PEDIATRICS®
OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

The Pediatrician's Role in Child Maltreatment Prevention

Emalee G. Flaherty, John Stirling, Jr and The Committee on Child Abuse and Neglect

Pediatrics 2010;126;833; originally published online September 27, 2010;
DOI: 10.1542/peds.2010-2087

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™

FROM THE AMERICAN ACADEMY OF PEDIATRICS

Guidance for the Clinician in Rendering Pediatric Care

Clinical Report—The Pediatrician's Role in Child Maltreatment Prevention

Emalee G . Flaherty, MD , John Stirling Jr, MD , and THE COMMITTEE ON CHILD ABUSE AND NEGLECT

KEY WORDS
child maltreatment, primary care, prevention

ABBREVIATION
AAP—American Academy of Pediatrics

The guidance in this report does not indicate an exclusive course of treatment or serve as a standard of medical care. Variations, taking into account individual circumstances, may be appropriate.

www.pediatrics.org/cgi/doi/10.1542/peds.2010-2087

doi:10.1542/peds.2010-2087

PEDIATRICS (ISSN Numbers: Print, 0031-4005; Online, 1098-4275).

abstract

FREE

It is the pediatrician's role to promote the child's well-being and to help parents raise healthy, well-adjusted children. Pediatricians, therefore, can play an important role in the prevention of child maltreatment. Previous clinical reports and policy statements from the American Academy of Pediatrics have focused on improving the identification and management of child maltreatment. This clinical report outlines how the pediatrician can help to strengthen families and promote safe, stable, nurturing relationships with the aim of preventing maltreatment. After describing some of the triggers and factors that place children at risk for maltreatment, the report describes how pediatricians can identify family strengths, recognize risk factors, provide helpful guidance, and refer families to programs and other resources with the goal of strengthening families, preventing child maltreatment, and enhancing child development. *Pediatrics* 2010;126:833–841

INTRODUCTION

Since Kempe et al[1] published their description of the battered-child syndrome in 1962, the medical profession has made great strides in recognizing and intervening in cases of child maltreatment. Child maltreatment is now recognized to be part of a continuum of family violence that includes child maltreatment, intimate partner violence, and the abuse of animals and the elderly. A great deal is known about the factors that contribute to the abuse of a child and about those that may prove protective. Despite the progress made, the problem remains widespread and serious in its costs, whether reckoned in dollars[2–4] or human potential.[5] Child maltreatment, however, is a preventable problem, and pediatricians have a role in its prevention.[6]

Pediatricians, because of their unique relationship with families, are in an excellent position to help families enhance their ability to protect children and to address factors that put them at increased risk of abuse. Because pediatricians have contact with families during challenging and stressful times (eg, when a child is ill), they can become familiar with a family's stressors and strengths. As a trusting relationship evolves, families and patients develop comfort discussing personal issues with their pediatrician.[7] Pediatricians are often connected to community resources that have the welfare of the child and family as a priority. Families tend to trust their pediatricians' guidance and referral to these resources. The literature shows that parents view pediatricians as respected advisors and counselors.[8]

Pediatricians accept this role as well. The majority of pediatricians (70%) who participated in the 2002–2003 American Academy of Pedi-

atrics (AAP) periodic survey agreed that they can help prevent child abuse by providing anticipatory guidance.[9] Almost all the respondents to this survey (91%) agreed that pediatricians should screen for parenting problems during health supervision visits.

Triggers

Pediatricians can play a role in preventing child maltreatment if they understand the situations that commonly trigger maltreatment and if they identify and address some of the factors that may make a child more vulnerable to maltreatment.

Certain elements of normal child development are often the triggers for child maltreatment. Schmitt[10] described what he called the "7 deadly sins" of childhood. He described normal developmental phases that may cause difficulty for some parents, specifically colic, awakening at night, separation anxiety, normal exploratory behavior, normal negativism, normal poor appetite, and toilet-training resistance. He suggested that pediatricians anticipate these normal developmental stages and provide guidance to families about how to best manage potentially difficult situations.

Crying is a common trigger for child abuse[11] and is the most common trigger of abusive head trauma.[12,13] In 1 study of infants who suffered abusive head trauma, almost all of the parents had sought help for their infant's crying previously from their primary care physician.[14] All infants cry; crying generally begins in the first month of life, and the duration of crying increases and peaks between 2 and 4 months of age. That the incidence of abusive head trauma parallels this normal developmental crying curve may serve as additional corroboration of the association between crying and abuse.[15,16]

The severity and frequency of caregivers' adverse responses to crying have largely been underappreciated. In 1 study, almost 6% of parents of 6-month-old infants admitted that they had smothered, slapped, or shaken their infant at least once because of his or her crying.[17]

Discipline can become abusive, as when punishment is used inappropriately in response to a child's developmentally normal behaviors. Unprepared parents may mistake separation anxiety, normal exploratory play, and normal negativism, for example, for abnormal behaviors or unacceptable behavior and resort to punitive measures to correct them. Apart from its possible effects on emotional development, corporal punishment may result in serious physical injuries for the child. When mothers in the Carolinas were interviewed, 4.3% of them admitted using harsh physical techniques when disciplining their children. These practices included beating, burning, kicking, or hitting a child with an object somewhere other than on the buttocks; 2.3% of the mothers said that they shook children younger than 2 years as a form of discipline.[18]

Toilet-training and toilet accidents are another common trigger for child abuse.[19] Immersion burns are frequently inflicted in response to soiling and enuresis by caregivers who believe that the children should be able to control these behaviors.[20,21] Genital bruising and immersion burns are common child abuse injuries associated with toilet-training. The average age of children who have been intentionally burned is 32 months, which is about the same age many children are being toilet trained and, thus, the same age at which some are accidentally soiling or wetting themselves.

TABLE 1 Factors and Characteristics That Place a Child at Risk for Child Maltreatment

Child	Parent	Environment (Community and Society)
Emotional/behavioral difficulties	Low self-esteem	Social isolation
Chronic illness	Poor impulse control	Poverty
Physical disabilities	Substance abuse/alcohol abuse	Unemployment
Developmental disabilities	Young maternal or paternal age	Low educational achievement
Preterm birth	Abused as a child	Single-parent home
Unwanted	Depression or other mental illness	Non–biologically related male living in the home
Unplanned	Poor knowledge of child development or unrealistic expectations for child	Family or intimate partner violence
	Negative perception of normal child behavior	

Factors That Place a Child at Risk for Child Maltreatment

Many disparate factors may combine to make a child more likely to be abused or neglected.[22] Using an ecologic model as a framework for considering risk,[23] certain characteristics of the child, the parent, and the environment may place a child at risk, as shown in Table 1. Often, multiple factors coexist and are interrelated, which increases the risk for the child.

Child characteristics that could predispose a child to maltreatment include anything that makes a child more difficult to care for or makes a child different from the parent's expectation. For example, a demanding infant or a child with special health care needs may test the parent's patience. As a result, children with physical, developmental, or emotional/behavioral disability are at an increased risk of being maltreated.[24,25]

Children with disabilities are approximately 3 times more likely to be maltreated than are children without disabilities.[26] A number of characteristics

may make children with disabilities more vulnerable to maltreatment.[27] The child's disability may place additional emotional or financial demands on the family. A child who is heavily dependent on others beyond infancy may engender resentment. Further complicating matters, the child with disabilities may be conditioned to obey caregivers without question and, thus, may lack the ability to disclose abuse. If children have been taught to accept painful touch as normal, they may not be able to distinguish when boundaries are crossed.

Children born prematurely may also be at increased risk of being maltreated.[28–30] Some preterm infants may be more at risk for abuse, because the infants are perceived as less attractive and more demanding by their parents.[28] Some experts have suggested that the early and sometimes prolonged separation of these infants from their parents may contribute to their vulnerability. Some preterm children may be more vulnerable because they have special needs or require special care, including additional physician visits or special therapy. All of this care may place an additional financial and/or emotional strain on the family.

Likewise, the child who is unplanned or unwanted is at risk for maltreatment.[31] An unplanned pregnancy may place an extra financial and/or emotional burden on the family.[30]

Parent factors also may make a child more vulnerable to being maltreated. Factors that may decrease a parent's ability to cope with the stresses of parenting include low self-esteem; poor impulse control, including a tendency to lash out in response to stress; substance use; and alcohol abuse.[30,32] Young maternal and paternal age are risk factors for maltreatment,[33,34] and young maternal age is strongly associated with infant homicide.[35] Parents who were abused or neglected themselves as children may parent in the only style they have learned.[30,31]

A parent's depression or other mental illnesses,[34,36] particularly postpartum depression, affect a child's growth and development and may place the child at risk for maltreatment. Depression is a significant problem for both fathers and mothers.[37]

Parents who have a negative view of themselves and their children and parents who devalue their children are at risk of maltreating their children. Oates et al[30] found that mothers who had maltreated their children tended to rate their children as below average, whereas control mothers viewed their infants as normal or above average.

Lack of knowledge about child-rearing can increase the caregiver's level of frustration with the child's behavior. Parents vary widely in their knowledge of child development and what they should reasonably expect from a child at a given age. Parents who maltreat their children are more likely to have developmentally inappropriate and unrealistic expectations for their child's behavior and to have a negative perception of normal behaviors.[28]

Oates et al[30] also found that parents who maltreated their children were more likely to have a punitive child-rearing style and were stricter. When the maltreated children behaved well, they were rarely praised, compared with the children in the control group, who were praised for good behavior.

Environmental factors can add to parents' stress. Parents who are isolated and who have low levels of social support are at increased risk of maltreating their child.[38] Poverty, unemployment, low maternal education, and single parenting are risk factors associated with physical child abuse.[36,39–42] Having a non–biologically related male living in a single-female–headed home is a risk factor for child maltreatment and for fatal child maltreatment.[43–45]

Adult intimate partner violence and child maltreatment are closely linked.[46] Children who live with an adult victim of intimate partner violence are at an increased risk of being physically abused. In addition, children who are exposed to violence in the home are affected emotionally, cognitively, and behaviorally.[47] Exposure to this toxic environment is often considered a form of child maltreatment.

These factors may interact and increase the child's vulnerability to maltreatment. Infants who are not nurtured properly in their first months may not learn to regulate their emotions, because development of this vital task is enhanced by early parental attention and support.[48] As the infants become more challenging to their parents, this complex interplay may increase their risk for abuse. Adults who are socially isolated may lack standards for comparison of their child's behaviors, or role models and resources for themselves. Food or employment insecurity, poor access to community services, or simply the lack of community feedback can exacerbate stress and anxiety. Even if no single factor would be sufficient to overwhelm the caregiver, the combination of stresses may precipitate an abusive crisis.[49,50]

Protective Factors

Besides assessing a child's risk for maltreatment, the pediatrician should identify and consider the child's and family's strengths. Maltreatment occurs when factors specifically pertinent to the child and factors relevant to the parent, the community, and to the environment interact, which creates a "perfect storm" for abuse and/or neglect.[51–53] In other words,

maltreatment occurs when risk factors are greater than protective factors and stressors exceed the supports.

Several factors seem to both protect a child from maltreatment and provide children with resilience to the effects of child maltreatment, as shown in Table 2.[54–56] Using the same ecologic framework, protective factors include attributes of the child and the family as well as support from outside the family. Although many studies have focused on how these behaviors may trigger a physical response or physical abuse, it is likely that these behaviors also trigger other forms of maltreatment, including sexual abuse. Prevention may require changing some cultural beliefs and social policy and improving education and economic opportunities.

PREVENTION AND INTERVENTION PROGRAMS

It is not the intent of this report to review and evaluate all of the available prevention and intervention programs. Instead, the report will discuss some of the programs as examples and, when available, cite any evidence for their effectiveness.

Hospital- and Office-Based Intervention Programs

Programs have been developed to help parents to better cope with a child's crying. Dias et al[57] implemented a program in nurseries in western New York designed to teach new parents about violent infant-shaking and alternatives to use when infants cried. They found that the incidence of abusive head injuries decreased by 47% during the first 5 years of the program. A similar program, the Period of PURPLE Crying, also uses a brief video and written material to educate new parents about normal crying and how to cope with an infant's crying. This program has been shown to improve mothers' knowledge about crying and to improve their behavioral response to it.[58,59] Although both of these programs represent promising models, neither program has yet demonstrated strong evidence that they are effective as a primary prevention of abusive head trauma.

One office-based prevention model, the Safe Environment for Every Child (SEEK) model, was tested in a resident continuity clinic over a 3-year period.[60] Residents were trained to recognize factors that placed a family at risk for maltreatment. Study families were screened for risk factors, and a team that consisted of a resident and a social worker addressed any identified risk factors. When the families were compared with a control group, the prevention program resulted in fewer reports of child maltreatment made to child protective services, fewer incidents of medical noncompliance and delayed immunizations, and less harsh punishment by parents. Although some of the differences between the control group and intervention group were of modest significance, participation in this program improved the residents' sense of competence and comfort when addressing risk behaviors.

The AAP developed Connected Kids: Safe, Strong, Secure, an office intervention originally known as the Violence Intervention and Prevention Program (VIPP). This program was modeled after The Injury Prevention Program (TIPP), also from the AAP.[61] The Connected Kids program uses a resilience-based approach to anticipatory guidance and is designed to help primary care physicians use their therapeutic relationship to support families as a means of violence prevention. The Connected Kids program includes a clinical guide, online training materials, and parent education materials and educates both pediatricians and parents about discipline, parenting, and other issues. Brochures on child development show parents that normal problematic child behaviors—from crying to climbing—arise from the child's normal growth and development and advocate that these behaviors be addressed with guidance rather than punishment. The Connected Kids program has not been

TABLE 2 Protective Factors

Dispositional/Temperamental Attributes of the Child	Warm and Secure Family Relationships	Availability of Extrafamilial Support
Above-average cognitive ability	Presence of a caring and supportive adult	Structured school environment
High ego control (high degree of impulse control and modulation)	Positive family changes (eg, family interventions, father no longer allowed on visitations)	Involvement with a religious community
Internal locus of control (belief in one's ability to control own destiny)		Involvement in extracurricular activities or hobbies
External attribution of blame (attribute cause to something outside oneself [eg, some external pressure])		Access to good health, educational, and social welfare services
Presence of spirituality		
Ego control and ego resilience (able to modify impulses and insulate themselves from environmental distracters)		
High self-esteem or sense of self-worth		

evaluated formally, but a study on implementation of Connected Kids was conducted in 2007 with 27 pediatricians over a 6-month period, with a focus on improving parental supervision and monitoring during middle childhood. Findings from the project indicate that the Connected Kids program is appealing to pediatricians, implementation is feasible, and use is sustainable over a period of 6 months. More information about the Connected Kids program is available at www.aap.org/connectedkids.

Practicing Safety, a program conducted by the AAP and funded by the Doris Duke Charitable Foundation, developed expanded anticipatory guidance modules for use in primary care offices. The 7 modules provide pediatricians with suggested assessment, guidance, and resources to help parents cope with crying, help them parent, ensure their children's safety when they are in the care of others, improve the family environment, provide effective discipline, assist with sleeping and eating, and help with toilet-training (www.aap.org/practicingsafety). The program was tested in 8 practices in New Jersey and Pennsylvania, and parent and staff reports showed a significant increase in maternal depression screening. Staff reports also showed an increase in discussion and use of resources on coping with crying, discipline, and toilet-training. The toolkit was revised and was implemented by 14 practices in the AAP Quality Improvement Innovation Network (QuIIN); the next steps are being developed.

Community Prevention Programs and Resources

Home-visitation programs, in which targeted families receive regular contact with trained personnel, are a prevention model that has been widely used and are supported by the AAP.[62] The Nurse-Family Partnership model developed by Olds et al has been rigorously tested.[63] The model, which uses trained nurses, has demonstrated improvements in maternal and child functioning and showed a trend toward reduced childhood mortality rates from preventable causes.[64] On the other hand, Healthy Families, a home-visitation program that uses trained paraprofessionals, has been tested in a number of states, but it has not been shown to reduce child abuse or child abuse risk factors.[65–67] Cincinnati's "Every Child Succeeds" program used both the Nurse-Family Partnership model and the Healthy Families model and provided home-visiting to mothers at high risk (adolescent, unmarried, low income, or suboptimal education) and first-time mothers. They found that intensive home-visiting reduced the risk of infant death during the first year of life.[68] The Task Force on Community Preventive Services found that, in the 21 programs for which records were available, home-visiting was associated with a median reduction in child abuse of more than 50%.[69–71]

Although pediatricians have long been familiar with therapeutic preschools and with parenting programs, study results have suggested that these interventions are more effective when multiple modalities are combined with those that target the entire family. Reynolds and Robertson[72] reported that participation in school-based child-parent centers, which provided extensive family education and support, reduced maltreatment by 50% in a population at high risk. Other study results have shown significant effects when community-based parent-child interventions are targeted at specific populations, combine peer and professional support, and provide some services directly to the children.[73]

Parent-training programs, such as the Triple P program, Sure Start, Family Connections, Healthy Families America, and Together for Kids, aim to improve parenting skills and parents' emotional adjustment. The quality of the programs, however, is variable. The Triple P program resulted in a positive reduction of maltreatment in 1 study,[74] but the program needs to be replicated and reassessed to determine its effectiveness.[63] A comparison of the effectiveness of parent-training programs is available through the *Cochrane Database of Systematic Reviews*.[75,76] More information about child abuse–prevention programs, local resources, and program evaluation can be found at www.childwelfare.gov/preventing/programs/types/homevisit.cfm.

The Role of Pediatricians

It is important for pediatricians to recognize and respond to ongoing maltreatment. Universal prevention of child maltreatment must begin with an approach that assesses the caregivers' strengths and deficits and connects the family with community resources that will protect the dependent children before abuse or neglect occurs. The schedule of routine health care visits recommended by the AAP provides ample opportunity for the clinician to observe and assess parenting practices at the very times when a child would be expected to initiate new and possibly challenging behaviors.[77]

The third edition of *Bright Futures* (http://brightfutures.aap.org/about.html) from the AAP provides pediatricians with guidelines for anticipatory guidance and prioritizes topics for discussion at each health supervision visit. This multimedia program includes the *Bright Futures* guidelines in a manual format, pocket guide, and personal digital assistant (PDA) version in addition to toolkits, PowerPoint presentations, and health-promotion information sheets.

A clinician may receive answers or observe behaviors that suggest the family's resilience is compromised in some significant way. Such compromise may derive from child factors, parental deficits, or environmental stressors. If the family's ability to nurture and protect the child is compromised, that child must be considered at risk for abuse, and action should be taken. Unless the child is felt to have been abused in some way, such action rarely entails referral to child protective services but frequently goes beyond the scope of a typical office visit. Efforts may be as straightforward as taking the time to elicit a more comprehensive history or counseling a frustrated parent. A more complicated case may involve referral to a community agency for evidence-based parent training or for intervention for intimate partner violence. If there is significant doubt about the child's safety, the caregivers' ability to protect, or maltreatment is suspected, the pediatrician should, of course, contact child protective services.

TABLE 3 Incorporating Primary Child Maltreatment Prevention Into the Health Supervision Visit

	Parent Coping Skills and Support System
Prenatal or first visit	Who lives in the home? History of mental health problems, substance abuse/alcohol abuse, or intimate partner violence?
	How were the parents parented and disciplined?
	What were the parents' experience(s) with trauma?
	Are there financial problems and/or poverty?
	Was the pregnancy planned?
	Who will care for the infant?
Newborn	Infant crying
	Expectations
	Identify 3 friends or family members who can help (safety line)
First months	Infant crying
	Normal development and expectations
	Maternal depression
	Identify 3 friends or family members who can help (safety line)
	Loving is not "spoiling"
Cruiser/toddler	Discipline = teaching
	Toilet-training
	Normal development and age-appropriate expectations
Preschool	Teach child names for genitalia
	Safe touch/unsafe touch
	Normal sexual behavior
	Normal development and age-appropriate expectations
	Discipline = teaching
	Model nonviolent anger management and conflict resolution
School	Discipline = teaching
	Model nonviolent anger management and conflict resolution
	Appropriate supervision
	Respect private parts of others and others to do the same
	Personal safety; peer pressure; Internet use
Adolescence	Discipline = teaching
	Dating violence
	Model nonviolent anger management and conflict resolution

Note that topics may be reintroduced at successive visits

GUIDANCE FOR THE PEDIATRICIAN

1. Obtain a thorough social history, initially and periodically, throughout a patient's childhood. The parent-screening tool included in the *Bright Futures* tool and resource kit (available at http://brightfutures.aap.org) can be used to help screen for risk factors and problems; identify and build on family strengths, resilience, and mediating factors; identify and address parents' concerns; and reinforce effective parenting.[78] Reinforcement builds strength and a sense of competence.
2. Acknowledge the frustration and anger that often accompany parenting. Provide anticipatory guidance about developmental stages that may be stressful or serve as a trigger for child maltreatment. A health visit framework can be helpful (see Table 3) or refer to the Connected Kids counseling schedule (http://aap.org/connectedkids).
3. Talk with parents about their infant's crying and how they are coping with it. Learn their perception of their infant's crying and which strategies they use to cope. The pediatrician should provide parents with insight into the infant's behavior and teach alternative responses.
4. When caring for children with disabilities, be cognizant of their increased vulnerability and watch for signs of maltreatment.[79,80] Provide families with information about the child's condition. Activities may include giving out handouts or having group instructional sessions with parents. Validate the parent's stresses and provide them with techniques to manage the stress. Provide the family with information about respite care, which allows someone else to care for the child so that the parents or other family members can take a break. Identify families at greater risk of abusing their child. Help educate older children about how to protect themselves against abuse and that they should share uncomfortable, abusive, or concerning experiences with a trusted adult.
5. Be alert to signs and symptoms of parental intimate partner violence[81] and postpartum depression. Instruments are available

that can be used by clinicians to identify depression in mothers and fathers.[37,82] Familiarize yourself with appropriate community resources, and know how to respond if a caregiver reports intimate partner violence or depression.

6. Guide parents in providing effective discipline.[83] Encourage parents to use alternatives to corporal punishment, such as time out techniques and positive reinforcement. Brochures such as those developed for the Connected Kids program (http://aap.org/connectedkids) and *Bright Futures* (http://brightfutures.aap.org) can be used to supplement this discussion.
7. Talk to parents about normal sexual development and counsel them about how to prevent sexual abuse. The AAP has developed an educational toolkit that helps health care professionals talk to parents and patients about sexual violence topics and provides them with educational materials and other resources (www.aap.org/pubserv/PSVpreview/start.html).
8. Encourage caregivers to use the pediatric office as a conduit to needed expertise. Become knowledgeable about resources in the community, and, when appropriate, refer families, especially stressed parents, to these resources.
9. Advocate for community programs and resources that will provide effective prevention, intervention, research, and treatment for child maltreatment and for programs that address the underlying problems that contribute to child maltreatment (eg, poverty, substance abuse, mental health issues, and poor parenting skills).
10. Advocate for positive behavioral interventions and supports in schools. Encourage schools to implement effective and supportive behavioral expectations and interventions. (More information about school-based positive behavioral interventions and support can be found at www.pbis.org.)
11. Recognize signs and symptoms of maltreatment and report suspected maltreatment to the appropriate authorities.

LEAD AUTHORS

Emalee G. Flaherty, MD
John Stirling Jr, MD

COMMITTEE ON CHILD ABUSE AND NEGLECT, 2008–2010

Carole Jenny, MD, MBA, Chairperson
Cindy W. Christian, MD
James Crawford, MD
Emalee G. Flaherty, MD
Roberta Hibbard, MD
Rich Kaplan, MD
John Stirling Jr, MD

LIAISONS

Harriet MacMillan, MD – *American Academy of Child and Adolescent Psychiatry*
Janet Saul, PhD – *Centers for Disease Control and Prevention*

STAFF

Tammy Piazza Hurley
thurley@aap.org

REFERENCES

1. Kempe CH, Silverman FN, Steele BF, Droegmuller W, Silver HK. The battered-child syndrome. *JAMA*. 1962;181:17–24
2. Libby AM, Sills MR, Thurston NK, Orton HD. Costs of childhood physical abuse: comparing inflicted and unintentional traumatic brain injuries. *Pediatrics*. 2003;112(1 pt 1):58–65
3. Bonomi AE, Anderson ML, Rivara FP, et al. Health care utilization and costs associated with childhood abuse. *J Gen Intern Med*. 2008;23(3):294–299
4. Hankivsky O, Draker DA, Hankivsky O. The economic costs of child sexual abuse in Canada: a preliminary analysis. *J Health Soc Policy*. 2003;17(2):1–33
5. Anda RF, Felitti VJ, Bremner JD, et al. The enduring effects of abuse and related adverse experiences in childhood: a convergence of evidence from neurobiology and epidemiology. *Eur Arch Psychiatry Clin Neurosci*. 2006;256(3):174–186
6. Greeley CS. The future of child maltreatment prevention. *Pediatrics*. 2009;123(3):904–905
7. Finkel MA. "I can tell you because you're a doctor." *Pediatrics*. 2008;122(2):442
8. Bass JL, Christoffel KK, Widome M, et al. Childhood injury prevention counseling in primary care settings: a critical review of the literature. *Pediatrics*. 1993;92(4):544–550
9. Flaherty EG, Sege R, Price LL, Christoffel KK, Norton DP, O'Connor KG. Pediatrician characteristics associated with child abuse identification and reporting: results from a national survey of pediatricians. *Child Maltreat*. 2006;11(4):361–369
10. Schmitt BD. Seven deadly sins of childhood: advising parents about difficult developmental phases. *Child Abuse Negl*. 1987;11(3):421–432
11. Flaherty EG. Analysis of caretaker histories in abuse: comparing initial histories with subsequent confessions. *Child Abuse Negl*. 2006;30(7):78–1989
12. Brewster AL, Nelson JP, Hymel KP, et al. Victim, perpetrator, family, and incident characteristics of 32 infant maltreatment deaths in the United States Air Force. *Child Abuse Negl*. 1998;22(2):91–101
13. Krugman RD. Fatal child abuse: analysis of 24 cases. *Pediatrician*. 1983;12(1):68–72
14. Talvik I, Alexander RC, Talvik T. Shaken baby syndrome and a baby's cry. *Acta Paediatr*. 2008;97(6):782–785
15. Barr RG, Trent RB, Cross J. Age-related incidence curve of hospitalized shaken baby syndrome cases: convergent evidence for crying as a trigger to shaking. *Child Abuse Negl*. 2006;30(1):7–16
16. Lee C, Barr RG, Catherine N, Wicks A. Age-related incidence of publicly reported shaken baby syndrome cases: is crying a trigger for shaking? *J Dev Behav Pediatr*. 2007;28(4):288–293
17. Reijneveld SA, van der Wal MF, Brugman E, Sing RA, Verloove-Vanhorick SP. Infant crying and abuse. *Lancet*. 2004;364(9442):1340–1342
18. Theodore AD, Chang JJ, Runyan DK, Hunter WM, Bangdiwala SI, Agans R. Epidemiologic features of the physical and sexual maltreatment of children in the Carolinas. *Pediatrics*. 2005;115(3). Available at: www.pediatrics.org/cgi/content/full/115/3/e331
19. Peck MD, Priolo-Kapel D. Child abuse by burning: a review of the literature and an algorithm for medical investigations. *J Trauma*. 2002;53(5):1013–1022

20. Daria S, Sugar NF, Feldman KW, Boos SC, Benton SA, Ornstein A. Into hot water head first: distribution of intentional and unintentional immersion burns. *Pediatr Emerg Care*. 2004;20(5):302–310
21. Maguire S, Moynihan S, Mann M, Potokar T, Kemp AM. A systematic review of the features that indicate intentional scalds in children. *Burns*. 2008;34(8):1072–1081
22. Cicchetti D, Toth SL. A developmental psychopathology perspective on child abuse and neglect. *J Am Acad Child Adolesc Psychiatry*. 1995;34(5):541–565
23. Bronfenbrenner U. Ecology of the family as a context for human development: research perspectives. *Dev Psychol*. 1986;22(6):723–742
24. Sedlak A, Broadhurst DD, Westat I, James Bell A; National Center on Child Abuse and Neglect. Third National Incidence Study of Child Abuse and Neglect: Final Report. Washington, DC: US Department of Health and Human Services, Administration for Children and Families, Administration on Children, Youth and Families, National Center on Child Abuse and Neglect; 1996
25. Sullivan PM, Knutson JF. The association between child maltreatment and disabilities in a hospital-based epidemiological study. *Child Abuse Negl*. 1998;22(4):271–288
26. Sullivan PM, Knutson JF. Maltreatment and disabilities: a population-based epidemiological study. *Child Abuse Negl*. 2000;24(10):1257–1273
27. Westcott H. The abuse of disabled children: a review of the literature. *Child Care Health Dev*. 1991;17(4):243–258
28. Sidebotham P, Heron J, Team AS. Child maltreatment in the "children of the nineties: " the role of the child. *Child Abuse Negl*. 2003;27(3):337–352
29. Wu SS, Ma CX, Carter RL, et al. Risk factors for infant maltreatment: a population-based study. *Child Abuse Negl*. 2004;28(12):1253–1264
30. Oates RK, Davis AA, Ryan MG. Predictive factors for child abuse. *Aust Paediatr J*. 1980;16(4):239–243
31. Altemeier WA 3rd, O'Connor S, Vietze PM, Sandler HM, Sherrod KB. Antecedents of child abuse. *J Pediatr*. 1982;100(5):823–829
32. Kelleher K, Chaffin M, Hollenberg J, Fischer E. Alcohol and drug disorders among physically abusive and neglectful parents in a community-based sample. *Am J Public Health*. 1994;84(10):1586–1590
33. Stier DM, Leventhal JM, Berg AT, Johnson L, Mezger J. Are children born to young mothers at increased risk of maltreatment? *Pediatrics*. 1993;91(3):642–648
34. Sidebotham P, Golding J; ALSPAC Study Team. Avon Longitudinal Study of Parents and Children. Child maltreatment in the "children of the nineties" a longitudinal study of parental risk factors. *Child Abuse Negl*. 2001;25(9):1177–1200
35. Overpeck MD, Brenner RA, Trumble AC, Trifiletti LB, Berendes HW. Risk factors for infant homicide in the United States. *N Engl J Med*. 1998;339(17):1211–1216
36. Cadzow SP, Armstrong KL, Fraser JA. Stressed parents with infants: reassessing physical abuse risk factors. *Child Abuse Negl*. 1999;23(9):845–853
37. Paulson JF, Dauber S, Leiferman JA. Individual and combined effects of postpartum depression in mothers and fathers on parenting behavior. *Pediatrics*. 2006;118(2):659–668
38. Kotch JB, Browne DC, Dufort V, Winsor J. Predicting child maltreatment in the first 4 years of life from characteristics assessed in the neonatal period. *Child Abuse Negl*. 1999;23(4):305–319
39. Brown J, Cohen P, Johnson JG, Salzinger S. A longitudinal analysis of risk factors for child maltreatment: findings of a 17-year prospective study of officially recorded and self-reported child abuse and neglect. *Child Abuse Negl*. 1998;22(11):1065–1078
40. Sidebotham P, Heron J, Team AS. Child maltreatment in the "children of the nineties": a cohort study of risk factors. *Child Abuse Negl*. 2006;30(5):497–522
41. Burrell B, Thompson B, Sexton D. Predicting child abuse potential across family types. *Child Abuse Negl*. 1994;18(12):1039–1049
42. Garbarino J, Kostelny K. Child maltreatment as a community problem. *Child Abuse Negl*. 1992;16(4):455–464
43. Radhakrishna A, Bou-Saada IE, Hunter WM, Catellier DJ, Kotch JB. Are father surrogates a risk factor for child maltreatment? *Child Maltreat*. 2001;6(4):281–289
44. Stiffman MN, Schnitzer PG, Adam P, Kruse RL, Ewigman BG. Household composition and risk of fatal child maltreatment. *Pediatrics*. 2002;109(4):615–621
45. Schnitzer PG, Ewigman BG. Child deaths resulting from inflicted injuries: household risk factors and perpetrator characteristics. *Pediatrics*. 2005;116(5). Available at: www.pediatrics.org/cgi/content/full/116/5/e687
46. Knapp JF, Dowd MD. Family violence: implications for the pediatrician. *Pediatr Rev*. 1998;19(9):316–321
47. Zuckerman B, Augustyn M, Groves BM, Parker S. Silent victims revisited: the special case of domestic violence. *Pediatrics*. 1995;96(3 pt 1):511–513
48. Shonkoff JP. From neurons to neighborhoods: old and new challenges for developmental and behavioral pediatrics. *J Dev Behav Pediatr*. 2003;24(1):70–76
49. Kliegman RM. Perpetual poverty: child health and the underclass. *Pediatrics*. 1992;89(4 pt 2):710–713
50. Zolotor AJ, Runyan DK, Zolotor AJ, Runyan DK. Social capital, family violence, and neglect. *Pediatrics*. 2006;117(6). Available at: www.pediatrics.org/cgi/content/full/117/6/e1124
51. Helfer RE, Kempe CH, eds. Child Abuse and Neglect: The Family and the Community. Cambridge, MA: Ballinger; 1976
52. Belsky J. Child maltreatment: an ecological integration. *Am Psychol*. 1980;35(4):320–335
53. Runyan DK, Hunter WM, Socolar RR, et al. Children who prosper in unfavorable environments: the relationship to social capital. *Pediatrics*. 1998;101(1 pt 1):12–18
54. Heller SS, Larrieu JA, D'Imperio R, Boris NW. Research on resilience to child maltreatment: empirical considerations. *Child Abuse Negl*. 1999;23(4):321–338
55. Werner EE. Overcoming the odds. *J Dev Behav Pediatr*. 1994;15(2):131–136
56. Bonanno GA, Mancini AD. The human capacity to thrive in the face of potential trauma. *Pediatrics*. 2008;121(2):369–375
57. Dias MS, Smith K, DeGuehery K, Mazur P, Li V, Shaffer ML. Preventing abusive head trauma among infants and young children: a hospital-based, parent education program. *Pediatrics*. 2005;115(4). Available at: www.pediatrics.org/cgi/content/full/115/4/e470
58. Barr RG, Rivara FP, Barr M, et al. Effectiveness of educational materials designed to change knowledge and behaviors regarding crying and shaken-baby syndrome in mothers of newborns: a randomized, controlled trial. *Pediatrics*. 2009;123(3):972–980
59. Barr RG, Barr M, Fujiwara T, Conway J, Catherine N, Brant R. Do educational materials change knowledge and behaviour about crying and shaken baby syndrome? A randomized controlled trial. *CMAJ*. 2009;180(7):727–733
60. Dubowitz H, Feigelman S, Lane W, Kim J. Pediatric primary care to help prevent child maltreatment: the Safe Environment for Every Kid (SEEK) model. *Pediatrics*. 2009;123(3):858–864
61. Sege RD, Flanigan E, Levin-Goodman R, Licenziato VG, De Vos E, Spivak H; American Academy of Pediatrics. American Academy of Pediatrics' Connected Kids' program: case study. *Am J Prev Med*. 2005;29(5 suppl 2):215–219

62. American Academy of Pediatrics, Council on Community Pediatrics. The role of preschool home-visiting programs in improving children's developmental and health outcomes. *Pediatrics*. 2009;123(2):598–603
63. MacMillan HL, Wathen CN, Barlow J, Fergusson DM, Leventhal JM, Taussig HN. Interventions to prevent child maltreatment and associated impairment. *Lancet*. 2009; 373(9659):250–266
64. Olds DL, Kitzman H, Hanks C, et al. Effects of nurse home visiting on maternal and child functioning: age-9 follow-up of a randomized trial. *Pediatrics*. 2007;120(4). Available at: www.pediatrics.org/cgi/content/full/120/4/e832
65. Duggan A, Windham A, McFarlane E, et al. Hawaii's Healthy Start Program of home visiting for at-risk families: evaluation of family identification, family engagement, and service delivery. *Pediatrics*. 2000;105(1 pt 3): 250–259
66. Duggan A, Caldera D, Rodriguez K, Burrell L, Rohde C, Crowne SS. Impact of a statewide home visiting program to prevent child abuse. *Child Abuse Negl*. 2007;31(8): 801–827
67. Duggan A, Fuddy L, Burrell L, et al. Randomized trial of a statewide home visiting program to prevent child abuse: impact in reducing parental risk factors. *Child Abuse Negl*. 2004;28(6):623–643
68. Donovan EF, Ammerman RT, Besl J, et al. Intensive home visiting is associated with decreased risk of infant death. *Pediatrics*. 2007;119(6):1145–1151
69. Olds DL, Kitzman H, Cole R, et al. Effects of nurse home-visiting on maternal life course and child development: age 6 follow-up results of a randomized trial. *Pediatrics*. 2004; 114(6):1550–1559
70. Russell BS, Britner PA, Woolard JL. The promise of primary prevention home visiting programs: a review of potential outcomes. *J Prev Interv Community*. 2007; 34(1–2):129–147
71. Hahn RA, Bilukha OO, Crosby A, et al; Task Force on Community Preventive Services. First reports evaluating the effectiveness of strategies for preventing violence: early childhood home visitation—findings from the Task Force on Community Preventive Services. *MMWR Recomm Rep*. 2003;52(RR-14):1–9
72. Reynolds AJ, Robertson DL. School-based early intervention and later child maltreatment in the Chicago Longitudinal Study. *Child Dev*. 2003;74(1):3–26
73. Layzer JI, Goodson BD, Bernstein L, Price C. *National Evaluation of Family Support Programs. Final Report Volume A—The Meta-analysis*. Cambridge, MA: Abt Associates; 2001. Available at: www.acf.hhs.gov/programs/opre/abuse_neglect/fam_sup/reports/famsup/fam_sup_vol_a.pdf. Accessed August 3, 2010
74. Prinz RJ, Sanders MR, Shapiro CJ, Whitaker DJ, Lutzker JR. Population-based prevention of child maltreatment: the U.S. Triple P system population trial. *Prev Sci*. 2009;10(1): 1–12
75. Kendrick D, Barlow J, Hampshire A, Polney L, Stewart-Brown S. Parenting interventions for the prevention of unintentional injuries in childhood. *Cochrane Database Syst Rev*. 2007;(4):CD006020
76. Barlow J, Coren E. Parent-training programmes for improving maternal psychosocial health. *Cochrane Database Syst Rev*. 2004;(1):CD002020
77. Brazelton TB. Touchpoints: opportunities for preventing problems in the parent-child relationship. *Acta Paediatr Suppl*. 1994;394: 35–39
78. Dixon SD, Stein MT. *Encounters With Children: Pediatric Behavior and Development. Philadelphia,* PA: Mosby Elsevier; 2006
79. Gaebler-Spira D, Thornton LS. Injury prevention for children with disabilities. *Phys Med Rehabil Clin N Am*. 2002;13(4):891–906
80. Hibbard RA, Desch LW; American Academy of Pediatrics, Committee on Child Abuse and Neglect, Council on Children With Disabilities. Maltreatment of children with disabilities. *Pediatrics*. 2007;119(5):1018–1025
81. American Academy of Pediatrics, Committee on Child Abuse and Neglect. The role of the pediatrician in recognizing and intervening on behalf of abused women. *Pediatrics*. 1998;101(6):1091–1092
82. Chaudron LH, Szilagyi PG, Kitzman HJ, Wadkins HIM, Conwell Y. Detection of postpartum depressive symptoms by screening at well-child visits. *Pediatrics*. 2004;113(3 pt 1):551–558
83. American Academy of Pediatrics, Committee on Psychosocial Aspects of Child and Family Health. Guidance for effective discipline [published correction appears in *Pediatrics*. 1998;102(2 pt 1): *Pediatrics*. 1998; 101(2 pt 1):723–728

The Pediatrician's Role in Child Maltreatment Prevention

Emalee G. Flaherty, John Stirling, Jr and The Committee on Child Abuse and Neglect

Pediatrics 2010;126;833; originally published online September 27, 2010;
DOI: 10.1542/peds.2010-2087