

# Applying Surveillance and Screening to Family Psychosocial Issues: Implications for the Medical Home

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**ABSTRACT:** Within the medical home, understanding the family and community context in which children live is critical to optimally promoting children's health and development. How to best identify psychosocial issues likely to have an impact on children's development is uncertain. Professional guidelines encourage pediatricians to incorporate family psychosocial screening within the context of primary care, yet few providers routinely screen for these issues. The authors propose applying the core principles of surveillance and screening, as applied to children's development and behavior, to also address family psychosocial issues during health supervision services. Integrating psychosocial surveillance and screening into the medical home requires changes in professional training, provider practice, and public policy. The potential of family psychosocial surveillance and screening to promote children's optimal development justifies such changes.

(*J Dev Behav Pediatr* 32:418–426, 2011) **Index terms:** family psychosocial issues, surveillance, screening, well-child care.

**F**amily psychosocial issues have a major influence on children's development.<sup>1</sup> Certain factors contribute to children's resiliency and healthy development, while other factors place children at increased risk of delayed or disordered development. In fact, many developmental and behavioral problems of young children correlate with the psychosocial status of their families.<sup>2</sup>

The term "family psychosocial issue," as previously defined by Kemper and Kelleher,<sup>1,3</sup> refers broadly to any "family factor that affects children's health." Family psychosocial issues can range from social needs (e.g., food insecurity and housing instability) to parent psychosocial problems (e.g., depression and intimate partner violence [IPV]). Numerous studies have demonstrated the myriad of family psychosocial issues that place children at developmental risk (Table 1).<sup>4–13</sup> Furthermore, the impact of these issues has been shown to be both cumulative and influenced by the age and developmental stage of the child.<sup>14–16</sup>

The American Academy of Pediatrics (AAP) states that a family-centered medical home exists within a "community-based system."<sup>17</sup> Professional guidelines have en-

couraged providers to identify and intervene with various family issues, given their potential negative impact on child health and development.<sup>18–21</sup> As stated in the AAP's policy statement on the medical home, a key service for pediatricians is to interact with "community agencies to be certain that the special needs of the child and family are addressed."<sup>22</sup>

Pediatricians, regardless of their practice setting and patient population, provide care to children who are exposed to family psychosocial issues and are in a unique position to develop partnerships with families.<sup>23</sup> However, studies suggest that providers are not effective in detecting many psychosocial issues.<sup>24,25</sup> Providers most often cite barriers, including a lack of time, training, and knowledge of available resources.<sup>26,27</sup> Child health providers may also question whether it is their prerogative to initiate discussion of parents' psychosocial problems and whether they will offend parents by raising sensitive issues that are not solely child-directed topics.<sup>28,29</sup> Finally, there are challenges to incorporating psychosocial screening within the current medical home structure.

Pediatric care models have focused on screening for specific family issues, such as parental smoking,<sup>30–32</sup> IPV,<sup>33–35</sup> and maternal depression.<sup>36–40</sup> To date, however, little guidance is available on how to best detect and intervene with the wide range of family psychosocial issues that influence children's development. A new paradigm is needed to better address family psychosocial issues within the medical home.

## SURVEILLANCE AND SCREENING

Expert opinion and research evidence support surveillance and screening as the process by which pediatric providers should monitor infants and young children

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**Table 1.** Examples of Family Psychosocial Issues, Association with Risk for Poor Child Outcomes, and Available Screening Tools

Family Psychosocial Issue	Child Outcomes	Screening Tools
Food insecurity	Iron deficiency, anemia, acute infections, depression, poor academic performance, poor social skills <sup>8,9,76,77</sup>	U.S. Department of Agriculture 18-item Household Food Security scale <sup>78</sup> ; 30-day food security scale <sup>79</sup> ; single-question hunger screening tool <sup>80</sup> ; 2-item food insecurity screen <sup>81</sup>
Housing instability	Acute illness symptoms, chronic health problems, learning disabilities, behavioral problems, school failure <sup>1,12,13,82,83</sup>	American Housing Survey <sup>84</sup>
Intimate partner violence	Abuse, violent behavior, emotional, behavioral, social, and academic problems <sup>1,85,86</sup>	Abuse Assessment Screen <sup>87</sup> ; Conflict Tactic Scale <sup>88</sup> ; HITS <sup>89</sup> ; Partner Violence Screen <sup>90</sup> ; Women Abuse Screening Tool <sup>91-93</sup>
Maternal depression	Low-birth weight, developmental and behavioral problems, low self-esteem, psychiatric disorders <sup>1,94</sup>	Beck Depression Inventory <sup>95</sup> ; Edinburgh Postpartum Depression Scale <sup>96</sup> ; Hamilton Rating Scale for Depression <sup>97,98</sup> ; Patient Health Questionnaire-2 <sup>99,100</sup>
Parental history of abuse	Abuse, psychiatric disorders, behavioral problems <sup>1,101</sup>	Items from the Kempe Family Stress Inventory <sup>100,102</sup>
Parental smoking	Asthma, respiratory infections, otitis media, sudden infant death syndrome <sup>103-105</sup>	ASSIST <sup>106</sup> ; Fagerstrom Test for Nicotine Dependence <sup>107</sup>
Parental substance abuse	Injury, learning disabilities, psychiatric disorders, neglect <sup>4,5,108-110</sup>	ASSIST <sup>106</sup> ; Alcohol Use Disorders Identification Test <sup>111</sup> ; CAGE questionnaire <sup>112</sup> ; Drug Abuse Screening Test <sup>113</sup> ; Michigan Alcoholism Screening Test <sup>114</sup> ; TWEAK Test <sup>115</sup>

HITS, Hurt, Insult, Threaten, and Scream; ASSIST, Alcohol, Smoking, and Substance Involvement Screening Test; CAGE, Cut, Annoyed, Guilty, Eye opener; TWEAK, Tolerance, Worried, Eye opener, Amnesia, K/Cut down.

for developmental delays.<sup>41</sup> Surveillance is defined as “a flexible, longitudinal, and continuous process whereby knowledgeable professionals perform skilled observations during the provision of health care.”<sup>42</sup> Screening involves the use of standardized tools, such as parent-completed questionnaires and professionally administered tests, at select ages. Surveillance and screening are guided by the developmental stage of the child and the concerns of the family and are used to monitor children’s development, provide anticipatory guidance, and initiate appropriate referrals. Both the Council on Children with Disabilities of the AAP and the Bright Futures Steering Committee have endorsed surveillance and screening as best practice.<sup>18,41</sup>

## APPLYING SURVEILLANCE AND SCREENING TO FAMILY PSYCHOSOCIAL ISSUES

In contrast, there is currently no consensus on how to best detect family psychosocial issues. We propose that the core components of surveillance and screening can also be effectively applied to family psychosocial issues to enhance the effectiveness of child health services.

### Eliciting and Attending to the Parents’ Concerns

The AAP recognizes that parental concerns warrant prompt attention and recommends that providers elicit parental observations, experiences, and concerns by posing simple questions related to children’s development, learning, and behavior.<sup>18</sup> A similar approach can be used to elicit and attend to parents’ concerns regard-

ing family psychosocial issues. General queries could be posed at all well-child care visits, such as, “Tell me about your living situation,” and “How are your resources for caring for your baby?”<sup>18</sup> The pediatrician may also ask, “Do you or your family have any needs with which I can help you?”

### Maintaining a Family Psychosocial History

A family psychosocial history should be a key component of the well-child visit. The mnemonic, IHELLP, is one example of a strategy to assist providers with addressing family issues such as *income, housing, education, legal status/immigration, literacy, and personal safety*.<sup>43</sup> Health information technology (e.g., templates) may also be useful. Like a developmental history, this history should be continually updated. This may be accomplished by asking, “Have there been any changes with your or your family’s needs since our last visit?”

### Identifying the Presence of Risk and Protective Factors

Multiple, concurrent family problems increase a child’s risk for poor development and suggest the need for early intervention and close follow-up.<sup>15</sup> Recognizing protective factors is also crucial to enable the provision of strength-based care to support the positive attributes of families.<sup>18,44</sup>

### Documenting the Process and Findings

The medical record should document all family psychosocial surveillance and screening activities to ensure

proper follow-up. The electronic medical record offers opportunities to develop templates specifically tailored to facilitate the documentation of family psychosocial issues and compile registries of families with common psychosocial issues. Of note, documentation of sensitive topics such as maternal depression and IPV may have medical-legal implications and require processes to ensure confidentiality and secure management.

### Sharing Opinions and Concerns with Other Relevant Professionals

Bidirectional communication between pediatric providers and community social service agencies is important to promote a comprehensive, multidisciplinary approach to family psychosocial issues. Recent innovations in pediatric training acknowledge the importance of promoting collaboration and communication between child health providers and community-based organizations.<sup>45</sup>

### ROLE OF SCREENING IN DETECTION OF FAMILY PSYCHOSOCIAL ISSUES

The AAP recommends the use of standardized screening tests at periodic well-child visits and when surveillance elicits concerns. Research has documented the efficacy of screening tests in the detection of family psychosocial issues.<sup>46</sup> More than a decade ago, Kemper and Kelleher<sup>1</sup> recommended incorporating global family psychosocial screening into pediatric practice. The authors concluded that doing so would legitimize these topics for discussion, enrich the clinical experience, and, ultimately, lead to more comprehensive pediatric care.

Achieving consensus on the importance of screening to strengthen longitudinal surveillance requires the resolution of such issues as which psychosocial issues should be the target of such screening. Certain guiding principles can inform pediatricians and their practices. Screening should be tailored to the most commonly identified issues in the community served by the medical home. For example, screening for public housing needs makes little sense in a practice that serves an upper middle class, suburban community. Screening should also be linked to the stages of a family's development. Screening for childcare needs, for example, may no longer be as important once a child begins school. Relying on parents' opinions and concerns to inform and, ultimately, determine the issues that are deemed important for screening is consistent with family-centered care and may promote families' adherence to providers' recommendations and referrals. Family psychosocial issues should be a target for screening when community resources are available to address these needs, since detection without referral to resources is only likely to increase frustration and may undermine the parent-provider relationship.<sup>47</sup> This requires the medical home to be aware of available community resources before initiating routine screening.

Family psychosocial screening may consist of global screening, as well as more focused screening for certain, specific family psychosocial issues. While there are a variety of validated screening tools designed to detect specific family psychosocial needs such as maternal depression and IPV (Table 1), few global screening tools have been developed with demonstrated applicability to pediatric practice. Kemper's original family psychosocial screening tool, since adopted for use by Bright Futures, screens for substance abuse, depression, IPV, parental history of abuse, social support, housing instability, low parental education, and unemployment.<sup>46</sup>

To date, two studies have demonstrated the impact of global screening for multiple family psychosocial problems at pediatric visits.<sup>46,48</sup> Kemper found that the use of a self-administered questionnaire increased the identification of family psychosocial problems among mothers attending a pediatric clinic.<sup>46</sup> In the WE CARE project, conducted in an urban clinic, we found that parents completing a self-report screener for 10 family psychosocial needs before the visit, along with providers' access to family resource books containing information sheets listing available community resources (Table 2), significantly increased identification and referrals to community agencies for basic needs such as food, employment, education, and housing.<sup>48</sup> This model extended the provider's role beyond surveillance and screening to include referring families to community-based services. The global screener, however, identified relatively few sensitive family psychosocial problems to which our families were likely exposed, such as IPV and substance abuse.

Studies have shown the impact of using specific screening tools for such sensitive family psychosocial issues as maternal depression,<sup>36-38</sup> substance abuse,<sup>30-32</sup>

**Table 2.** Key Components of the WE CARE Model

Component	Description
1. WE CARE survey instrument	Self-report questionnaire that screens for 10 family psychosocial issues Written at third grade level Parents instructed to complete the survey and give to the pediatrician at the beginning of the visit
2. Family Resource Book	Contains 1-page tear-out information sheets listing community resources for each psychosocial issue Available in each examination room for providers' use
3. Provider training	Twenty-minute teaching session consisting of the following: (a) Review of professional guidelines (b) Overview of the WE CARE model materials (i.e., survey instrument, Family Resource Book) (c) Instruction on how to review the survey tool and make referrals from the Family Resource Book

and IPV.<sup>33-35</sup> For example, Olson et al demonstrated that screening for maternal depression at well-child care visits using the Patient Health Questionnaire-2 significantly increased the identification of mothers with major depressive disorder and pediatric interventions, including counseling and referral to community supports.<sup>38</sup>

Thus, research findings support the use of global screening tools to identify basic family issues, in combination with specific screening tools for sensitive problems, to enhance the effectiveness of longitudinal surveillance for psychosocial issues. We suggest that family psychosocial screening should occur when surveillance detects a family psychosocial problem; during initial intake with any new family; with a newborn within the first 6 months of life; and periodically (e.g., annually) during well-child care visits, as family needs can change over time. Frequency of screening should be determined by the prevalence of psychosocial issues in the community and the capacity of the medical home staff.

### **INCORPORATING FAMILY PSYCHOSOCIAL SURVEILLANCE AND SCREENING WITHIN THE MEDICAL HOME**

We acknowledge the challenges to incorporating psychosocial surveillance and screening in pediatric practice. The range of potential issues is extremely broad and families' specific needs may vary by and within practice settings. Furthermore, resources are highly variable in their availability and require interaction with different service sectors. For example, certain basic issues such as housing, food, or employment are typically addressed by social service agencies, while other issues, such as maternal depression and substance abuse are typically treated by mental health professionals. Recommendations and strategies regarding the implementation of psychosocial surveillance and screening must, therefore, be sufficiently generic to accommodate the broad range of issues confronting families in different communities, while sufficiently substantive and specific to enable practices to better identify such issues and ensure the effective linkage of families to appropriate community resources.

Barriers to establishing family psychosocial surveillance and screening as the standard of care for child health care providers are similar to those impeding the widespread implementation of developmental surveillance and screening.<sup>26,49</sup> Providers are expected to perform a litany of tasks during the well-child visit, and adding another expectation to their busy agenda may seem unfeasible. For example, Holtrop et al demonstrated that IPV screening increased identification of women with IPV. To adequately address this issue with at-risk mothers, pediatricians must also have the capacity to make referrals to community resources and develop a safety plan. The effort required may well be daunting, given the time constraints of the typical well-child visit. This suggests that the current medical home model must be redesigned. Lack of reimbursement for such activities

may make the costs of staffing and processes prohibitive. We suggest the following strategies for child health providers, professional organizations, and advocacy groups to facilitate the incorporation of surveillance and screening for family psychosocial issues within the medical home.

### **Increase Awareness by Child Health Providers and Parents that Family Psychosocial Issues are a Pediatric Issue**

Although pediatric professional guidelines recommend discussion of family psychosocial issues at well-child visits,<sup>19-21</sup> pediatricians may view these topics as beyond the scope of their implicit contract with families.<sup>27,28</sup> Professional organizations can take a leadership role in promoting this message nationally and locally, by emphasizing the correlation between family psychosocial issues and child health and the role of the pediatrician. Doing so may help promote acceptance of the detection of psychosocial issues as a core component of pediatric care.

Providers must also promote the message that parents can receive assistance and appropriate referrals to community resources within their child's medical home. Parental awareness that these issues are a priority will encourage their participation in psychosocial surveillance and screening and increase their comfort with discussing sensitive issues. The longitudinal, therapeutic relationship between providers and parents should also enable discussions of difficult, sensitive issues.

### **Conduct Family Psychosocial Screening Before Patient Visits**

Schor<sup>50</sup> has recommended using time before the health supervision visit to perform screening tests. In our experience, parents were willing and able to complete a 10-item, written family psychosocial questionnaire in the waiting room.<sup>48</sup> Currently, all parents accompanying their child for a well-child visit to the Harriet Lane Clinic of the Johns Hopkins Hospital complete a family psychosocial questionnaire that screens for basic needs and safety needs while awaiting their child's pediatric provider. In addition to written surveys, newer technologies such as computer kiosks in the waiting room or administering surveys via telephone or the internet have also been shown to be useful.<sup>51-53</sup>

### **Ensure Reimbursement for Providers' Early Detection and Intervention Activities**

Without adequate reimbursement, universal adoption of family psychosocial surveillance and screening will not be feasible. Such reimbursement has facilitated the implementation of developmental surveillance and screening in a number of states.<sup>54</sup> The AAP Committee on Psychosocial Aspects of Child and Family Health has suggested using the Current Procedural Terminology code 99420 to support screening for postpartum depression as a measure of risk in the infant's environment.<sup>55</sup>



Effective advocacy by pediatricians and organizations is critical to secure such policy change.

### Promote Strategies to Strengthen Care Coordination to Link Families to Community Resources

The Institute of Medicine has identified care coordination as a key factor in improving the quality of health care.<sup>56</sup> Pediatric care coordination is defined as a “patient- and family-centered, assessment driven, team-based activity designed to meet the needs of children and youth while enhancing the care-giving capabilities of families.”<sup>57</sup> Experience with developmental surveillance and screening has documented the importance of care coordination in ensuring successful referrals. Even when at-risk children are successfully detected and community-based resources are identified, an average of 7 contacts may be required to successfully link children and families to services.<sup>58</sup>

Family psychosocial issues are likely to demand similar care coordination efforts. Parents report a disconnect between their child’s health provider and community-based services.<sup>59</sup> In our experience in an inner-city pediatric clinic, we were impressed by the number of community resources that are available, free of charge, to families in need.<sup>48</sup> When available, care coordinators can help to identify available community resources, along with monitoring adherence to recommendations and referrals, care planning (e.g., scheduling appointments), and providing feedback to parents, providers, and community resources.<sup>57</sup> This team-based model of care allows busy providers to assist parents in connecting to resources, while not eroding clinical capacity. Unfortunately, few medical homes currently have care coordinators as members of their practice team and such functions are often assumed, when performed at all, by untrained and very busy support staff. In other practices, such functions are assumed by trained staff, such as social workers and nurses, often at the expense of their substantive clinical duties.

System change is necessary to fully enhance linkages between medical homes and community-based resources. Successful models of care coordination are currently being implemented, evaluated, and replicated in a variety of practice settings.<sup>60</sup> Carolina Collaborative Community Care partners with other nonprofit organizations to inform providers and families about resources and encourage referrals.<sup>61</sup> Help Me Grow, a state-wide program in Connecticut currently being replicated in other states, assists with identifying children from birth to 8 years who are at increased risk for developmental and behavioral problems and connects them and their families to appropriate community resources.<sup>62,63</sup> Key components include a free and confidential telephone access point, which links families to existing services and a continually updated inventory of community-based programs and services (Table 3). Such models can likely be extended to the identification and referral of family psychosocial issues. Currently, 47 states maintain toll-

**Table 3.** Key Components of the Connecticut HMG Model

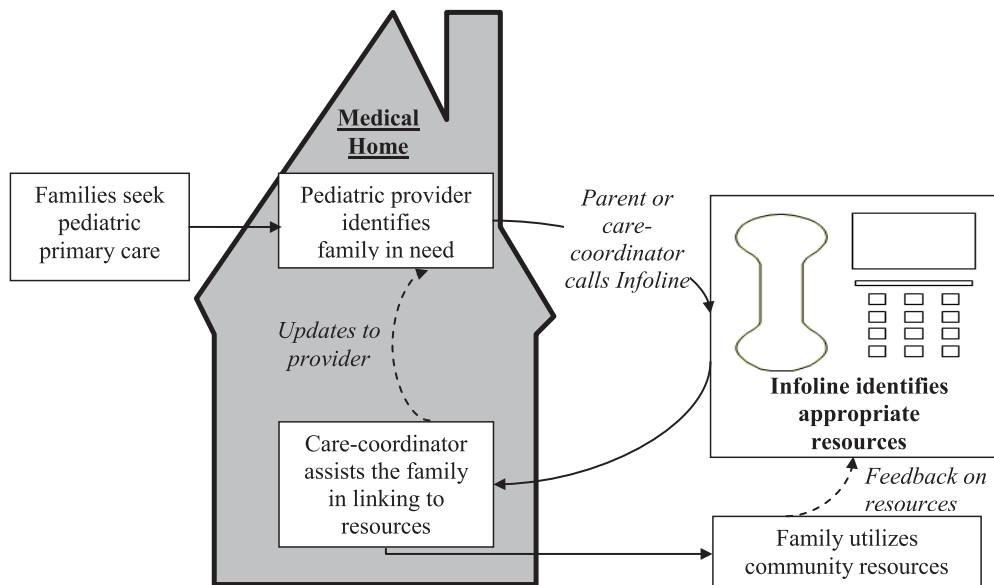
Component	Description
1. Child Development Line	A specialized call center of the United Way 2-1-1, staffed by trained child development coordinators  A free and confidential telephone access point for families that links them to existing services  Families are also offered the Ages and Stages Questionnaire
2. Inventory of community-based programs	Resource information is maintained through a cooperative venture between HMG Community liaisons and United Way 2-1-1
3. Provider training	Grand round presentations at hospital-based pediatric departments and large pediatric clinics across Connecticut  Trainers visit pediatric practices and present guides and protocols for developmental surveillance and screening and referrals to the Child Development Line
4. Data collection	Feedback enables maintenance and updating of resource inventory  Identification of capacity issues and gaps informs advocacy

HMG, Help Me Grow.

free telephone numbers (e.g., 2-1-1 Infoline) that enable families to be linked to available human service resources such as food banks, job training, Head Start, substance abuse counseling, and support groups. Nationally, >16 million calls were received by 2-1-1 in 2009.<sup>64</sup> In addition, state-run maternal and child health toll-free telephone hotlines are also available to assist families with such issues as health insurance, parenting and child rearing topics, and children with mental health needs.<sup>65</sup> Pediatric medical homes should become familiar with existing community resource hotlines.

An integrated system of care could, for example, have pediatric providers identify families with psychosocial problems and refer them to a toll-free Infoline. Parents or care coordinators within the medical home could initiate the telephone call. Infoline personnel would provide contact information on available community resources. The care coordinator would help families access resources and update providers on families’ use of services. Feedback on the specific community resource’s ability to effectively address the family’s needs would inform the maintenance and updating of the Infoline resource inventory (Fig. 1).

The development of an integrated system for care coordination will require thoughtful responses to a variety of important issues. For example, how is the quality of services ensured? Will the system be prepared to manage large volumes of referrals? Cross-sector collaboration and partnerships are critical to ensure families’ access to a comprehensive array of programs and services.



**Figure 1.** Integrated care model for addressing families' psychosocial needs.

## IMPLICATIONS

Implementing family psychosocial surveillance and screening into pediatric primary care has implications for education, research, and public policy.

### Education

Educating pediatricians on family psychosocial surveillance and screening should occur across the medical education continuum. Training curriculum should target providers' knowledge of the impact of family psychosocial issues on child health and development, surveillance and screening skills, and awareness of available community resources.

Increasing providers' knowledge should begin in medical school and continue during residency training. Exposure to community resources may be integrated within pediatric training. Many residency programs have advocacy rotations that offer this type of experience.<sup>66-68</sup> This allows future pediatricians to gain a better understanding of how community services operate and the procedures (and paperwork) required of parents to access resources. Educating providers in practice about the social determinants of health and available community resources is an important priority for continuing medical education.

Educational initiatives aimed at increasing providers' knowledge are necessary but insufficient to ensure practice change. Pediatric residents need "hands-on" training in family psychosocial surveillance and screening. This could be incorporated within mandatory child development rotations and practiced in primary care rotations. Residents typically provide care to low-income children in continuity clinic,<sup>69</sup> thereby providing a robust opportunity to practice surveillance and screening and making referrals for an at-risk population. Reviewing quality measurement data on the identification of needs, referrals, utilization of resources, and correlation with child

outcomes will allow providers to assess the impact of these endeavors.

### Research

Research is needed to evaluate the feasibility and effectiveness of family psychosocial surveillance and screening within the medical home. Screening tools that broadly assess multiple family psychosocial issues need to be further developed. Different screening delivery systems (e.g., kiosks, internet-based, and telephone) should also be evaluated in diverse patient populations. Prospective, longitudinal cohort studies and randomized controlled trials should evaluate the impact of surveillance and screening on short- and long-term child health and developmental outcomes. Finally, research grounded in diffusion of innovation theory will be important to identify key attributes for the dissemination into practice of novel surveillance/screening models.<sup>70,71</sup>

Qualitative and quantitative studies should evaluate strategies to overcome barriers to accessing community resources.<sup>72</sup> We found that only one-third of urban families with identified basic needs such as food and child-care accessed community resources.<sup>73</sup> Similarly, evaluation of the Help Me Grow model found that only 43% of referred children at risk for developmental delay successfully accessed services.<sup>63</sup>

The requirement for quality improvement projects by the American Board of Pediatrics for maintenance of certification, as well as such activities as The National Committee for Quality Assurance Patient-Centered Medical Home recognition program,<sup>74,75</sup> may create incentives to evaluate efforts that incorporate family psychosocial surveillance and screening into routine pediatric practice. Advances in health information technology will enhance data collection capabilities and better enable the monitoring of quality indicators.

## Public Policy

Incorporating family psychosocial surveillance and screening into the medical home and creating linkages to community resources has important public policy implications. Family psychosocial surveillance and screening and care coordination activities must be a valued and, therefore, reimbursed component of pediatric primary care. Policies that enable and encourage cross-sector (and interagency) collaboration and partnerships are critical to ensure families' access to a comprehensive array of programs and services. In Connecticut, Help Me Grow is a partnership among 5 state agencies, demonstrating the feasibility and benefits of this type of integrated model.<sup>62</sup> Developing and implementing an integrated model of care will require strong leadership and advocacy from pediatric and community leaders and organizations both at the state and national levels.

## CONCLUSIONS

As the early identification of developmental disorders is crucial to the well-being of children, so is early detection and intervention for family psychosocial issues. The core principles of surveillance and screening can be readily applied to the detection and referral of psychosocial issues by child health providers within the medical home. Integrating family psychosocial surveillance and screening into well-child care services requires changes in professional training, provider practice, and public policy. We believe that the potential of psychosocial surveillance and screening to enhance the effectiveness of child health supervision services to promote children's optimal development justifies efforts to promote such changes.

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