

Primary Care Pediatricians' Roles and Perceived Responsibilities in the Identification and Management of Depression in Children and Adolescents

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Objective.—To describe primary care pediatricians' 1) approach to the identification and management of childhood and adolescent depression and 2) perception of their skills, responsibilities, and barriers in recognizing and managing depression in children and adolescents.

Design and Methods.—National cross-sectional survey of randomly selected primary care pediatricians that assessed the management of recalled last case of child or adolescent depression, attitudes, limitations to care from barriers and skills, and willingness to implement new educational or intervention strategies to improve care.

Results.—There were 280 completed surveys about child and adolescent depression (63% response rate). Pediatricians overwhelmingly reported it was their responsibility to recognize depression in both children and adolescents (90%) but were unlikely to feel responsible for treating children or adolescents (26%–27%). Those with most of their practice in capitated managed care were less likely to feel responsible for recognizing depression in either children or adolescents. Forty-six percent of pediatricians lacked confidence in their skills to recognize depression in children, and few of them (10%–14%) had confidence in their skills in different aspects of treatment with children or adolescents. Diagnostic, assessment, and management details for their last recalled case of depression in a child or adolescent were provided by 248 of these pediatricians. In addition to referring 78%–79% of the cases to mental health care professionals, 77% of pediatricians provided a wide range of brief interventions. Only 19%–20% prescribed medication. Major factors cited that limited their diagnosis or management were time (56%–68%) and training or knowledge of issues (38%–56%). Fewer pediatricians noted limitations due to insurer or financial issues (8%–39%) or patient issues (19%–31%). The 35% of pediatricians who were motivated to change their recognition and management of suspected depression were significantly more interested in implementing in the future a variety of new strategies to improve care.

Conclusion.—Primary care pediatricians felt responsible for recognizing but not for treating child and adolescent depression. Although the lack of confidence and lack of knowledge and/or skills and time issues are major barriers that limit pediatricians in their treatment of childhood and adolescent depression, pediatricians varied in their readiness to change, with some being more willing to implement new strategies to care for depression. Educational and practice interventions need to focus on how to assist all pediatricians in diagnosis and to prepare these motivated pediatricians to manage depression in primary care settings.

KEY WORDS: adolescents; children; continuing medical education; depression; family; mental health care services; primary care

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Primary care providers increasingly find themselves dealing with both physical and mental health issues with their patients. Since 1977, the primary care sector had been described as the de facto mental health care system, especially for children and the elderly.^{1,2} Managed care plans and national guidelines encourage

primary care providers to take an active role in the diagnosis and treatment of common mental disorders, especially adult depression.³ The central role of pediatricians in the care of mental disorders has become more apparent lately. Pediatricians and other primary care clinicians prescribe the majority of the psychotropic drugs that are prescribed for children in the United States and provide some type of supportive therapy or counseling to the majority of the patients they identify with behavioral or emotional problems.^{4,5}

Although depression is less common than many of the behavioral problems that present in the primary care setting, it is one of the most significant mental health problems pediatricians encounter. Community prevalence studies have shown that 2% of children and 5% of adolescents have depression.⁶ Depression is comorbid with many common chronic somatic, behavior, and learning problems seen in primary care practice⁷ and is one of the principal risk factors for teen suicide and substance abuse.⁸

Pediatricians have been encouraged to take an active role in depression as a part of a comprehensive approach

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to health care.^{9,10} For adult populations, the primary care role in the management of depression ranges from simple detection and referral to comprehensive management.¹¹ Similarly, many options exist for the involvement of primary care pediatricians in identifying and managing depression.

The management of behavioral and learning problems, such as attention-deficit/hyperactivity disorder, has become generally accepted as part of pediatric primary care practice in recent years. Although surveys have assessed pediatricians' attitudes and roles in managing behavioral problems overall,^{5,12,13} we found little information on how primary care pediatricians perceive their roles in the identification and management of depression of children and adolescents.¹⁴

To better understand pediatricians' place in primary care management of depression, a national survey of pediatricians was conducted to examine the following: 1) the self-perceived roles and responsibilities of primary care pediatricians in the recognition and treatment of depression in children and adolescents; 2) self-reported identification and management practices; 3) confidence in diagnostic and treatment skills; 4) the barriers to recognition and management; and 5) willingness to use education or new approaches for recognition or management.

METHODS

The study design was a cross-sectional survey of primary care pediatricians focused on the issues of identification and management of depression in families. One third of the pediatricians received questionnaires with sections focusing on child or adolescent depression, one third with sections on postpartum depression, and one third with sections on maternal depression. After describing the design and conduct of the entire survey, this article reports only on the pediatricians who completed surveys focused on child and adolescent depression.

The survey was mailed to 1994 pediatricians who were randomly selected by the American Academy of Pediatrics (excluding resident and emeritus members) from its current member lists, excluding subspecialty section members. A telephone reminder followed 2 follow-up mailings. Completion of the survey was requested only from those in active primary care practice care (ie, working at least half-time seeing primary care patients in the ambulatory setting). A total of 501 pediatricians responded that they were not in primary care and were classified ineligible. A total of 160 could not be reached in 3 mailings or 2 telephone calls and were classified as ineligible. Thus, 1333 pediatricians were considered eligible as practicing primary care pediatricians. Of this group, 445 eligible pediatricians received the child and adolescent survey format.

The 45-item questionnaire was adapted for pediatricians from an adult primary care provider survey of primary care management of depression developed for use with family physicians, internists, and obstetricians and gynecologists.¹¹ Major constructs in the development of this survey included current practice patterns regarding diag-

nostic evaluation, treatment, and barriers to the recognition and treatment of depression in their last recalled case of depression. The survey items were derived from previous qualitative studies about physician behavior change¹⁵ and personal and practice factors associated with physician involvement with mental health care.^{12,16,17} The format of recalling their last case was chosen to gain more specific management data and limit overgeneralization and social desirability in responses. The original adult primary care provider survey recalled the last case of 3 severity levels of depression in adult patients. The pediatrician survey instead assessed last case recall of 1) either child or adolescent depression, 2) postpartum depression, or 3) maternal depression. For the recalled case of depression, the survey queried about barriers that limited recognition or intervention. The potential barriers were organized into 3 domains: physician factors ($\alpha = .79$), patient factors ($\alpha = .67$), and organizational factors ($\alpha = .69$) (J. W. Williams, written communication, 1998). Questions asked about the physicians' confidence in their skills, willingness to change management or participate in continuing medical education, and perceived responsibility for recognition or treatment (eg, "recognizing childhood depression is my responsibility," "treating adolescent depression is my responsibility"). These questions were from the earlier adult provider survey with the addition of other pediatric psychosocial management roles. Because the use of screening questionnaires is an approach for detection of psychosocial problems in pediatrics,¹⁸ the pediatrician format included questions on whether the respondent used screening questionnaires for any condition or for behavioral or emotional problems. The original adult survey was first piloted with 15 physicians to determine face validity and clarity. A second pilot with 150 adult providers assessed response variability. The pediatrician format questionnaire was first validated with a convenience sample of 30 pediatricians and revised after their input.

Fifty nonrespondents were randomly selected, contacted by telephone, and asked to complete the attitude and demographic sections of the survey. Thirty-five of the nonrespondents completed the survey by telephone. The attitudes and demographics of the nonrespondent group were not significantly different from those who returned surveys, except the nonrespondents more likely to devote their practice to subspecialty care.

Sixty-three percent ($n = 280$) of the 445 eligible pediatricians returned the child or adolescent depression survey.

Data were analyzed by χ^2 and the Fisher exact test for categorical variables and Student's *t* test for continuous variables. For analysis, 4-point scales were collapsed into 2-part variables (very and mostly confident coded as confident, very likely and almost certain to implement new approaches coded as willing to change). Because of the use of multiple comparisons, a significance level of $P < .01$ was used in comparative analyses. Significance levels of .01-.05 are only provided to indicate trends.

TABLE 1. Pediatricians' Perceived Role in Psychosocial and Mental Health Issues

Role	Agree or Strongly Agree, % (n = 280)
Recognizing childhood depression is my responsibility	90
Recognizing adolescent depression is my responsibility	90
Detecting sexual abuse in patients is my responsibility	94
Recognizing learning and school problems is my responsibility	86
Treating childhood depression is my responsibility	27
Treating adolescent depression is my responsibility	26
Treating of learning or school problems is my responsibility	55

RESULTS

The median length of time in practice of the 280 child and adolescent survey respondents was 15 years, 41% were female, and 19% currently in primary care practice also had subspecialty training. Those with subspecialty training represented 30 subspecialty fields (14% adolescent medicine, 11% child development or behavioral pediatrics, 11% hematology or oncology, 10% neonatology, and others reported at a rate of less than 10%). Less than 5% of those surveyed had training that might prepare them for the management of depression in their primary care practice. Practice locations were rural in 16%, suburban in 55%, and urban in 29%. Nineteen percent were in solo practice, 61% in group practice, 9% in staff-model health maintenance organizations, and 11% in other clinical settings. Twenty-eight percent reported that 50% or more of their practice was insured through capitated managed care arrangements. Forty percent reported that they used a screening instrument for developmental, behavioral, or psychosocial issues. The question did not ask how often screening questionnaires were used. The reported weekly patient load for 37% of the pediatricians was between 100 and 125 patients (median response).

Of the 280 child and adolescent survey respondents, 32 (11%) could not recall a last case of depression in a child or adolescent. The pediatricians who could not recall a last case did not differ from other survey respondents in their other responses. Of the 248 child or adolescent depression cases recalled, 24% were younger than 13 years, 71% were ages 13–18 years, and 4% were ages 18–21 years (3 cases had no age reported). There were no significant differences in practice and provider variables between respondents who recalled a child or adolescent case. Forty percent of the cases were described as having mild depression, 55% as having moderate depression, and 5% as severe depression. The general health status of the last case patient was reported as healthy in 76%, whereas 11% were chronically ill or disabled and 13% were acutely ill. Seventy-two percent of patients in recalled cases were European American, 18% were Hispanic, and 8% were African American.

TABLE 2. Barriers That Limited Pediatricians' Ability to Diagnose or Intervene in Last Recalled Case of Child or Adolescent Depression

Barrier	Limited Somewhat or a Great Deal, % (n = 248)
Organizational barriers	
Inadequate time to provide counseling or education	68
Appointment time too short for adequate history	56
Patient's insurance limited treatment options	39
Mental health care professionals not affordable	31
Unavailability of mental health care resources	27
Poor reimbursement for treatment	22
Difficult paperwork or authorization procedures	19
Physician financial disincentives for mental health care referrals	8
Physician barriers	
Incomplete training to diagnose or counsel	56
Incomplete knowledge of treatment for depression	44
Incomplete knowledge of <i>DSM-IV</i> diagnostic criteria*	38
Lack of effective treatments	11
Patient barriers	
Symptoms explained by other medical illness	31
Patient or parent reluctance to see mental health care professional	31
Patient or parent reluctance to accept diagnosis	31
Medical problems of patient were more pressing	24
Patient or parent reluctance to begin antidepressant medication	19

**DSM-IV* indicates *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*.

Pediatricians' Attitudes About Their Role in Childhood and Adolescent Depression

Nearly all pediatricians felt it was their responsibility to recognize childhood and adolescent depression (90%) as shown in Table 1. However, only about a quarter of pediatricians felt it was their responsibility to treat depression in children (27%) or adolescents (26%). Although pediatricians considered recognition of depression as important as recognition of other major psychosocial problems (sexual abuse and school learning problems), they felt less responsible to treat depression than school learning problems.

Responsibility did not differ by provider or practice characteristics except that pediatricians in practices with more than 50% of their patients in capitated managed care were less likely to report responsibility for recognition of childhood depression (81% if $\geq 50\%$ of care capitated, 94% if $< 50\%$ of care capitated, $P = .001$) or adolescent depression (83% if $\geq 50\%$ of care capitated, 94% if $< 50\%$ of care capitated, $P = .004$).

Barriers That Limit Diagnosis and Management

Organizational, physician, and patient barriers that limit pediatricians' ability to recognize or intervene in their last case of child or adolescent depression are summarized in Table 2. Only 2 organizational issues, inadequate time for obtaining a history (56%) or inadequate time for provid-

TABLE 3. Cues That Led Pediatricians to Suspect Depression in Last Recalled Case for Child or Adolescent

Cues†	Child, % (n = 59)	Adolescent, % (n = 186)	Total, % (n = 245)
Presenting clinical problem associated with depression	64	69	68
Patient appeared depressed	41	51	48
Depression suspected because of family dynamics	46	36	38
Family member concerned about depression	42	30	33
Routinely ask about symptoms of depression	10	17	15
Patient introduced topic directly	8	16	14
Family said patient currently being treated for depression	10	8	9
History of depression or mental illness*	8	21	18
History of alcohol or other drug use or self-destructive behavior	2	9	7

†Multiple answers allowed.

* $P = .029$.

ing counseling and education (68%), were a concern for most pediatricians. The 3 physician barriers most commonly perceived to limit their care were 1) incomplete training to diagnose and counsel (56%), 2) inadequate knowledge of Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) (38%), and 3) inadequate knowledge about the treatment of depression (44%). Patient factors were not often cited as barriers. Barriers did not vary by pediatrician and practice variables or age of patient, with the exception that pediatricians whose practices had more than 50% capitated managed care were more likely to report limitations due to incomplete knowledge of diagnostic criteria (52% with $\geq 50\%$ of care capitated and 35% with $< 50\%$ of care capitated, $P = .017$).

Pediatricians' Confidence in Their Skills

Pediatricians were asked how confident they felt in their diagnostic and management skills for children and adolescents with depression in their practice. Forty-six percent of pediatricians lacked confidence that they could recognize depression, 86% lacked confidence that they could treat with medication, and 90% lacked confidence that they could treat with counseling. Only 13% of pediatricians were confident in their ability to manage the care overall.

The pediatricians who felt responsible for treating depression in either children or adolescents were more likely to also have confidence in many of their skills. Seventy-five percent of those who felt responsible for treatment in children were confident in their ability to recognize childhood depression compared with 46% who did not feel responsible for treatment ($P < .001$). Similarly, 78% were confident they could recognize adolescent depression if they felt responsible for treatment compared with only 45% if they did not feel responsible for treatment ($P < .001$). They were also more likely to have confidence in their ability to treat with medication when they felt responsible for treatment (for children: 32% confident if responsible for treatment vs 6% nonresponsible, $P < .001$; for adolescents: 35% confident if responsible vs 5% nonresponsible, $P < .001$). Confidence in counseling skills also varied by perceived responsibility (for children: 20% confident if responsible for treatment vs 5% nonrespon-

sible, $P < .001$; for adolescents: 20% confident if responsible for treatment vs 4% nonresponsible, $P < .001$).

Reported Management: Identification and Assessment of Depression

Recall of the pediatricians' last case seen provides more specific information about how pediatricians evaluate and manage depression. The cues that pediatricians used to detect depression are listed in Table 3. Detection was predominantly triggered by observation, family concerns, and psychosocial dynamics and the presence of clinical problems where depression can be a factor (eg, sleep problems, eating disorder, behavioral or somatic complaints, or suicide attempts). Detection of nearly half of cases of childhood depression and nearly a third of cases of adolescent depression came from an expressed parental concern. Although 40% of the pediatricians had reported that they used some kind of screening questionnaire and 27% used them specifically with behavioral issues in their practice, only 1 case of childhood depression was reported as identified through the use of a screening questionnaire.

Pediatricians typically did not use formal criteria to diagnose depression. Thirty percent of pediatricians based their diagnosis on their overall impression and 50% on their overall impression and inquiry about 1–2 symptoms. The use of formal DSM-IV criteria with inquiry about specific symptoms was limited to 17% of pediatricians. After identifying possible depression, 92% of pediatricians further assessed specific symptoms and contributing factors. Table 4 summarizes the areas about which pediatricians inquired. Although somatic symptoms and functional impairment were usually determined, other aspects of assessment were much more variable.

Reported Management: Interventions

Self-report of how they intervened in their last case of child or adolescent depression allowed pediatricians to further describe their role in management. Despite low rates of perceived responsibility for treatment, most pediatricians were directly involved in some aspect of management with these cases. The specific types of interventions provided by pediatricians are summarized in Table 5. Although referral to mental health care providers was widespread, in 77% of cases pediatricians also provided

TABLE 4. Other Assessment by Pediatricians for Last Recalled Case After Depression Recognized

Issue Assessed	Child, % (n = 57)	Adolescent, % (n = 171)	Total, % (n = 228)
Impairment in function	84	84	84
Somatic symptoms of depression	77	87	84
Risk for suicide*	56	79	73
Risk for being victim of abuse	62	60	60
Family history of mental health or psychosocial issues	53	57	56
Support person or network available	42	53	50
Patient history of psychiatric disorder	46	50	49
Medical conditions causing depression	44	50	49
Evidence of alcohol or substance abuse*	18	58	48
History of sexual or physical abuse	33	31	32
Loss of loved one	21	29	27

**P* < .001.

other specific brief interventions (eg, advised lifestyle changes; provided brief counseling, more frequent monitoring, or referral to self-help groups; and involved family members).

Female pediatricians were somewhat more likely to report counseling for >5 minutes (48% women vs 32% men, *P* = .015) and to involve other family members (50% women vs 36% men, *P* = .02). There was also a trend for pediatricians in urban locations to be less likely to prescribe medication than those in suburban or rural settings (treat with medication: urban, 9%; suburban, 24%; rural, 25%; *P* = .02). Pediatricians in practices with >50% capitated managed care were also more likely to refer to a mental health care provider (90% if majority of care capitated, 75% if not capitated, *P* = .008) and tended to be less likely to counsel for >5 minutes (29% if majority of care capitated vs 43% if not capitated, *P* = .04) and prescribe medication (10% if majority of care capitated vs 23% if not capitated, *P* = .02).

Perceived responsibility for treatment was associated with treating children or adolescents with medication and with scheduling adolescents for more frequent appointments with the pediatrician. For children, 43% of those who felt responsible for treatment treated the last case recalled with medication compared with 5% of those who did not feel responsible for treatment (*P* < .001). For adolescents, 31% of those who felt responsible for treat-

ment treated the last case recalled with medication compared with 17% of those who did not feel responsible for treatment (*P* = .04), and 39% of those responsible scheduled more frequent appointments compared with 19% of those who did not feel responsible (*P* = .004).

Changes in the Future

Despite previously reported time constraints, 35% of pediatricians responded that they were willing to change how they identified or managed depression in children or adolescents. All pediatricians selected which strategies to improve management of depression that they would be most interested in implementing in the next 6 months. Although most patients were referred, 47% of pediatricians still wanted more opportunity for consultation with mental health care providers. Others were interested in improving their diagnostic activities (ask about depression more frequently in 35%, use formal diagnostic criteria in 19%, use depression screening measures in 17%). Pediatricians who felt responsible for treating children or adolescents were more likely to be interested in using formal diagnostic criteria (for children: 30% if responsible, 15% if not, *P* = .007; for adolescents: 29% if responsible, 16% if not, *P* = .02). Although only 5% said they were likely to change management by prescribing antidepressant medication more often, there was a trend for pediatricians who felt responsible for treating adolescents to prescribe med-

TABLE 5. Depression Management for Last Recalled Case by Pediatricians

Management Strategy†	Child, % (n = 59)	Adolescent, % (n = 186)	Total, % (n = 245)
Refer to mental health care professional	78	79	79
Involve family members	44	41	42
Counseling by pediatrician			
<5 min	20	20	20
≥5 min	32	42	40
Schedule with pediatrician more often	24	24	24
Recommend lifestyle changes to help*	10	25	21
Treat with medication	19	20	20
Refer to self-help or support group	8	4	5
Watchful waiting only	8	5	6
Not involved in management	2	7	6

†Multiple answers allowed.

**P* < .02.

ication more often (10% if felt responsible vs 3% if not responsible for treatment, $P = .02$). A substantial subgroup desired further education (use self-study or guided readings if available in 31%, attend continuing medical education if available in 23%). Not surprisingly, those who had responded they were definitely thinking of changing the way they recognized or managed patients with suspected depression were much more likely to be interested in implementing all the options offered ($P \leq .001$ for all strategies).

DISCUSSION

This study demonstrates that a large gap exists between pediatricians' perceptions of responsibility and their confidence in their depression recognition and management skills. Although virtually all pediatricians reported it was their responsibility to recognize depression in children and adolescents, only a minority felt responsible for treatment, and very few reported feeling comfortable managing depression with medication. Most primary care pediatricians reported lack of knowledge and/or skills as important barriers that limit their actual involvement. This has changed little from 15 years ago when 52% of general pediatricians surveyed felt inadequately trained to diagnosis or treat psychosocial problems.¹⁹ During the interim the role of pediatricians, either as part of the team or in handling less severe or stable cases of childhood or adolescent depression, has not become more reassuring to pediatricians. A recent survey of North Carolina physicians also confirms these findings and shows that pediatricians also lag behind their family practice colleagues in comfort with treatment, use of medication, and knowledge about new antidepressants.¹⁴

The recent development of a primary care-based diagnostic coding and educational tool (Diagnostic and Statistical Manual for Primary Care [DSM-PC], child and adolescent version) is an important resource to involve and educate current and future pediatricians in the diagnosis of depression and other mental health conditions.^{20,21} However, this study shows that primary care pediatricians should not be considered as a homogenous group when planning primary care interventions about depression. Pediatricians differ in perceived responsibility and confidence in their skills. They may be at different points in their acceptance of educational programs and new approaches to recognition and management. Just as understanding readiness to change has led to more focused, effective approaches to changing patient behaviors,²² development of a "stages of change" approach is appropriate for enhancing the primary care management of depression. Personal beliefs and attitudes, such as commitment and feeling responsibility for a problem, have been shown to be important to target in changing physicians' behaviors.¹⁵ Educational interventions will need to address both varying perceptions of responsibility and ability. Similarly, the success of any practice-level interventions regarding primary care diagnosis or management of depression is likely to be influenced by pediatricians' perception of roles and willingness to implement change. For example,

pedsiatricians' high level of interest in more opportunities for consultation with mental health care providers supports practice interventions that use collaborative models of care with mental health care providers directed toward the pediatricians who feel responsible for treating depression and are interested in changing their care.

Because our survey items matched those administered in the earlier study to other primary care providers, we can compare aspects of depression care by pediatricians to the care of depression in adults by internists, family physicians, and obstetrician/gynecologists (OBGs).¹¹ Inadequate time to provide counseling or education or to take an adequate history were identified as barriers by about two thirds of family physicians, general internists, and OBGs as well as by pediatricians. About a third of the respondents from all 4 specialties indicated that insurance coverage limited treatment options and that there was poor reimbursement for treatment. Although almost half of both pediatricians and OBGs indicated incomplete knowledge of diagnostic criteria and of treatment, this incomplete knowledge was a limitation for less than 20% of family physicians and internists who care for adults with depression. Feeling responsible for treatment was similar in internists (27%) and pediatricians (26%–27%).

Pediatric assessment and management can be compared to the other primary care disciplines as well. Formal diagnostic criteria were seldom used in all specialties. Although about 60% of pediatricians ask about sexual or physical abuse in evaluating a patient with depression, 49% of OBGs and only about 25% of family physicians and internists make this inquiry to their adult patients with depression. Among pediatricians who saw a teen with depression, 58% asked about substance abuse. Among family physicians, general internists, and OBGs, 74%, 69%, and 52%, respectively, stated that they asked their last adult patient with depression about substance abuse. Physicians of all 4 specialties should consider whether they are appropriately exploring these areas. Pediatricians were nearly twice as likely to refer their last case of depression to a mental health care provider than providers of adult health care. Pediatricians were just as likely as the other primary care clinicians to have provided more than 5 minutes of counseling (about 40% of all respondents from all 4 specialties). Pediatricians were much less likely to prescribe antidepressants (children, 19%; adolescents, 20%) than family physicians (85%), internists (65%), or OBGs (52%) when caring for adults.

The finding that 90% of primary care pediatricians report that they are responsible for recognizing both child and adolescent depression is important. Without responsibility, recognition and subsequent involvement are unlikely, and interventions to improve recognition would be less likely to succeed. We are encouraged that most primary care pediatricians, despite barriers that limit their involvement, respond to depression in their patients with both mental health referral and supportive interventions. Similar rates of referral, advice, and counseling have previously been reported by pediatricians for other behavioral problems.⁵ However, important issues related to depres-

sion and suicide may not be assessed routinely in pediatric patients. Pediatrician-acknowledged lack of knowledge and skills may contribute to a less consistent approach to evaluating patients in busy practice settings. Practices with most patients in capitated care often experience additional time pressures. This may explain why more of these pediatricians were likely to refer and less likely to feel responsible for recognition or participate in office management.

One of the strengths of our study is that it provides in-depth information about both provider and patient issues important in the management of depression in the primary care setting. It is based on a national sample where all respondents spend at least half of their time in active primary care practice. The questionnaire has also been used in studies with other primary care groups, and its last case recall format reports recent patient care activity. Most pediatricians were able to recall patients with depression, and 77% of the cases occurred within the past 6 weeks.

There are certain limitations to this study. It surveys pediatricians but not family physicians or nurse practitioners, who also care for children and adolescents. Surveys can only describe self-reported behaviors. We were not able to limit mailing of surveys to only primary care pediatricians. The membership lists of the American Academy of Pediatrics, which did not designate whether pediatricians spent most of their time in primary care, required a 2-step survey method. With our methods of selecting only primary care pediatricians, non--primary care pediatricians may have been less likely to return the form to opt out, thus overestimating our eligible group. This is supported by our telephone interviews of eligible nonrespondents, where providers were more likely to have a subspecialty focus. There is always the possibility of response bias, where pediatricians interested in child and adolescent depression were more likely to return surveys, thus overestimating positive findings. However, we obtained the same rates for perceived responsibilities for recognition and treatment of children and adolescents with the other 508 respondents whom we surveyed about maternal issues.

Underrecognition of mental health problems has been identified as an important issue in both pediatric and adult primary care mental health literature.²³ As in other studies, in our survey there was likely to be a subgroup of depressed patients who are not recognized by these respondents. When asked to estimate the number of children or adolescents they diagnose or treat in a month, 24% said none, 60% replied 1 or 2, 14% said 3–5, and 3% said 6 or more. Not surprisingly, those who felt responsible to treat cared for more depressed patients. However, our survey's last case recall method is able to provide us with specific information about how pediatricians recognize the patients they consider depressed. As in other studies of the recognition of psychosocial problems, clinical problems and family or patient concerns were the primary cues.²⁴ The 2 methods advocated for early identification of emotional problems,²⁵ routine interview questions about depressive symptoms or use of a screening ques-

tionnaire, were rarely used. Pediatricians seem to have a reactive approach to recognizing depression. A more systematic individual and practice-level approach to depression recognition could be an important component of continuing education. Experience gained in new initiatives that seek to improve the recognition of depression by providers of adult health care could be helpful in designing pediatrician interventions.²⁶

In conclusion, this study provides new information about the barriers experienced and current roles, attitudes, and needs of pediatricians regarding depression identification and management. Pediatricians are an important potential resource for depressed children and adolescents. One set of interventions will not be applicable for all pediatricians. Differing perceptions of responsibilities and readiness to change need to be considered separately for recognition and management. To increase pediatricians' effectiveness, new approaches to training, diagnosis, and intervention in the primary care setting need to be developed that realistically can be implemented within the time constraints of pediatric practice.

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