other	2	1.4%	4	11.5%	

\*N and weighted % shown for categorical variables.

Weighted mean ± weighted standard deviation (weighted median) shown for continuous variables.

providers to refer to, long waiting periods to see referred MH providers, and lack of time to treat child MH problems). CAPs were significantly more likely than PCPs to agree that pediatricians' lack of training in identifying child mental health problems was a barrier (70.2% vs 47.4%,  $p < .05$ ). CAPs were significantly less likely than PCPs to agree that pediatricians' lack of confidence in their ability to treat child mental health problems with counseling was a barrier (45.2% vs 69.6%,  $p < .05$ ). Both groups agree that there are long waiting periods to see mental health providers, though a greater proportion of PCPs than CAPs endorse this as a barrier for pediatricians (86.6% vs 71.8%,  $p < .05$ ). Similarly, although the majority of PCPs and CAPs agree that family failure to follow through on a referral is a barrier, PCPs were more likely than CAPs to endorse this as a barrier for pediatricians (75.3% vs 56.9%,  $p < .05$ ). Finally, PCPs were also more likely than CAPs to endorse 2 system barriers. Fifty-six percent of PCPs agreed or strongly agreed that lack of

familiarity with CPT codes to reimburse treatment of child mental health problems was a barrier, whereas only 22.1% of CAPs agreed that this was a barrier for pediatricians ( $p < .001$ ). Similarly, PCPs were also more likely than CAPs to agree that inadequate reimbursement for treating child mental health problems was a barrier (66.5% vs 40.5%,  $p < .001$ ). Physician-specific barriers related to child mental health among the PCPs in our sample were almost identical to those endorsed in a national sample of pediatricians.<sup>14</sup>

## DISCUSSION

Although primary care pediatrician (PCPs) and child and adolescent psychiatrists in this study report similarities in their perceptions about the role of pediatricians in identifying, referring, and treating child mental health problems, several important differences emerge. In this exploratory study, fewer child and adolescent psychiatrists (CAPs) than PCPs agreed that it is a pediatrician's role

**Table 2.** Child Mental Health Opinions and Activities

Child Mental Health Activities and Opinions	PCPs (n = 132)		CAPs (n = 31)		p Value
	N	Wtd %	N	Wtd %	
	Availability of children's MH services				
Very available	5	3.7	3	9.4	0.40
Somewhat available	106	81.0	24	78.0	
Not available/don't know availability	21	15.3	4	12.6	
Time from referral to MH evaluation					
<1 wk	5	3.8	3	8.7	0.56
1–2 wk	13	10.1	3	11.2	
2–4 wk	38	28.9	11	35.0	
>4 wk	69	52.0	11	37.2	
Don't know/no answer	7	5.2	3	7.9	
Time from referral to MH treatment					
<1 wk	2	1.6	4	11.5	0.05
1–2 wk	9	7.1	3	11.2	
2–4 wk	29	21.7	8	24.9	
>4 wk	67	51.1	13	44.4	
Don't know/no answer	25	18.5	3	7.9	
Frequency that PCPs consult with CAPs by phone:					
At least once per week	6	5.0	3	7.6	0.15
1–3 times per month	27	20.6	8	24.5	
Less than once per month	83	62.4	13	43.3	
Never	15	11.2	7	24.6	
No answer	1	0.8	0	0.0	

to identify children with anxiety and depression. However, both PCPs and CAPs believe that PCPs are responsible for referring children with these problems. More importantly, these perceptions suggest that both groups believe that treatment of most mental health problems are the domain of CAPs and the mental health system, despite the identified shortage of CAPs to care for these children.<sup>13</sup>

In contrast to anxiety and depression, both PCPs and CAPs agreed that it is a pediatrician's role to identify and treat children with attention deficit hyperactivity disorder (ADHD). This difference may reflect the position of the American Academy of Pediatrics asserting that it is the pediatrician's responsibility to identify and treat ADHD.<sup>27,28</sup> Significant efforts have been made to educate pediatricians about ADHD, including the wide dissemination of a tool-kit developed and designed specifically for use in primary care pediatrics.<sup>27,28</sup> Because ADHD has been addressed in a more organized and focused effort than any other behavioral and mental health problem commonly

**Table 3.** PCP and CAP Comparisons: Agree that Pediatricians Should be Responsible for Identifying, Treating, and Referring Child Mental Health Problems

Agree That Pediatricians Should Be Responsible for	PCPs (n = 132)		CAPs (n = 31)		p-Value
	N	Wtd %	N	Wtd %	
	ADHD				
Identifying	117	90.1	23	73.3	0.01
Treating	110	85.6	18	57.0	0.005
Referring	46	35.6	17	56.8	0.04
Child/adolescent depression					
Identifying	111	84.7	19	62.6	0.008
Treating	17	13.3	3	9.2	0.52
Referring	110	83.8	23	84.7	0.91
Behavioral problems					
Identifying	107	82.0	25	78.7	0.68
Treating	21	17.2	4	13.8	0.66
Referring	104	79.6	22	77.5	0.80
Learning disabilities					
Identifying	77	58.4	20	61.3	0.77
Treating	14	11.1	5	18.4	0.30
Referring	120	91.6	24	82.8	0.16
Anxiety disorders					
Identifying	112	85.0	22	68.2	0.04
Treating	21	16.5	2	7.7	0.26
Referring	106	80.9	25	88.6	0.30
Child substance abuse					
Identifying	113	86.3	25	81.6	0.51
Treating	15	11.7	2	7.7	0.55
Referring	120	91.9	25	84.7	0.26
Child eating disorders					
Identifying	115	89.2	27	87.4	0.77
Treating	20	15.5	3	10.3	0.49
Referring	114	86.8	24	82.0	0.52

seen in pediatric settings, it is interesting to note that PCP respondents in this study, as in a national study,<sup>29</sup> take more ownership of this mental health problem.

In this study, 70% of CAPs believed that pediatricians lacked adequate training in identifying child mental health problems, whereas fewer pediatricians (47%) endorsed the same barrier. The pediatricians' perceptions are consistent with findings in a large national study by Horwitz et al.<sup>14</sup> Finally, compared to PCPs, CAPs underestimated the importance of system barriers, such as of lack of knowledge of CPT codes and poor reimbursement for mental health care that PCPs encounter in the identification and treatment of mental health problems.

In our study, the vast majority of PCPs agreed that pediatricians should refer children with mental health disorders. PCPs often refer patients "to obtain a skill outside their range of expertise,"<sup>30</sup> but many may also do so because of other perceived limitations, such as time

**Table 4.** PCP and CAP Comparisons of Endorsement of Barriers Encountered by Pediatricians in Identifying, Treating, and Referring Child Mental Health Problems

Barriers for Pediatricians	PCPs (n = 132) Agree*		CAPs (n = 31) Agree*		p Value
	N	Wtd %	N	Wtd %	
Lack of training in identifying child MH problems	60	47.4	22	70.2	0.03
Lack of confidence in ability to diagnose	51	40.2	13	50.2	0.36
Lack of confidence in ability to treat w/counseling	90	69.6	12	45.2	0.02
Lack of confidence in ability to treat w/medication	82	63.6	13	47.2	0.12
Lack of qualified providers to refer to	99	78.2	22	76.3	0.82
Long waiting periods to see referred MH provider	111	86.6	21	71.8	0.05
Family failure to follow through on referrals to MH providers	97	75.3	17	56.9	0.05
Family reluctance to acknowledge MH problem	80	62.7	19	62.4	0.98
Lack of training in child MH treatment	81	63.0	25	80.3	0.10
Lack of time to treat child MH problems	105	81.4	23	74.7	0.43
Unfamiliar with CPT codes to reimburse for treating	73	56.5	7	22.1	0.001
Inadequate reimbursement for treating	84	66.5	12	40.5	0.01
Concern about liability coverage for treating	75	58.4	16	57.0	0.90

\*Agree includes strongly agree and agree responses.

and insurance constraints. Forrest et al found that two-thirds of mental health referrals were made on the first visit, suggesting that identification of mental health problems was not an issue, but that assistance in treatment was needed.<sup>30</sup> Referrals are further complicated by the finding that fewer than 10% of PCPs and CAPs in this sample believed that children's mental health services were very available in their community. Thus, barriers raised by both PCPs and CAPs underscore a critical problem: if PCPs and CAPs believe it is pediatricians' responsibility to identify and refer, but not treat, the majority of children's mental health problems, but both groups do not believe that mental health services are available, how can a system of care be created to ensure that all children receive timely, coordinated, and appropriate care?

One such system has been described by Connor et al<sup>12</sup> In the Massachusetts Child Psychiatry Access Project,<sup>12</sup> 6 regional teams comprised of psychiatrists and other mental health professionals have been established to provide pediatricians with immediate diagnostic and resource information to help manage children with more mild symptoms within the primary care setting, and to provide face-to-face consultations for children and adolescents with moderate to severe mental health problems. This model of care is promising; yet, adapting such an innovation across a wide variety of communities will require identification of local opinion leaders, educational outreach, increased funding for mental health services, and even system-wide restructuring before implementation.<sup>31,32</sup> Additional strategies to increase collaboration between pediatricians and child and adolescent psychiatrists may consist of colocated services, bidirectional flow of diagnostic and treatment information, comanagement of patients, or a combination of all of the above.<sup>10</sup> Health policy experts, insurers, pediatricians, and psychiatrists should be invested in such reforms. In essence, the cost

consequences of unidentified and untreated children with mental health disorders can be addressed now or later, at a higher individual and societal price.

The American Academy of Pediatrics and the American Academy of Child and Adolescent Psychiatry have collaborated in creating educational materials to assist pediatricians in practice. The Bright Futures and DSM-PC have been developed as tools to foster common language between PCPs and CAPs,<sup>33,34</sup> although their effectiveness and efficacy have not been formally studied. Additionally, guidelines for the treatment of adolescent depression, which were developed by experts for use in primary care settings, were endorsed by both organizations.<sup>35,36</sup> Although these educational materials are very helpful, the American Academy of Pediatrics has made an even more concerted effort to effect system changes within local communities. The American Academy of Pediatrics Task Force on Mental Health has created a tool-kit for communities, "*Strategies for System Change in Children's Mental Health: A Chapter Action Kit.*"<sup>37</sup> The action kit describes concrete steps that facilitate collaboration between primary care providers and children's mental health providers. Several communities have used this information to begin the process of improving mental health care for children.<sup>38</sup>

Further alliances are necessary to advocate for mental health parity and educational reform. Additionally, efforts to cross-train pediatricians in psychiatric settings and to inform psychiatrists and other mental health professionals about the pressures pediatricians face in trying to provide mental health care for children in existing practice settings are needed. Local solutions will also be important, because, "defacto" referral services and systems are often loosely geographically determined and shaped. Finally, additional attention to mental health research for children, particularly as it occurs in primary care, is an

imperative, given the paucity of attention it has received in funding at national levels when compared to research for adult mental health care research.<sup>39</sup>

The findings from this exploratory study must be evaluated in light of their limitations. This was a cross-sectional, self-reported survey rather than direct observation of respondents' practices. This survey, like other surveys of physicians,<sup>40,41</sup> has a suboptimal response rate. As described in the Methods section, the analyses were weighted for nonresponse; however, it is possible that this did not fully correct for nonresponse bias. Further, given that those PCPs and CAPs who are most interested in this topic are most likely to respond, the results must be viewed with this fact in mind. It is important to note that only 31 CAPs responded, and the proportions reported are based on a small sample size. However, the age and gender distributions of CAPs that responded and did not respond to the survey were similar.

Assessing the attitudes of other mental health professionals, such as psychologists, social workers, nurse practitioners, or adult psychiatrists was beyond the scope of this study. However, their perspectives are essential to consider in future studies and in reform of mental health services for children. Developmental and behavioral pediatricians are also underrepresented in this sample. This group of professionals would be especially important to include in future efforts, as their training places them in an ideal position to identify and treat children's mental health problems.

These results represent one community. However, our measures included questions that were used in a nationally representative sample and the results in this local sample were similar to those regarding barriers and pediatricians' perceived responsibility of caring for children's mental health needs.<sup>14</sup> Finally, the questionnaire sought to explore PCP's and CAP's beliefs about identification of children with mental health disorders by PCPs, not whether a specific diagnosis can or should be made. We acknowledge that this may have been interpreted differently by PCPs and CAPs. In future studies that include nationally representative samples of PCPs and CAPs, clear definitions of "identification" and "diagnosis" would be beneficial. The results may reflect the inherent perceived differences that PCPs and CAPs have between "identifying" and "diagnosing" mental health disorders.

## CONCLUSION

The willingness of pediatricians to accept the responsibility for identifying children's mental health problems is encouraging. It is an important first step toward reducing the morbidity, mortality, and costs associated with an inadequate and dysfunctional child mental health system. However, redefining the role of the pediatrician to include part or all of the treatment or referral components will require well-delineated responsibilities and excellent agreement about roles among their specialist colleagues. This study suggests that there is considerably more work to be done on these critical issues.

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